NIST Interagency Report
NISTIR 8525

Face Analysis Technology Evaluation: Age Estimation and Verification

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This publication is available free of charge from:
https://doi.org/10.6028/NIST.IR.8525

NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY
U.S. DEPARTMENT OF COMMERCE

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Information Access Division
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NIST IR May 2024
INCLUDES UPDATES AS OF 2026-04-07

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National Institute of Standards and Technology
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Publication History
Approved by the NIST Editorial Review Board on 2024-05-24

How to cite this NIST Technical Series Publication:
Kayee Hanaoka, Mei Ngan, Joyce Yang, George W. Quinn, Austin Hom, Patrick Grother (2024) Face Analysis Technology Evaluation: Age Estimation and Verification . (National Institute of Standards and Technology, Gaithersburg, MD), NISTIR 8525. https://doi.org/10.6028/NIST.IR.8525

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NISTIR 8525
May 2024

Abstract

The report documents technical performance of prototype age estimation algorithms submitted to the Age Estimation and Verification (AEV) track of the Face Analysis Technology Evaluation (FATE) executed by the National Institute of Standards and Technology (NIST).

Acknowledgements

The authors are grateful to the Federal Bureau of Investigation (FBI) and the Department of Homeland Security (DHS) Office of Biometrics Identity Management (OBIM) for their support of this work. Additionally we are indebted to DHS Customs and Border Protection, DHS Citizenship and Immigration, and the FBI for allowing use of photographs in this FATE evaluation. Finally, the authors are grateful to colleagues in the NIST Biometrics Research Laboratory for excellent infrastructure supporting this evaluation.

Other Related Reports

Results from the Face Recognition Technology Evaluation (FRTE) and Face Analysis Technology Evaluation (FATE) activities appear in the series of NIST Interagency Reports tabulated below. From 1999 to May 2024, FRTE and FATE were collectively known as FRVT.

DATE	PROG.	NISTIR	TITLE
2014-03-20	FATE	7995	Performance of Automated Age Estimation Algorithms
2015-04-20	FATE	8052	Performance of Automated Gender Classification Algorithms
2014-05-21	FRTE	8009	Performance of Face Identification Algorithms
2017-03-07	FRTE	8173	FIVE - Face In Video Evaluation: Face Recognition of Non-Cooperative Subjects
2017-11-23	FRTE	8197	FRPC - The 2017 IARPA Face Recognition Prize Challenge
2020-01-03	FRTE	Draft	Part 1: Verification
2019-09-11	FRTE	8271	Part 2: Identification
2019-12-11	FRTE	8280	Part 3: Demographic Effects
2020-03-04	FATE	8292	Part 4: MORPH - Performance of Automated Face Morph Detection
2020-03-06	FATE	Draft	Part 5: Face Image Quality Assessment
2020-07-24	FRTE	8311	Part 6A: Face Recognition Accuracy with Face Masks using Pre-COVID-19 Algorithms
2022-01-20	FRTE	8331	Part 6B: Face Recognition Accuracy with Face Masks using Post-COVID-19 Algorithms
2022-07-13	FRTE	8381	Part 7: Identification for Paperless Travel and Immigration
2022-09-30	FRTE	8429	Part 8: Summarizing Demographic Differentials
2022-09-30	FRTE	8439	Part 9A: Face Recognition Verification Accuracy on Distinguishing Twins
2023-09-20	FATE	8491	Part 10: Performance of Passive Software-based Presentation Attack Detection (PAD) Algorithms
2023-09-20	FATE	8485	Part 11: Face Image Quality Vector Assessment: Specific Image Defect Detection
2024-05-29	FATE	8525	Part 12: Face Analysis Technology Evaluation: Age Estimation and Verification
2025-08-18	FATE	8584	Part 4B: Considerations for Implementing Morph Detection in Operations
2025-09-25	FRTE	500-343	Face Recognition Technology Evaluation (FRTE): Preparation of Compact Face Images for 2D Barcodes

Details appear on pages linked from https://www.nist.gov/programs-projects/face-projects.

Key words

Face Analysis Technology Evaluation; FATE; AEV; Age estimation; Age Verification; Age Assurance

Release notes

2026-04-01: The AEV track of the FATE remains open.

- ▷ This document is the thirteenth update to NIST Interagency Report 8525.
- ▷ The weights used in the ineffectiveness formula eq. 14 were calculated incorrectly. The old formula

$$p_i = \alpha \exp(\mathrm{L} - i - 1) / \exp(\mathrm{L} - 1)$$

has been replaced with

$$p_i = \alpha \exp(i - \mathrm{L} + 1)$$

. The old formula yielded higher weights for 13 year olds than for 17 years olds. The corrected weights reverse that such that equation 14 *ineffectivenes* increases over the values published 2024 to 2026-03. The algorithm rankings change minimally, however.

2026-02-13: The AEV track of the FATE remains open.

- ▷ This document is the twelfth update to NIST Interagency Report 8525. It contains results for two developers: ROC, and Shufti.

2026-01-23: The AEV track of the FATE remains open.

- ▷ This document is the twelfth update to NIST Interagency Report 8525. It contains results for two developers: Yoti, and Privately.

2025-12-18: The AEV track of the FATE remains open.

- ▷ This document is the twelfth update to NIST Interagency Report 8525. It contains results for two developers: Innovatrics, and Daon.

2025-08-28: The AEV track of the FATE remains open.

- ▷ This document is the twelfth update to NIST Interagency Report 8525. It contains results for three developers: Cyberlink Corp, Regula Forensics, and Youverse.

2025-07-21: The AEV track of the FATE remains open.

- ▷ This document is the eleventh update to NIST Interagency Report 8525. It contains results for four developers: Cognitec Systems GmbH, Idemia, Innovatrics, and Yoti.

2025-05-21: The AEV track of the FATE remains open.

- ▷ This document is the tenth update to NIST Interagency Report 8525. It contains results for one developers: Incode Technologies Inc.

2025-05-14: The AEV track of the FATE remains open.

- ▷ This document is the ninth update to NIST Interagency Report 8525. It contains results for two developers: Czech Technical University in Prague, and Daon.

2025-04-11: The AEV track of the FATE remains open.

- ▷ This document is the eighth update to NIST Interagency Report 8525. It contains results for three developers: Hangzhuo AIlu Network Information Technology, Nominder, and Ondato UAB.
- ▷ The FATE AEV homepage includes age estimation noise results from the frontal video frames and the yaw variation video frames.

2025-02-28: The AEV track of the FATE remains open.

- ▷ This document is the seventh update to NIST Interagency Report 8525. It contains results for one developers: Innovatrics.
- ▷ The FATE AEV homepage includes age estimation noise results from the frontal video frames and the yaw variation video frames.

2025-01-28: The AEV track of the FATE remains open.

- ▷ This document is the sixth update to NIST Interagency Report 8525. It contains results for one developers: Dermalog.

2024-12-20: The AEV track of the FATE remains open.

- ▷ This document is the fifth update to NIST Interagency Report 8525. It contains results for three developers: Nominder, Ondato UAB, and Viante.AI.

2024-11-08: The AEV track of the FATE remains open.

- ▷ This document is the fourth update to NIST Interagency Report 8525. It contains results for two developers: ROC and Czech Technical University in Prague.

2024-10-07: The AEV track of the FATE remains open.

- ▷ This document is the third update to NIST Interagency Report 8525. It contains results for two developers: Yoti and the Brno University of Technology.
- ▷ The FATE AEV homepage has been revamped to include MAE by demographic group and MAE by image type.

2024-09-16: The AEV track of the FATE remains open.

- ▷ This document is the second update to NIST Interagency Report 8525. It contains results for two new developers: Idemia and Jumio.

2024-08-23: The AEV track of the FATE remains open.

- ▷ This document is the first update to NIST Interagency Report 8525. It contains results for two new developers: Nominder and the Czech Technical University in Prague.
- ▷ The document also includes results for algorithms for one returning developer: Neurotechnology.

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Executive Summary

Motivation

Age assurance is the subject of recent legislation both inside and outside the United States. This has driven the need for age assurance methods to support applications such as verification that a person is above age 18, 21, or other key ages (e.g., for sale of alcohol or online access). While the mechanism for estimating age may not be specified in legislation, software-based face analysis is one potential approach supported by ubiquitous inexpensive cameras. Age estimation can operate statelessly with no requirement for persistent storage of a photo or biometric data derived from it.

Overview

Age assurance applications can employ either an age verification (AV) algorithm that produces a yes/no guess at whether someone is above an age threshold, or an age estimation (AE) algorithm that emits a numeric age estimate that can be compared with the age threshold i.e. AV can be implemented with AE, or it can be computed without explicit AE.

This report quantifies the capability of six software-based AE and AV prototypes applied to around eleven million photos drawn from four operational repositories: immigration visas, arrest mugshots, border crossings, and immigration office photos. The report includes statements of age estimation (AE) accuracy globally and across demographic groups. It uses AE with thresholds to measure performance in age verification tasks and also reports the dependence on image quality. The report excludes performance measured in interactive sessions, in which a person can cooperatively present and re-present to a camera. It does not measure accuracy effects related to disguises, cosmetics, or other presentation attacks. It does not address policy nor recommend AV thresholds as these differ across applications and jurisdictions.

Audience

This report is of primary utility to actual and prospective deployers of the technology faced with selection of particular AE implementations. It is additionally intended to inform policymakers interested in assessing absolute capability and whether that is sufficient for particular use-cases. The report will be useful to developers in exposing factor affecting performance and in documenting capability relative to other prototypes. This report is a snapshot; the AEV benchmark remain opens for new and returning developers as a means to track technological gains.

Results

Age estimation accuracy has improved since we first measured it in 2014 - see NISTIR 7995. However, for both age estimation (e.g., MAE) and metrics appropriate to "challenge" that require alternative means of age assurance if age is not above some limit, accuracy is strongly influenced by algorithm, sex, image quality, region-of-birth, age itself, and interactions between those factors. There is no uniformly superior algorithm, and algorithm rankings differ across those factors. Accuracy also depends on the metric: age estimation error vs. challenge-25-like false positive rates. Given variation across demographic groups, we anticipate developers improving capability over time. Future FATE AEV reports will address online safety applications (for 13-16 year olds), report on new datasets, and include extended analyses. Detailed results follow in the Technical Summary.

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Technical Summary

Algorithms: FATE AEV is an ongoing technology evaluation of age estimation implementations. This report is a snapshot of results documenting the application of six commercially-developed age estimation algorithms to four archived datasets. The algorithms are prototypes - so not necessarily available as mature integrable products. See sec. 4.

Datasets: We used four large operational sets of photographs. The sets are accompanied by subject metadata including age and, in some cases, sex and country-of-birth information. The four datasets are domestic *mugshots* collected in the United States after arrest, *application* photographs taken in immigration offices from a global population, *visa* photographs collected in consular offices in Mexico, and *border* crossing photographs of travelers entering the United States. See sec. 3.

Accuracy gains since 2014: This report includes results for a dataset used in our 2014 evaluation of age estimation algorithms. With a decade of research and development, and significant advances in deep neural network technology, we see five of six algorithms outperform the most accurate algorithm submitted to NIST in 2014. Using a common *visa* database, best mean absolute error (MAE) has reduced from 4.3 to 3.1 years. See sec. 5.1.

Age estimation accuracy: The AEV program aims to measure age estimation accuracy, and to quantify gains over time. This is done by running empirical trials using large datasets. Table 1 shows standard statements of age estimation error for all algorithms on the 18-24 subset of the four databases.

Notable from the table is that the main summary measure of how close age estimates are to ground truth - mean absolute error (MAE) - varies between algorithms operating on any one dataset, and between datasets using any one algorithm. This is a function of algorithm sensitivities to image quality and demographics, as discussed below. Within one dataset, aggregate MAE hides variation across sex and ethnicity. Moreover, MAE also does not specifically quantify how many age estimates are large overestimates, so it is not an appropriate metric for age verification (AV) tasks. See metrics in sec. 2.

Table 1. *Mean, median and standard deviation of absolute error (MAE, MDAE, SD) and failure to process rate (FTP) for subjects between the age 18 to 24 year old. Num. Img shows how many images processed sucessfully by the algorithm. Lower values are better.*

Algorithm	Dataset	Num. Img	MAE	MDAE	SD	FTP
cognitec-000	Mugshot	376773	2.4	1.8	2.1	0.000
cognitec-000	Border	236052	3.1	2.4	2.6	0.001
cognitec-000	Application	111937	2.5	2.0	2.2	0.000
cognitec-000	Visa	857763	2.6	2.1	2.1	0.000
cvut-001	Mugshot	368979	3.5	3.0	3.1	0.021
cvut-001	Border	235829	3.3	2.5	3.5	0.002
cvut-001	Application	111938	3.2	2.5	2.8	0.000
cvut-001	Visa	857761	4.5	3.7	3.7	0.000
cvut-002	Mugshot	368982	2.4	2.0	2.3	0.021
cvut-002	Border	236216	3.6	3.1	2.8	0.000
cvut-002	Application	111938	2.5	2.0	2.4	0.000
cvut-002	Visa	857761	3.4	2.8	2.6	0.000
cvut-003	Mugshot	368895	2.7	2.2	2.4	0.021
cvut-003	Border	236216	3.4	3.0	2.6	0.000
cvut-003	Application	111938	2.4	1.8	2.2	0.000
cvut-003	Visa	856824	4.6	4.2	2.9	0.001
cyberlink-000	Mugshot	376849	3.6	3.0	2.9	0.000
cyberlink-000	Border	236227	3.2	2.7	2.7	0.000
cyberlink-000	Application	111938	3.5	3.1	2.7	0.000
cyberlink-000	Visa	857764	3.8	3.4	2.7	0.000
cyberlink-001	Mugshot	376849	2.8	2.0	2.4	0.000
cyberlink-001	Border	236227	2.8	2.3	2.3	0.000

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Table 1. *Mean, median and standard deviation of absolute error (MAE, MDAE, SD) and failure to process rate (FTP) for subjects between the age 18 to 24 year old. Num. Img shows how many images processed sucessfully by the algorithm. Lower values are better. (continued)*

Algorithm	Dataset	Num. Img	MAE	MDAE	SD	FTP
cyberlink-001	Application	111938	2.6	2.0	2.3	0.000
cyberlink-001	Visa	857765	3.3	2.8	2.5	0.000
daon-000	Mugshot	376841	4.3	3.7	3.3	0.000
daon-000	Border	236231	4.8	4.2	3.6	0.000
daon-000	Application	111938	4.1	3.4	3.2	0.000
daon-000	Visa	857763	4.7	4.3	3.1	0.000
daon-001	Mugshot	376835	3.5	3.0	2.8	0.000
daon-001	Border	236220	4.2	3.8	3.1	0.000
daon-001	Application	111938	3.7	3.1	2.9	0.000
daon-001	Visa	857764	4.3	4.1	2.7	0.000
dermalog-001	Mugshot	376560	3.8	3.0	3.2	0.001
dermalog-001	Border	236251	5.1	4.6	3.6	0.000
dermalog-001	Application	111938	3.3	2.6	2.8	0.000
dermalog-001	Visa	857766	4.7	4.2	3.2	0.000
dermalog-002	Mugshot	376560	3.9	3.0	3.4	0.001
dermalog-002	Border	236251	5.1	4.4	3.8	0.000
dermalog-002	Application	111938	3.6	2.9	2.9	0.000
dermalog-002	Visa	857766	4.4	3.8	3.3	0.000
hzailu-001	Mugshot	376699	7.5	7.0	4.4	0.000
hzailu-001	Border	236236	5.7	5.1	3.9	0.000
hzailu-001	Application	111938	5.9	5.5	3.8	0.000
hzailu-001	Visa	857763	7.8	7.6	3.9	0.000
idemia-001	Mugshot	376850	2.1	1.7	1.9	0.000
idemia-001	Border	236232	2.5	2.0	2.1	0.000
idemia-001	Application	111938	2.6	2.1	2.3	0.000
idemia-001	Visa	857764	2.8	2.3	2.2	0.000
idemia-002	Mugshot	376850	2.4	1.9	2.1	0.000
idemia-002	Border	236232	2.7	2.2	2.2	0.000
idemia-002	Application	111938	2.6	2.1	2.3	0.000
idemia-002	Visa	857764	3.5	2.9	2.7	0.000
inbut-000	Mugshot	376822	2.8	1.9	2.7	0.000
inbut-000	Border	236224	3.2	2.8	2.5	0.000
inbut-000	Application	111938	3.7	2.9	3.3	0.000
inbut-000	Visa	857764	10.5	10.9	4.2	0.000
incode-000	Mugshot	376710	2.7	2.2	2.5	0.000
incode-000	Border	236181	4.5	3.6	3.9	0.000
incode-000	Application	111938	3.0	2.4	2.5	0.000
incode-000	Visa	857762	3.5	2.9	2.7	0.000
incode-001	Mugshot	376606	2.5	1.9	2.5	0.001
incode-001	Border	236171	3.9	2.9	3.7	0.000
incode-001	Application	111936	3.1	2.4	2.7	0.000
incode-001	Visa	857759	3.7	2.9	3.1	0.000
innovatrics-000	Mugshot	376794	2.0	1.5	1.8	0.000
innovatrics-000	Border	236171	2.5	2.1	2.1	0.000
innovatrics-000	Application	111938	2.5	2.0	2.2	0.000
innovatrics-000	Visa	857764	3.2	2.9	2.3	0.000
innovatrics-001	Mugshot	376794	1.9	1.5	1.8	0.000
innovatrics-001	Border	236171	2.4	1.9	2.1	0.000
innovatrics-001	Application	111938	2.3	1.8	2.1	0.000
innovatrics-001	Visa	857764	3.0	2.6	2.2	0.000
innovatrics-002	Mugshot	376823	2.3	1.8	2.0	0.000
innovatrics-002	Border	236208	2.7	2.3	2.2	0.000
innovatrics-002	Application	111938	2.8	2.2	2.3	0.000
innovatrics-002	Visa	857765	3.2	2.6	2.4	0.000
jumio-000	Mugshot	376344	2.9	2.2	2.8	0.001
jumio-000	Border	226033	5.6	4.5	4.6	0.043
jumio-000	Application	111759	3.4	2.7	2.9	0.002
jumio-000	Visa	835881	4.3	3.9	3.0	0.026
neurotechnology-000	Mugshot	376764	3.6	3.0	3.0	0.000
neurotechnology-000	Border	236169	3.4	2.8	2.8	0.000
neurotechnology-000	Application	111938	3.7	3.1	2.9	0.000
neurotechnology-000	Visa	857764	3.2	2.5	2.7	0.000
neurotechnology-001	Mugshot	376726	2.9	2.0	2.7	0.000
neurotechnology-001	Border	236107	3.2	2.6	2.7	0.001
neurotechnology-001	Application	111938	3.2	2.6	2.6	0.000
neurotechnology-001	Visa	857762	3.1	2.5	2.6	0.000
nominder-000	Mugshot	376720	2.8	2.2	2.5	0.000
nominder-000	Border	236203	3.2	2.7	2.6	0.000
nominder-000	Application	111938	3.1	2.5	2.6	0.000
nominder-000	Visa	857765	3.5	2.9	2.7	0.000
nominder-001	Mugshot	376683	2.3	1.7	2.1	0.000

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Table 1. *Mean, median and standard deviation of absolute error (MAE, MDAE, SD) and failure to process rate (FTP) for subjects between the age 18 to 24 year old. Num. Img shows how many images processed sucessfully by the algorithm. Lower values are better. (continued)*

Algorithm	Dataset	Num. Img	MAE	MDAE	SD	FTP
nominder-001	Border	236204	2.6	2.1	2.3	0.000
nominder-001	Application	111938	2.4	1.9	2.2	0.000
nominder-001	Visa	857765	3.7	3.0	2.9	0.000
ondato-000	Mugshot	376835	2.8	2.2	2.6	0.000
ondato-000	Border	236209	2.8	2.3	2.4	0.000
ondato-000	Application	111938	3.1	2.4	2.7	0.000
ondato-000	Visa	857764	3.1	2.6	2.5	0.000
ondato-001	Mugshot	376835	2.7	2.1	2.5	0.000
ondato-001	Border	236209	2.7	2.2	2.4	0.000
ondato-001	Application	111938	2.9	2.3	2.5	0.000
ondato-001	Visa	857764	3.2	2.7	2.4	0.000
privately-000	Mugshot	376867	2.9	2.3	2.5	0.000
privately-000	Border	236272	3.9	3.3	3.1	0.000
privately-000	Application	111938	2.9	2.3	2.5	0.000
privately-000	Visa	857774	3.4	2.8	2.6	0.000
regula-000	Mugshot	376840	2.0	1.5	1.9	0.000
regula-000	Border	236175	2.6	2.0	2.3	0.000
regula-000	Application	111938	2.2	1.7	2.1	0.000
regula-000	Visa	857764	2.6	2.1	2.2	0.000
roc-000	Mugshot	376809	2.3	1.7	2.3	0.000
roc-000	Border	236191	4.0	3.4	3.1	0.000
roc-000	Application	111938	3.5	2.9	2.8	0.000
roc-000	Visa	857764	3.7	2.8	3.1	0.000
roc-001	Mugshot	376818	2.2	1.6	2.1	0.000
roc-001	Border	236198	3.5	3.1	2.6	0.000
roc-001	Application	111938	3.2	2.8	2.6	0.000
roc-001	Visa	857764	3.9	3.5	2.8	0.000
roc-002	Mugshot	376850	1.8	1.4	1.6	0.000
roc-002	Border	236199	3.2	2.7	2.5	0.000
roc-002	Application	111938	2.5	2.0	2.2	0.000
roc-002	Visa	857764	2.4	1.9	2.0	0.000
shufti-000	Mugshot	376392	3.1	2.2	3.0	0.001
shufti-000	Border	234897	4.2	3.2	3.8	0.006
shufti-000	Application	111932	4.0	3.2	3.4	0.000
shufti-000	Visa	857762	3.5	2.7	3.0	0.000
unissey-001	Mugshot	376776	3.5	3.0	3.1	0.000
unissey-001	Border	236182	3.4	3.0	2.8	0.000
unissey-001	Application	111938	4.0	3.5	3.1	0.000
unissey-001	Visa	857764	4.1	3.6	3.0	0.000
viante-000	Mugshot	376674	4.8	5.0	2.7	0.001
viante-000	Border	236210	4.1	3.8	2.8	0.000
viante-000	Application	111938	5.0	4.7	2.7	0.000
viante-000	Visa	857759	6.2	6.1	3.1	0.000
yoti-001	Mugshot	376274	2.7	2.1	2.5	0.002
yoti-001	Border	235988	5.1	4.5	3.8	0.001
yoti-001	Application	111936	4.1	3.4	3.3	0.000
yoti-001	Visa	857713	3.8	3.1	3.0	0.000
yoti-002	Mugshot	376867	2.5	2.1	2.2	0.000
yoti-002	Border	236272	4.4	4.0	3.1	0.000
yoti-002	Application	111938	3.5	2.9	2.7	0.000
yoti-002	Visa	857774	3.1	2.6	2.4	0.000
yoti-003	Mugshot	376867	2.4	1.9	2.1	0.000
yoti-003	Border	236272	4.3	3.8	3.1	0.000
yoti-003	Application	111938	3.3	2.7	2.7	0.000
yoti-003	Visa	857774	3.1	2.6	2.4	0.000
yoti-004	Mugshot	376867	1.9	1.5	1.8	0.000
yoti-004	Border	236272	3.8	3.3	2.8	0.000
yoti-004	Application	111938	2.6	2.1	2.3	0.000
yoti-004	Visa	857774	2.5	2.1	2.0	0.000
youverse-000	Mugshot	376691	3.3	2.4	3.0	0.000
youverse-000	Border	236217	4.7	4.0	3.6	0.000
youverse-000	Application	111938	3.1	2.5	2.6	0.000
youverse-000	Visa	857689	3.1	2.5	2.5	0.000

Impact of image quality: Table 1 shows mugshots are easiest for three of six algorithms using the MAE metric, and border crossing photos are the hardest for four of six algorithms. Mugshots and application photos are collected with standardized photographic setups. The border photos are

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collected with a webcam and exhibit more variation in head orientation away from frontal, and lower contrast. On such images, algorithms perform less well than on office-collected application photos of the same people (i.e. the same demographics). We have not conducted a detailed cause-and-effect analysis to relate age estimation error to explicit measurements of standardized quality metrics such as sharpness, exposure and head orientation. The datasets are detailed in 3. See sec. 5.6.

Impact of eyeglasses: Eyeglasses have an effect on age estimation error. Four of six algorithms show higher age estimation error (over-estimation or under-estimation) in both male and female when wearing glasses vs. not wearing glasses. See sec. 5.6.1.

Age verification accuracy: For restricted-age applications such as alcohol purchase, a Challenge-T policy accepts people with age estimated at or above T but requires additional age assurance checks on anyone assessed to have age below T. Table 2 shows false positive rates (FPR) for people below a legal limit (18 in the first four columns, and 21 in the second four columns) but who are estimated to be at or above the challenge age T. FPR, which should be low, decreases with higher Challenge-T values. The use of higher T values will cause more people at or above legal age to be subject to additional age assurance. The tables show that for four of six algorithms, FPR is markedly lower in men than women, the opposite is true for another, and parity is almost achieved for one more.

Table 2. *For Application images, false positive rates (FPR) for 14-17 year olds, 14-20 years olds, at challenge ages, 25, 28 and 31. Values are lower the better.*

Algorithm	Male 14-17 T=25	Female 14-17 T=25	Male 14-17 T=28	Female 14-17 T=28	Male 14-20 T=28	Female 14-20 T=28	Male 14-20 T=31	Female 14-20 T=31
cognitec-000	0.005	0.014	0.001	0.003	0.007	0.013	0.002	0.004
cvut-001	0.039	0.100	0.006	0.025	0.029	0.052	0.006	0.018
cvut-002	0.011	0.032	0.002	0.005	0.012	0.015	0.004	0.005
cvut-003	0.008	0.029	0.002	0.005	0.009	0.017	0.003	0.006
cyberlink-000	0.054	0.091	0.012	0.020	0.051	0.050	0.008	0.011
cyberlink-001	0.013	0.023	0.002	0.005	0.014	0.016	0.003	0.005
daon-000	0.094	0.067	0.027	0.024	0.066	0.048	0.020	0.017
daon-001	0.045	0.034	0.009	0.011	0.037	0.030	0.010	0.010
dermalog-001	0.051	0.112	0.012	0.036	0.034	0.069	0.010	0.021
dermalog-002	0.034	0.167	0.009	0.037	0.031	0.081	0.010	0.020
hzailu-001	0.341	0.361	0.127	0.154	0.246	0.247	0.091	0.080
idemia-001	0.004	0.012	0.002	0.003	0.009	0.012	0.003	0.003
idemia-002	0.002	0.009	0.002	0.003	0.006	0.012	0.002	0.003
inbut-000	0.100	0.114	0.055	0.050	0.072	0.075	0.034	0.030
incode-000	0.006	0.033	0.002	0.010	0.008	0.027	0.002	0.008
incode-001	0.006	0.034	0.002	0.010	0.011	0.038	0.004	0.010
innovatrics-000	0.007	0.030	0.002	0.005	0.008	0.015	0.002	0.004
innovatrics-001	0.005	0.024	0.001	0.004	0.007	0.013	0.002	0.003
innovatrics-002	0.008	0.034	0.002	0.006	0.010	0.020	0.003	0.006
jumio-000	0.021	0.088	0.009	0.026	0.019	0.067	0.007	0.020
neurotechnology-000	0.248	0.178	0.062	0.035	0.101	0.057	0.028	0.014
neurotechnology-001	0.157	0.125	0.019	0.014	0.040	0.027	0.011	0.007
nominder-000	0.020	0.041	0.004	0.012	0.025	0.031	0.007	0.009
nominder-001	0.007	0.021	0.002	0.004	0.009	0.015	0.003	0.004
ondato-000	0.027	0.073	0.006	0.018	0.022	0.040	0.006	0.011
ondato-001	0.014	0.051	0.003	0.010	0.012	0.030	0.004	0.007
privately-000	0.014	0.065	0.003	0.012	0.008	0.029	0.002	0.006
regula-000	0.003	0.012	0.001	0.003	0.005	0.012	0.002	0.004
roc-000	0.041	0.073	0.006	0.016	0.030	0.049	0.006	0.011
roc-001	0.013	0.040	0.002	0.006	0.015	0.030	0.004	0.007

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roc-002	0.006	0.016	0.002	0.003	0.008	0.014	0.002	0.003
shufti-000	0.029	0.067	0.009	0.022	0.044	0.066	0.015	0.023
unissey-001	0.107	0.127	0.031	0.038	0.091	0.092	0.018	0.019
viante-000	0.138	0.253	0.023	0.049	0.111	0.123	0.017	0.020
yoti-001	0.012	0.090	0.003	0.032	0.017	0.093	0.004	0.033
yoti-002	0.009	0.063	0.002	0.014	0.010	0.046	0.003	0.011
yoti-003	0.008	0.056	0.003	0.014	0.011	0.046	0.004	0.011
yoti-004	0.005	0.026	0.001	0.004	0.006	0.017	0.002	0.004
youverse-000	0.026	0.051	0.008	0.015	0.030	0.031	0.008	0.009

Table 2 uses two samples sets (14-17 and 14-20), but these subsets are imbalanced by age and sex per the characteristic demographics of the operational population the set was drawn from. Imbalance matters, because 14 year olds have markedly lower FPR than do those aged 17: Table 3 shows that Challenge-25 false positive rates increase by an order-of-magnitude as subjects age from 14 through 20 - for example for the roc-000 algorithm FPR at age 20 (0.295) is almost fifteen times larger than at age 14 (0.02). The implication of imbalance in a set is that a test that employs that set without taking any steps to correct for that imbalance, will yield unpresentative results - see the discussion in 2.7.3. A test of an operational system should typically proceed with operationally representative numbers of $14, 15, \ldots$ year old males and females.

Table 3. *For Application images, false positive rates for Challenge-25 by actual age. The FPR values are averages of 12 FPR estimates from two sexes and six regions-of-birth. Lower values are the better.*

	Actual Age						
Algorithm	**14**	**15**	**16**	**17**	**18**	**19**	**20**
cognitec-000	0.003	0.009	0.016	0.027	0.044	0.078	0.125
cvut-001	0.055	0.075	0.106	0.148	0.173	0.241	0.304
cvut-002	0.013	0.018	0.035	0.064	0.083	0.136	0.197
cvut-003	0.013	0.018	0.030	0.051	0.068	0.111	0.162
cyberlink-000	0.041	0.059	0.096	0.149	0.199	0.281	0.375
cyberlink-001	0.006	0.013	0.026	0.047	0.067	0.120	0.183
daon-000	0.031	0.059	0.096	0.143	0.168	0.234	0.299
daon-001	0.014	0.024	0.045	0.087	0.114	0.178	0.257
dermalog-001	0.039	0.060	0.097	0.134	0.151	0.226	0.284
dermalog-002	0.046	0.074	0.106	0.152	0.189	0.251	0.322
hzailu-001	0.246	0.336	0.444	0.522	0.590	0.663	0.717
idemia-001	0.001	0.007	0.012	0.024	0.040	0.078	0.132
idemia-002	0.001	0.005	0.008	0.019	0.030	0.057	0.102
inbut-000	0.092	0.123	0.159	0.200	0.202	0.288	0.371
incode-000	0.008	0.012	0.031	0.047	0.062	0.112	0.171
incode-001	0.006	0.012	0.029	0.053	0.078	0.140	0.214
innovatrics-000	0.008	0.014	0.028	0.055	0.074	0.130	0.193
innovatrics-001	0.007	0.012	0.025	0.048	0.065	0.114	0.168
innovatrics-002	0.010	0.017	0.038	0.069	0.090	0.155	0.219
jumio-000	0.037	0.052	0.079	0.115	0.147	0.219	0.303
neurotechnology-000	0.200	0.231	0.293	0.353	0.380	0.426	0.465
neurotechnology-001	0.058	0.090	0.120	0.169	0.201	0.243	0.302
nominder-000	0.017	0.025	0.041	0.073	0.101	0.161	0.227
nominder-001	0.004	0.008	0.023	0.042	0.060	0.099	0.150
ondato-000	0.029	0.044	0.068	0.108	0.129	0.200	0.273
ondato-001	0.015	0.029	0.047	0.078	0.107	0.169	0.248
privately-000	0.014	0.026	0.047	0.061	0.077	0.110	0.160
regula-000	0.001	0.004	0.012	0.024	0.040	0.076	0.120
roc-000	0.020	0.037	0.063	0.103	0.138	0.216	0.295
roc-001	0.004	0.017	0.031	0.068	0.104	0.187	0.277
roc-002	0.002	0.005	0.015	0.027	0.040	0.084	0.140

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shufti-000	0.021	0.036	0.062	0.103	0.140	0.242	0.337
unissey-001	0.047	0.082	0.128	0.191	0.252	0.332	0.424
viante-000	0.091	0.148	0.260	0.373	0.452	0.579	0.690
yoti-001	0.018	0.033	0.068	0.110	0.155	0.236	0.327
yoti-002	0.012	0.021	0.046	0.072	0.098	0.173	0.246
yoti-003	0.010	0.017	0.039	0.067	0.087	0.159	0.242
yoti-004	0.003	0.008	0.018	0.037	0.053	0.105	0.164
youverse-000	0.021	0.040	0.057	0.096	0.130	0.175	0.231

Table 4. *For Application images, false positive rates for Challenge-28 by actual age. The FPR values are averages of 12 FPR estimates from two sexes and six regions-of-birth. Lower values are the better.*

	Actual Age						
Algorithm	**14**	**15**	**16**	**17**	**18**	**19**	**20**
cognitec-000	0.000	0.002	0.004	0.006	0.011	0.022	0.032
cvut-001	0.012	0.017	0.028	0.042	0.056	0.091	0.124
cvut-002	0.001	0.003	0.007	0.011	0.016	0.029	0.050
cvut-003	0.002	0.003	0.007	0.009	0.015	0.031	0.048
cyberlink-000	0.006	0.013	0.024	0.043	0.052	0.088	0.136
cyberlink-001	0.000	0.002	0.006	0.011	0.014	0.031	0.048
daon-000	0.012	0.020	0.031	0.052	0.060	0.091	0.127
daon-001	0.003	0.007	0.014	0.027	0.039	0.060	0.097
dermalog-001	0.011	0.018	0.028	0.041	0.047	0.077	0.107
dermalog-002	0.010	0.018	0.027	0.041	0.052	0.078	0.113
hzailu-001	0.103	0.141	0.205	0.263	0.320	0.380	0.445
idemia-001	0.000	0.001	0.005	0.007	0.009	0.021	0.039
idemia-002	0.000	0.001	0.004	0.007	0.009	0.018	0.033
inbut-000	0.046	0.062	0.082	0.095	0.091	0.124	0.150
incode-000	0.002	0.004	0.012	0.015	0.019	0.037	0.052
incode-001	0.002	0.005	0.010	0.017	0.024	0.046	0.072
innovatrics-000	0.001	0.002	0.006	0.010	0.014	0.027	0.044
innovatrics-001	0.000	0.002	0.005	0.009	0.011	0.024	0.038
innovatrics-002	0.001	0.005	0.008	0.014	0.019	0.038	0.059
jumio-000	0.013	0.018	0.028	0.042	0.050	0.082	0.113
neurotechnology-000	0.058	0.071	0.094	0.123	0.138	0.162	0.191
neurotechnology-001	0.008	0.012	0.019	0.027	0.030	0.040	0.065
nominder-000	0.003	0.008	0.013	0.024	0.030	0.054	0.085
nominder-001	0.000	0.002	0.005	0.010	0.014	0.026	0.042
ondato-000	0.006	0.013	0.019	0.030	0.037	0.062	0.093
ondato-001	0.003	0.006	0.010	0.018	0.021	0.043	0.068
privately-000	0.003	0.004	0.011	0.012	0.015	0.022	0.041
regula-000	0.000	0.001	0.004	0.005	0.008	0.019	0.031
roc-000	0.003	0.008	0.014	0.023	0.037	0.066	0.100
roc-001	0.000	0.003	0.008	0.013	0.021	0.043	0.074
roc-002	0.001	0.002	0.003	0.006	0.008	0.020	0.036
shufti-000	0.006	0.012	0.019	0.035	0.054	0.094	0.140
unissey-001	0.012	0.024	0.046	0.064	0.090	0.139	0.194
viante-000	0.017	0.028	0.053	0.095	0.132	0.206	0.281
yoti-001	0.007	0.012	0.025	0.040	0.054	0.093	0.124
yoti-002	0.002	0.005	0.013	0.018	0.022	0.046	0.072
yoti-003	0.002	0.005	0.011	0.019	0.024	0.047	0.073
yoti-004	0.000	0.002	0.003	0.007	0.010	0.021	0.037
youverse-000	0.008	0.013	0.021	0.029	0.047	0.058	0.088

Table 4 shows the effect of increasing the challenge age to 28. FPR reduces universally (necessarily). Note that in both tables the large variation down the columns, showing that some algorithms are markedly better than others.

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In the main results section, we include results for all ages and all thresholds. We also include results for other datasets, where FPR is increased with lower quality photos. See sec. 5.3.

Age verification accuracy vs age estimation: Our API includes age verification function which allow developers to implement a dedicated classifier indicating whether the subject is above an age limit. All algorithms show that age-verification classifier do not perform better when comparing to a regression-like estimator. See sec. 5.3.1

Demographics - Region of birth: In addition to age, we report performance for six regions-of-birth: E. Africa, W. Africa, E. Europe, S. Asia, S. E. Asia, and E. Asia. This forms a proxy for ethnicity, as explained in section 5.4. We do not attempt to recover skin tone information from images, because this is problematic for technical reasons and, more importantly, because face processing algorithms should be expected to be sensitive to skin tone *and* many other phenotypes present in a face such as square jaws, prominent eye brows, high cheekbones, aquiline noses etc.

Table 5. *For Application images, Challenge-25 FPR for men aged 17 by region of birth. Gini summarizes variability of the six FPR values to its right; lower values are better.*

Algorithm	Gini	E Africa	E Asia	E Europe	S Asia	S E Asia	W Africa
cognitec-000	0.53	0.006 ± 0.006	0.010 ± 0.004	0.000 ± 0.000	0.014 ± 0.007	0.02 ± 0.01	0.04 ± 0.02
cvut-001	0.50	0.17 ± 0.04	0.05 ± 0.01	0.03 ± 0.01	0.07 ± 0.02	0.05 ± 0.02	0.27 ± 0.05
cvut-002	0.59	0.05 ± 0.02	0.006 ± 0.003	0.008 ± 0.008	0.04 ± 0.01	0.01 ± 0.01	0.11 ± 0.04
cvut-003	0.65	0.03 ± 0.02	0.004 ± 0.003	0.003 ± 0.003	0.03 ± 0.01	0.006 ± 0.006	0.08 ± 0.03
cyberlink-000	0.30	0.20 ± 0.04	0.09 ± 0.01	0.04 ± 0.02	0.12 ± 0.02	0.11 ± 0.03	0.19 ± 0.04
cyberlink-001	0.22	0.04 ± 0.02	0.020 ± 0.006	0.02 ± 0.01	0.03 ± 0.01	0.03 ± 0.02	0.05 ± 0.02
daon-000	0.27	0.23 ± 0.04	0.17 ± 0.02	0.03 ± 0.01	0.19 ± 0.02	0.16 ± 0.04	0.13 ± 0.04
daon-001	0.25	0.13 ± 0.04	0.10 ± 0.01	0.008 ± 0.008	0.09 ± 0.02	0.10 ± 0.03	0.11 ± 0.04
dermalog-001	0.21	0.10 ± 0.03	0.07 ± 0.01	0.04 ± 0.02	0.12 ± 0.02	0.10 ± 0.03	0.09 ± 0.03
dermalog-002	0.14	0.07 ± 0.03	0.05 ± 0.01	0.06 ± 0.02	0.09 ± 0.02	0.08 ± 0.03	0.05 ± 0.02
hzailu-001	0.15	0.55 ± 0.05	0.34 ± 0.02	0.44 ± 0.05	0.68 ± 0.03	0.53 ± 0.05	0.67 ± 0.05
idemia-001	0.58	0.01 ± 0.01	0.007 ± 0.004	0.000 ± 0.000	0.009 ± 0.005	0.006 ± 0.006	0.04 ± 0.02
idemia-002	0.75	0.000 ± 0.000	0.004 ± 0.003	0.000 ± 0.000	0.006 ± 0.004	0.006 ± 0.006	0.03 ± 0.02
inbut-000	0.28	0.30 ± 0.05	0.10 ± 0.01	0.12 ± 0.03	0.13 ± 0.02	0.13 ± 0.03	0.27 ± 0.05
incode-000	0.49	0.02 ± 0.01	0.006 ± 0.004	0.003 ± 0.003	0.017 ± 0.007	0.01 ± 0.01	0.05 ± 0.02
incode-001	0.47	0.02 ± 0.01	0.011 ± 0.004	0.000 ± 0.000	0.011 ± 0.006	0.02 ± 0.01	0.04 ± 0.02
innovatrics-000	0.68	0.03 ± 0.01	0.006 ± 0.004	0.000 ± 0.000	0.020 ± 0.008	0.003 ± 0.003	0.07 ± 0.03
innovatrics-001	0.72	0.02 ± 0.01	0.004 ± 0.003	0.000 ± 0.000	0.012 ± 0.006	0.003 ± 0.003	0.06 ± 0.02
innovatrics-002	0.67	0.05 ± 0.02	0.008 ± 0.004	0.003 ± 0.003	0.021 ± 0.009	0.003 ± 0.003	0.09 ± 0.03
jumio-000	0.44	0.04 ± 0.02	0.019 ± 0.006	0.11 ± 0.03	0.017 ± 0.008	0.03 ± 0.02	0.06 ± 0.03
neurotechnology-000	0.45	0.76 ± 0.05	0.36 ± 0.03	0.06 ± 0.02	0.20 ± 0.02	0.28 ± 0.04	0.84 ± 0.05
neurotechnology-001	0.38	0.12 ± 0.03	0.37 ± 0.02	0.06 ± 0.02	0.20 ± 0.03	0.26 ± 0.04	0.10 ± 0.03
nominder-000	0.41	0.04 ± 0.02	0.05 ± 0.01	0.008 ± 0.008	0.04 ± 0.01	0.03 ± 0.01	0.10 ± 0.03
nominder-001	0.34	0.01 ± 0.01	0.016 ± 0.006	0.008 ± 0.008	0.016 ± 0.007	0.03 ± 0.01	0.04 ± 0.02
ondato-000	0.44	0.10 ± 0.03	0.045 ± 0.010	0.011 ± 0.008	0.05 ± 0.01	0.05 ± 0.02	0.16 ± 0.04
ondato-001	0.46	0.06 ± 0.02	0.018 ± 0.006	0.006 ± 0.006	0.024 ± 0.008	0.04 ± 0.02	0.09 ± 0.03
privately-000	0.36	0.01 ± 0.01	0.037 ± 0.009	0.003 ± 0.003	0.015 ± 0.006	0.03 ± 0.01	0.03 ± 0.02
regula-000	0.66	0.003 ± 0.003	0.002 ± 0.002	0.000 ± 0.000	0.007 ± 0.005	0.011 ± 0.008	0.03 ± 0.02
roc-000	0.36	0.07 ± 0.03	0.12 ± 0.02	0.000 ± 0.000	0.04 ± 0.01	0.11 ± 0.03	0.11 ± 0.03
roc-001	0.45	0.05 ± 0.02	0.042 ± 0.010	0.003 ± 0.003	0.019 ± 0.008	0.03 ± 0.02	0.08 ± 0.03
roc-002	0.50	0.012 ± 0.009	0.014 ± 0.005	0.000 ± 0.000	0.010 ± 0.006	0.02 ± 0.01	0.04 ± 0.02
shufti-000	0.31	0.11 ± 0.03	0.05 ± 0.01	0.02 ± 0.01	0.05 ± 0.01	0.06 ± 0.02	0.09 ± 0.03
unissey-001	0.28	0.20 ± 0.04	0.26 ± 0.02	0.04 ± 0.02	0.15 ± 0.02	0.23 ± 0.04	0.14 ± 0.03
viante-000	0.30	0.43 ± 0.05	0.25 ± 0.02	0.02 ± 0.01	0.35 ± 0.03	0.37 ± 0.05	0.47 ± 0.05
yoti-001	0.48	0.02 ± 0.01	0.036 ± 0.009	0.003 ± 0.003	0.021 ± 0.008	0.02 ± 0.01	0.08 ± 0.03
yoti-002	0.38	0.012 ± 0.009	0.028 ± 0.007	0.006 ± 0.006	0.018 ± 0.007	0.011 ± 0.008	0.04 ± 0.02
yoti-003	0.39	0.012 ± 0.009	0.020 ± 0.007	0.006 ± 0.006	0.016 ± 0.008	0.03 ± 0.02	0.04 ± 0.02
yoti-004	0.38	0.012 ± 0.009	0.011 ± 0.005	0.003 ± 0.003	0.011 ± 0.006	0.011 ± 0.008	0.03 ± 0.02

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youverse-000	0.50	0.12 ± 0.03	0.021 ± 0.007	0.03 ± 0.02	0.07 ± 0.01	0.02 ± 0.01	0.17 ± 0.04

Table 5 shows false positive rates for a Challenge-25 policy for 17 year old males. The lowest FPR values are in East Europeans though this varies for women and for men of other ages; the highest values occur in various other regions. See sec. 5.4

Demographics - Sex: Another obvious demographic variable is sex. Table 6 shows false positive rates, again for just 17 year olds, but with both sexes and three regions-of-birth. The main observation is generally higher FPR in women than men, but with exceptions for some algorithms operating on some ethnicities. The MAE values are also generally higher in women.

Table 6. *For Application images, Challenge-25 FPR for subjects aged 17 by sex and region of birth. Lower values are the better.*

Algorithm	Gini	Female E Africa	Female E Asia	Female E Europe	Male E Africa	Male E Asia	Male E Europe
cognitec-000	0.74	0.08 ± 0.03	0.015 ± 0.005	0.006 ± 0.006	0.006 ± 0.006	0.010 ± 0.004	0.000 ± 0.000
cvut-001	0.61	0.46 ± 0.05	0.12 ± 0.02	0.04 ± 0.02	0.17 ± 0.04	0.05 ± 0.01	0.03 ± 0.01
cvut-002	0.65	0.17 ± 0.04	0.024 ± 0.007	0.03 ± 0.02	0.05 ± 0.02	0.006 ± 0.003	0.008 ± 0.008
cvut-003	0.70	0.15 ± 0.04	0.022 ± 0.007	0.02 ± 0.01	0.03 ± 0.02	0.004 ± 0.003	0.003 ± 0.003
cyberlink-000	0.41	0.28 ± 0.05	0.14 ± 0.02	0.06 ± 0.02	0.20 ± 0.04	0.09 ± 0.01	0.04 ± 0.02
cyberlink-001	0.38	0.10 ± 0.03	0.034 ± 0.009	0.03 ± 0.02	0.04 ± 0.02	0.020 ± 0.006	0.02 ± 0.01
daon-000	0.42	0.21 ± 0.04	0.10 ± 0.02	0.03 ± 0.02	0.23 ± 0.04	0.17 ± 0.02	0.03 ± 0.01
daon-001	0.46	0.14 ± 0.03	0.06 ± 0.01	0.02 ± 0.01	0.13 ± 0.04	0.10 ± 0.01	0.008 ± 0.008
dermalog-001	0.41	0.13 ± 0.04	0.14 ± 0.02	0.31 ± 0.04	0.10 ± 0.03	0.07 ± 0.01	0.04 ± 0.02
dermalog-002	0.45	0.11 ± 0.03	0.29 ± 0.02	0.31 ± 0.05	0.07 ± 0.03	0.05 ± 0.01	0.06 ± 0.02
hzailu-001	0.15	0.39 ± 0.05	0.40 ± 0.03	0.66 ± 0.05	0.55 ± 0.05	0.34 ± 0.02	0.44 ± 0.05
idemia-001	0.59	0.04 ± 0.02	0.023 ± 0.007	0.003 ± 0.003	0.01 ± 0.01	0.007 ± 0.004	0.000 ± 0.000
idemia-002	0.65	0.03 ± 0.02	0.013 ± 0.005	0.03 ± 0.02	0.000 ± 0.000	0.004 ± 0.003	0.000 ± 0.000
inbut-000	0.37	0.39 ± 0.05	0.08 ± 0.01	0.22 ± 0.04	0.30 ± 0.05	0.10 ± 0.01	0.12 ± 0.03
incode-000	0.59	0.11 ± 0.03	0.05 ± 0.01	0.07 ± 0.03	0.02 ± 0.01	0.006 ± 0.004	0.003 ± 0.003
incode-001	0.55	0.11 ± 0.03	0.07 ± 0.01	0.06 ± 0.02	0.02 ± 0.01	0.011 ± 0.004	0.000 ± 0.000
innovatrics-000	0.80	0.20 ± 0.04	0.020 ± 0.007	0.01 ± 0.01	0.03 ± 0.01	0.006 ± 0.004	0.000 ± 0.000
innovatrics-001	0.81	0.17 ± 0.04	0.014 ± 0.005	0.02 ± 0.01	0.02 ± 0.01	0.004 ± 0.003	0.000 ± 0.000
innovatrics-002	0.71	0.22 ± 0.04	0.024 ± 0.007	0.04 ± 0.02	0.05 ± 0.02	0.008 ± 0.004	0.003 ± 0.003
jumio-000	0.45	0.25 ± 0.05	0.10 ± 0.01	0.16 ± 0.04	0.04 ± 0.02	0.019 ± 0.006	0.11 ± 0.03
neurotechnology-000	0.46	0.39 ± 0.05	0.24 ± 0.02	0.12 ± 0.03	0.76 ± 0.05	0.36 ± 0.03	0.06 ± 0.02
neurotechnology-001	0.41	0.08 ± 0.03	0.26 ± 0.02	0.14 ± 0.03	0.12 ± 0.03	0.37 ± 0.02	0.06 ± 0.02
nominder-000	0.44	0.14 ± 0.03	0.06 ± 0.01	0.04 ± 0.02	0.04 ± 0.02	0.05 ± 0.01	0.008 ± 0.008
nominder-001	0.48	0.08 ± 0.03	0.024 ± 0.007	0.03 ± 0.01	0.01 ± 0.01	0.016 ± 0.006	0.008 ± 0.008
ondato-000	0.50	0.23 ± 0.04	0.11 ± 0.02	0.05 ± 0.02	0.10 ± 0.03	0.045 ± 0.010	0.011 ± 0.008
ondato-001	0.55	0.16 ± 0.04	0.07 ± 0.01	0.04 ± 0.02	0.06 ± 0.02	0.018 ± 0.006	0.006 ± 0.006
privately-000	0.54	0.08 ± 0.03	0.14 ± 0.02	0.07 ± 0.03	0.01 ± 0.01	0.037 ± 0.009	0.003 ± 0.003
regula-000	0.76	0.07 ± 0.02	0.013 ± 0.006	0.02 ± 0.01	0.003 ± 0.003	0.002 ± 0.002	0.000 ± 0.000
roc-000	0.50	0.18 ± 0.04	0.17 ± 0.02	0.02 ± 0.01	0.07 ± 0.03	0.12 ± 0.02	0.000 ± 0.000
roc-001	0.59	0.14 ± 0.04	0.10 ± 0.02	0.003 ± 0.003	0.05 ± 0.02	0.042 ± 0.010	0.003 ± 0.003
roc-002	0.55	0.05 ± 0.02	0.040 ± 0.010	0.008 ± 0.008	0.012 ± 0.009	0.014 ± 0.005	0.000 ± 0.000
shufti-000	0.41	0.21 ± 0.04	0.09 ± 0.01	0.14 ± 0.03	0.11 ± 0.03	0.05 ± 0.01	0.02 ± 0.01
unissey-001	0.25	0.17 ± 0.04	0.26 ± 0.02	0.19 ± 0.04	0.20 ± 0.04	0.26 ± 0.02	0.04 ± 0.02
viante-000	0.45	0.60 ± 0.05	0.33 ± 0.03	0.12 ± 0.04	0.43 ± 0.05	0.25 ± 0.02	0.02 ± 0.01
yoti-001	0.53	0.18 ± 0.04	0.14 ± 0.02	0.19 ± 0.04	0.02 ± 0.01	0.036 ± 0.009	0.003 ± 0.003
yoti-002	0.52	0.10 ± 0.03	0.12 ± 0.02	0.06 ± 0.02	0.012 ± 0.009	0.028 ± 0.007	0.006 ± 0.006
yoti-003	0.56	0.11 ± 0.03	0.12 ± 0.02	0.05 ± 0.02	0.012 ± 0.009	0.020 ± 0.007	0.006 ± 0.006
yoti-004	0.54	0.06 ± 0.02	0.05 ± 0.01	0.011 ± 0.008	0.012 ± 0.009	0.011 ± 0.005	0.003 ± 0.003
youverse-000	0.45	0.18 ± 0.04	0.037 ± 0.009	0.13 ± 0.03	0.12 ± 0.03	0.021 ± 0.007	0.03 ± 0.02

Weighted Challenge-25 metrics: In a Challenge-T application, the false positive rate varies by age and demographics. We therefore introduce an aggregated measure of ineffectiveness, which is a

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population- and risk-weighted average of FPR. The population weights quantify the age pyramid; the risk weights express how likely it is for a person of each age to attempt to use an AV system. The formula is presented and discussed in section 2.7.3; it is included not as a definitive model, rather to illustrate what an analyst might consider. For an 18 year legal limit application, Table 7 shows weighted Challenge-T FPR, aggregating both sexes and six regions-of-birth with equal weights, and $13, \ldots, 17$ year olds with weights that de-emphasize the younger ages.

Table 7. *For Application images in an L = 18 age restriction application,* **ineffectiveness** *for four Challenge-T thresholds i.e. a population weighted aggregate of FPR. Lower values are better.*

Algorithm	T=22	T=25	T=28	T=31
cognitec-000	0.096 ± 0.024	0.022 ± 0.010	0.005 ± 0.004	0.002 ± 0.002
cvut-001	0.265 ± 0.036	0.128 ± 0.026	0.036 ± 0.012	0.012 ± 0.006
cvut-002	0.159 ± 0.030	0.051 ± 0.017	0.009 ± 0.006	0.003 ± 0.002
cvut-003	0.127 ± 0.027	0.042 ± 0.015	0.008 ± 0.005	0.002 ± 0.002
cyberlink-000	0.514 ± 0.043	0.125 ± 0.027	0.035 ± 0.014	0.006 ± 0.004
cyberlink-001	0.195 ± 0.033	0.038 ± 0.015	0.009 ± 0.006	0.002 ± 0.002
daon-000	0.286 ± 0.037	0.121 ± 0.026	0.043 ± 0.016	0.015 ± 0.008
daon-001	0.211 ± 0.033	0.069 ± 0.020	0.022 ± 0.010	0.007 ± 0.005
dermalog-001	0.358 ± 0.040	0.116 ± 0.025	0.035 ± 0.014	0.010 ± 0.006
dermalog-002	0.357 ± 0.038	0.131 ± 0.026	0.034 ± 0.014	0.010 ± 0.007
hzailu-001	0.711 ± 0.039	0.478 ± 0.043	0.234 ± 0.036	0.084 ± 0.023
idemia-001	0.096 ± 0.023	0.019 ± 0.009	0.006 ± 0.004	0.002 ± 0.002
idemia-002	0.064 ± 0.020	0.014 ± 0.008	0.005 ± 0.004	0.001 ± 0.001
inbut-000	0.366 ± 0.040	0.180 ± 0.033	0.087 ± 0.024	0.041 ± 0.017
incode-000	0.095 ± 0.022	0.039 ± 0.015	0.013 ± 0.007	0.004 ± 0.003
incode-001	0.119 ± 0.025	0.042 ± 0.014	0.014 ± 0.008	0.004 ± 0.003
innovatrics-000	0.195 ± 0.030	0.044 ± 0.014	0.008 ± 0.005	0.002 ± 0.002
innovatrics-001	0.182 ± 0.029	0.038 ± 0.012	0.007 ± 0.004	0.002 ± 0.002
innovatrics-002	0.183 ± 0.028	0.055 ± 0.015	0.011 ± 0.006	0.003 ± 0.003
jumio-000	0.269 ± 0.036	0.099 ± 0.024	0.035 ± 0.014	0.014 ± 0.008
neurotechnology-000	0.615 ± 0.036	0.323 ± 0.035	0.109 ± 0.022	0.031 ± 0.012
neurotechnology-001	0.481 ± 0.042	0.147 ± 0.027	0.023 ± 0.012	0.011 ± 0.007
nominder-000	0.269 ± 0.037	0.059 ± 0.018	0.019 ± 0.009	0.006 ± 0.004
nominder-001	0.185 ± 0.031	0.033 ± 0.013	0.008 ± 0.005	0.003 ± 0.003
ondato-000	0.277 ± 0.037	0.090 ± 0.023	0.025 ± 0.011	0.008 ± 0.005
ondato-001	0.253 ± 0.035	0.064 ± 0.019	0.014 ± 0.008	0.004 ± 0.003
privately-000	0.190 ± 0.031	0.053 ± 0.016	0.011 ± 0.007	0.003 ± 0.002
regula-000	0.082 ± 0.021	0.018 ± 0.009	0.004 ± 0.004	0.001 ± 0.001
roc-000	0.288 ± 0.035	0.085 ± 0.021	0.019 ± 0.009	0.005 ± 0.004
roc-001	0.239 ± 0.033	0.053 ± 0.016	0.011 ± 0.006	0.004 ± 0.003
roc-002	0.089 ± 0.021	0.022 ± 0.011	0.005 ± 0.004	0.002 ± 0.002
shufti-000	0.231 ± 0.035	0.085 ± 0.022	0.028 ± 0.013	0.009 ± 0.007
unissey-001	0.270 ± 0.037	0.162 ± 0.030	0.054 ± 0.018	0.013 ± 0.008
viante-000	0.692 ± 0.036	0.318 ± 0.037	0.077 ± 0.019	0.009 ± 0.006
yoti-001	0.189 ± 0.030	0.090 ± 0.021	0.033 ± 0.012	0.011 ± 0.007
yoti-002	0.144 ± 0.026	0.059 ± 0.017	0.015 ± 0.008	0.005 ± 0.004
yoti-003	0.145 ± 0.027	0.054 ± 0.016	0.016 ± 0.008	0.004 ± 0.004
yoti-004	0.149 ± 0.027	0.029 ± 0.012	0.005 ± 0.004	0.002 ± 0.002
youverse-000	0.213 ± 0.034	0.079 ± 0.022	0.025 ± 0.012	0.008 ± 0.006

We additionally quantify inconvenience experienced by persons above the legal age limit whose age verification are delayed by a failed Challenge-T attempt. The aggregated measure is again a weighted average this time of false negative rates (FNR). The formula is presented and discussed in section 2.7.4. Table 8 shows Challenge-T FNR computed over all ages $18, \ldots, 71$ with equal weights representing uniform likelihood that adults would engage with the system.

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Table 8. *For Application images in an L = 18 age restriction application,* **inconvenience** *for four Challenge-T thresholds i.e. a population weighted aggregate of FNR. Lower values are better.*

Algorithm	T=22	T=25	T=28	T=31
cognitec-000	0.077 ± 0.005	0.139 ± 0.006	0.202 ± 0.006	0.264 ± 0.007
cvut-001	0.069 ± 0.006	0.119 ± 0.007	0.188 ± 0.008	0.267 ± 0.009
cvut-002	0.077 ± 0.007	0.138 ± 0.008	0.227 ± 0.009	0.282 ± 0.009
cvut-003	0.077 ± 0.005	0.143 ± 0.006	0.222 ± 0.007	0.275 ± 0.007
cyberlink-000	0.019 ± 0.003	0.090 ± 0.006	0.156 ± 0.007	0.254 ± 0.008
cyberlink-001	0.057 ± 0.005	0.128 ± 0.006	0.203 ± 0.007	0.272 ± 0.007
daon-000	0.068 ± 0.006	0.121 ± 0.007	0.185 ± 0.008	0.249 ± 0.009
daon-001	0.065 ± 0.005	0.116 ± 0.006	0.176 ± 0.007	0.237 ± 0.007
dermalog-001	0.051 ± 0.006	0.122 ± 0.008	0.193 ± 0.008	0.257 ± 0.009
dermalog-002	0.056 ± 0.006	0.125 ± 0.009	0.210 ± 0.010	0.288 ± 0.010
hzailu-001	0.022 ± 0.004	0.048 ± 0.006	0.107 ± 0.009	0.196 ± 0.010
idemia-001	0.073 ± 0.005	0.130 ± 0.005	0.190 ± 0.006	0.250 ± 0.006
idemia-002	0.085 ± 0.005	0.140 ± 0.006	0.194 ± 0.006	0.251 ± 0.006
inbut-000	0.033 ± 0.003	0.077 ± 0.005	0.142 ± 0.006	0.213 ± 0.007
incode-000	0.075 ± 0.005	0.120 ± 0.006	0.184 ± 0.006	0.247 ± 0.006
incode-001	0.060 ± 0.004	0.100 ± 0.005	0.153 ± 0.005	0.210 ± 0.006
innovatrics-000	0.048 ± 0.004	0.113 ± 0.005	0.190 ± 0.006	0.263 ± 0.006
innovatrics-001	0.052 ± 0.004	0.121 ± 0.005	0.197 ± 0.006	0.273 ± 0.006
innovatrics-002	0.055 ± 0.004	0.111 ± 0.005	0.185 ± 0.006	0.254 ± 0.006
jumio-000	0.040 ± 0.004	0.089 ± 0.005	0.149 ± 0.006	0.214 ± 0.006
neurotechnology-000	0.040 ± 0.005	0.107 ± 0.007	0.209 ± 0.009	0.308 ± 0.010
neurotechnology-001	0.047 ± 0.005	0.140 ± 0.009	0.263 ± 0.010	0.343 ± 0.011
nominder-000	0.049 ± 0.005	0.120 ± 0.006	0.182 ± 0.007	0.248 ± 0.007
nominder-001	0.056 ± 0.004	0.129 ± 0.006	0.198 ± 0.006	0.263 ± 0.007
ondato-000	0.044 ± 0.004	0.102 ± 0.006	0.174 ± 0.007	0.241 ± 0.007
ondato-001	0.043 ± 0.004	0.103 ± 0.006	0.177 ± 0.006	0.247 ± 0.007
privately-000	0.081 ± 0.006	0.165 ± 0.008	0.254 ± 0.009	0.331 ± 0.009
regula-000	0.069 ± 0.004	0.126 ± 0.005	0.190 ± 0.005	0.255 ± 0.006
roc-000	0.049 ± 0.004	0.099 ± 0.005	0.157 ± 0.006	0.221 ± 0.007
roc-001	0.039 ± 0.003	0.088 ± 0.005	0.151 ± 0.005	0.216 ± 0.005
roc-002	0.068 ± 0.004	0.119 ± 0.005	0.181 ± 0.005	0.248 ± 0.006
shufti-000	0.042 ± 0.004	0.083 ± 0.006	0.132 ± 0.006	0.187 ± 0.007
unissey-001	0.061 ± 0.006	0.091 ± 0.007	0.155 ± 0.008	0.246 ± 0.009
viante-000	0.006 ± 0.001	0.036 ± 0.004	0.105 ± 0.005	0.188 ± 0.006
yoti-001	0.047 ± 0.004	0.082 ± 0.005	0.137 ± 0.006	0.199 ± 0.006
yoti-002	0.056 ± 0.004	0.093 ± 0.005	0.156 ± 0.006	0.222 ± 0.006
yoti-003	0.053 ± 0.004	0.092 ± 0.005	0.152 ± 0.005	0.216 ± 0.006
yoti-004	0.048 ± 0.004	0.108 ± 0.005	0.181 ± 0.005	0.244 ± 0.006
youverse-000	0.079 ± 0.006	0.144 ± 0.008	0.227 ± 0.009	0.312 ± 0.010

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The two tables show the expected tradeoff between protecting young people and inconveniencing older subjects.

Children: We use a set of visa photos collected in one country, Mexico, to quantify age estimation accuracy in children between age 0 to 17. Accuracy is higher than in an adult population: For the most accurate algorithm mean absolute error in children under age 1 is 0.34 years (i.e. about four months) versus 3.5 years for a thirty year old. See sec. 5.5.

Future work: The FATE AEV evaluation remains open, so we will continue to evaluate and report on newly submitted prototypes. In future reports we will: evaluate performance of implementations that can exploit having a prior known-age reference photo of a subject (see our API); consider

whether video clips afford improved accuracy over still photographs; and extend demographic and quality analyses.

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1. Introduction

1.1. Role of AEV Technology

Age assurance (AA) systems are fielded to support validation of a person's eligibility to access age-restricted online content or physical world products or spaces. As the Future of Privacy Forum shows, an AA system may employ various methods depending on the purpose. These include human checks of a government-issued identification document, possession of a credit card or payment credential only issued to people of the required age, biometric verification against a photograph collected during a prior session in which age was verified, accessing high integrity age data from a trusted device, and use of face analysis to estimate age or verify age is above (or below) the limit.

This report is concerned only with evaluation of AE technologies used in an age verification process. It is intended to generically support applications including:

1. Verification that a person is above 18, 21 or other key ages, e.g. for sale of alcohol.
2. Verification that a person is below a certain age, e.g. entrance to a teen chat room.
3. Producing population age statistics for people visiting certain locations, e.g. movie theaters.
4. Digital advertising where a display might show an age-tailored advertisement.
5. Checks that a passport application photo is recent (not collected 10 years previously).
6. Age estimation for refugees, asylum seekers, and other undocumented individuals.

Age assurance is mandated in various jurisdictions for various purposes. In the United States, the Children's Online Privacy Protection Act (COPPA) of 1998[1], requires the Federal Trade Commission to prescribe regulations to protect the privacy of personal information collected from and about children on the internet, to provide greater parental control over the collection and use of that information, and for other purposes. Within the States, Arkansas[2], Mississippi[3], Montana[4], Louisiana[5], Utah[6], Virginia[7], and Texas[8] have passed age verification laws to require social media, adult websites, harmful to minors to use a reasonable age verification methods to verify the user's age eligibility.

There are new and emerging technical standards in this area. IEEE Standard 2089-2021 provides best practice for designing digital services that impact directly or indirectly on children[9]. ISO/IEC 27566 is a (recently renumbered) multipart standard for age assurance: Part 1 provides a framework including vocabulary; Part 2 guides architecture and interoperability; Part 3 concerns benchmarking and analysis.

1.2. Age Estimation is Not Face Recognition

We distinguish facial age estimation (AE) from face recognition (FR). AE analyses one face to produce an estimate of age. FR is concerned with *who* is in an image. The two techniques employ different algorithmic machinery for these two purposes: AE is trained on photos accompanied by known-age values; FR is trained on pairs of photographs with identity labels. AE typically proceeds with *one* photograph or video - the image is passed to an algorithm which emits an age estimate, and the photo can be deleted. FR, on the other hand, compares identity information extracted from *two*

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photos with the goal of determining if they are from the same person. The first sample is stored in a passport, or phone, or database. The second sample is collected for verification or identification. The Oxford English Dictionary is explicit in noting the "previous encounter". The utility of FR is in binding a new photograph to an older one and its informative metadata, for example, that a person is allowed to enter a facility, or had previously applied for a passport under the same (or different) name, or had previously been deported from a country.

1.3. Scope

NIST published Interagency Report 7995 Performance of Automated Age Estimation Algorithms in 2014. The report showed that the most accurate algorithm can estimate the age of a person within five years of their actual age 67% of the time[10]. With the increase in human-computer interaction and as the motivation of needs to use age estimation systems continues to grow, NIST revamped the age estimation study. We restructured and launched the Face Analysis Technology Evaluation - Age Estimation and Verification track. This is an ongoing evaluation to benchmark software-based facial age estimation algorithms.

This evaluation is not a certification program nor an evaluation of a full age verification process. It does not evaluate mechanisms for detecting active attacks on AV systems. It does not establish minimum accuracy criteria, because different applications have different requirements.

1.4. The Technical Challenge

An AE algorithm is tasked with mapping pixel values in an image to an estimate of the subject's age. The output estimate will generally be different to the actual age, and this estimate error should be low and bounded. An AE algorithm should tolerate at least four classes of variation. First are **photography-related** factors such as illumination, exposure, focus, and distortion. Second are **subject presentation** variations such as facial hair, eye glasses, dry vs. moisturized skin, and cosmetics. Third there are more **slowly varying** facial archetypes such as sun-damaged skin, creases, and jowls. Fourth there are **phenotypic** properties which includes skin tone but extends to a multitude of characteristics such as high cheek bones, bushy eye brows, dark eye brows, thin lips, square jaws, flat faces, and aquiline noses. This latter category are often properties of demographic groups associated with sex and ethnicity. Further more, should age estimation accuracy be constant across age, should it work as well in the old as the young? Ideally, yes, but operationally this is less important as many applications are focused on groups of people around a certain age, and algorithms could be tailored for that.

Figure 1 demonstrates some of the difficulty of the AE task. The figure shows the result of applying AE algorithms to self-portraits collected by artist Noah Kalina as part of his Everyday project. The images, collected daily since 2000, can seen via that link.

The figure reveals considerable **daily variance** in the age estimates. The daily increase should be 1/365 but the standard deviation of the absolute error is much larger - above 2 years in the best case. Why this occurs would require detailed developer investigation. Given the use of one camera model for the period 2009-2015 (age 27-34) and an impressively consistent two-arm frontal-selfie presentation to that camera, the sources of short-term variation are clothing, hair arrangement, ambient illumination which varies with the room, and sensor noise, none of which should affect

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estimated age. In the longer-run the subject does adopt a heavier beard, but that too is elective not essentially part of ageing.

The figure also shows **systematic error** for all six algorithms: They overestimate Kalina's age, with very few photographs ever giving an underestimate. The blue line $y = x$ represents perfect estimation; the green line represents best fit linear regression. The separation of those lines is around five years, and this often persists for the entire interval. Why this occurs is not known, but could be investigated by developers who should have access to the photographs. An incorrect birthdate would yield consistent error, but date of birth has been reported. The images have good quality, so either some aspect of the subject's appearance induces overestimation, or the algorithms are sensitive to information beyond the facial region. This concept - that some people look young, or old, for their age - is common in human experience, but whether Deep Neural Network (DNN) based algorithms can acquire information from photographs that humans cannot, or at least do not, is not clear.

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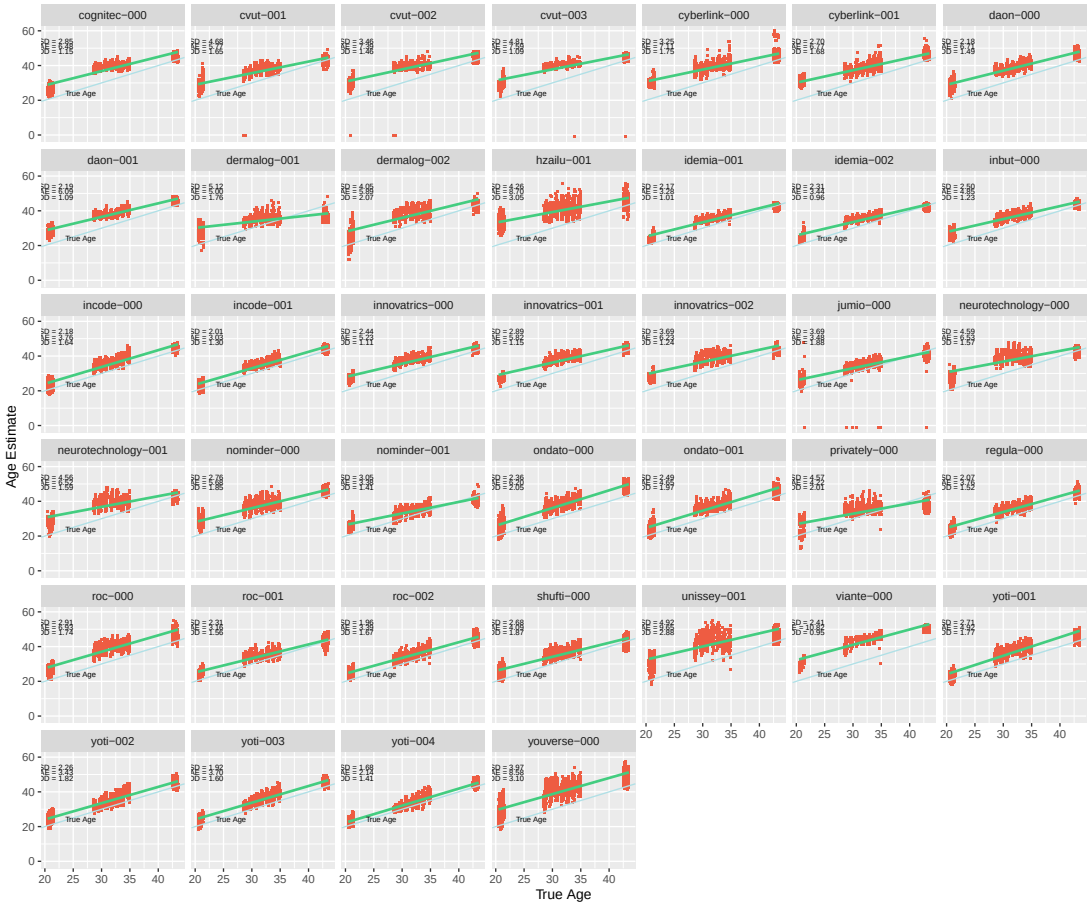
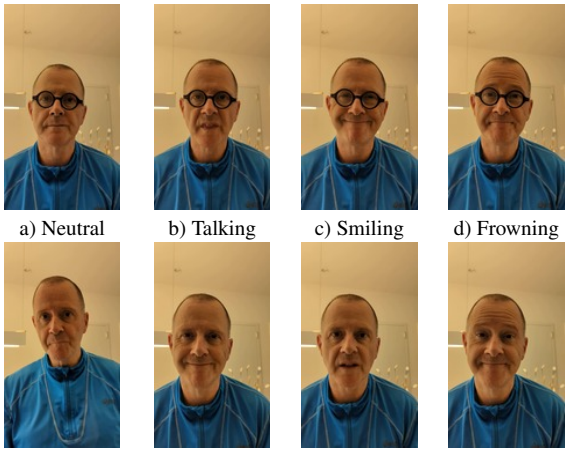


Fig. 1. *This figure shows age estimates plotted against ground truth age for six algorithms applied to 1991 photographs of the artist Noah Kalina taken daily throughout 2001, then between January and June in the years 2009 - 2015, then again throughout 2023. Note NIST purchased only photos for the first six months of each calendar year - the subject was born 1980-07-04. The inset values are standard deviation (SD) quantifying "noise", mean absolute error (MAE) quantifying accuracy, and mean sequential day difference (MDD) which would ideally be 1/365. The lower blue line gives ground truth age. The upper line gives least squares best fit.*

This kind of variation is evident in the very short term also. Figure 3 shows the results of applying AE algorithms to sequential frames in a 60 second video. The frames have size 1080x1920 and were extracted from an MP4 video captured by one of the authors using his mobile phone. The figure shows considerable inter-frame estimated age variation even in frames 0-180 and 900-1100 where the subject was largely motionless. In subsequent frames the subject talks, then smiles and frowns, and these induce larger variance. Age estimates tend to be higher with thick-rimmed glasses in the first half of the video, than without glasses in the second half.



a) Neutral b) Talking c) Smiling d) Frowning

e) Glasses Off f) Smiling g) Talking h) Frowning

Fig. 2. Image frames from a 60 second video when subject's facial expression changes, causing large variance.

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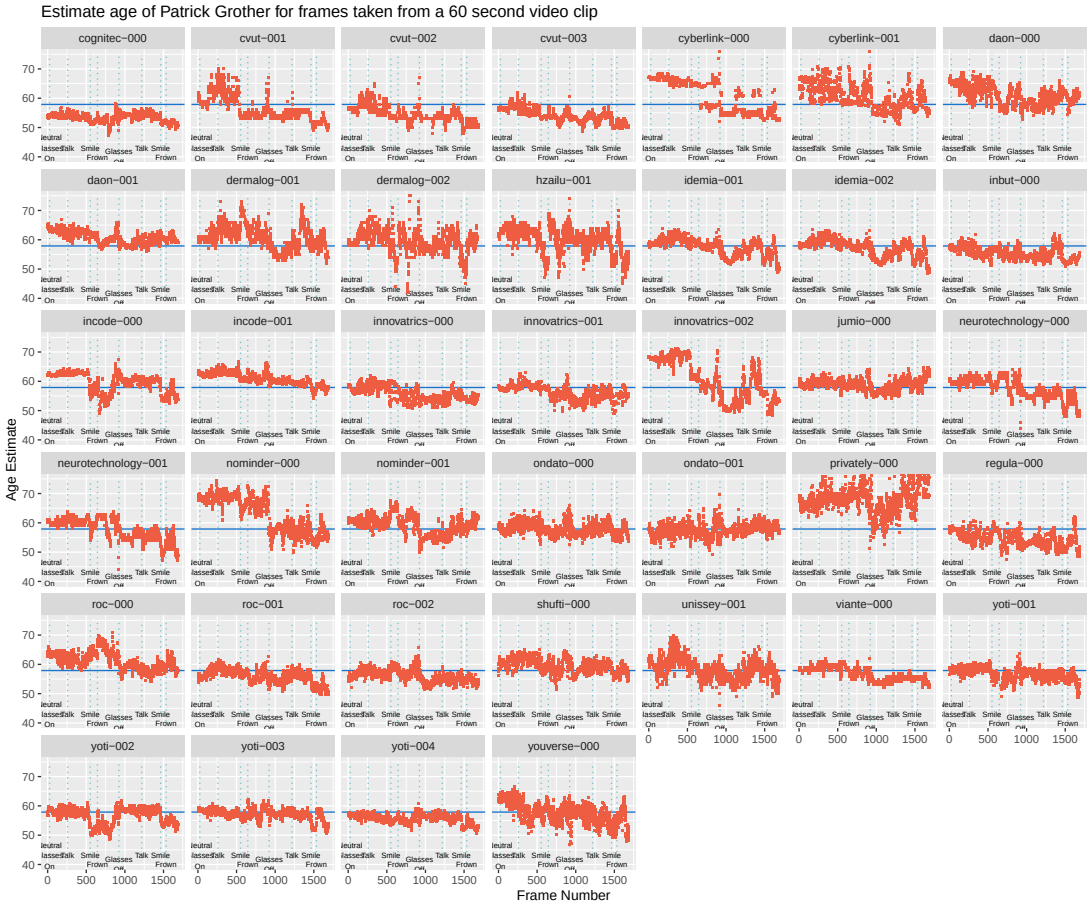

Fig. 3. *This figure shows the variation of age estimates for six algorithms applied to 1688 frames of Patrick Grother (figure 2) extracted from a 60 second video captured using an Android phone. The blue line is the ground truth age.*

Discussion: Face recognition (FR) algorithms have become highly insensitive to nuisance variables such as pose, illumination and expression. This has been achieved over time using diverse in-the-wild datasets, and more recently data augmentation (synthetically changing images to diversify appearance while maintaining identity). FR algorithms are tasked with extracting features related to a person's fixed identity; AE algorithms, on the other hand, are estimating a variable quantity, age. Whether AE can become insensitive to nuisance variables is not clear, and may actually be unnecessary. What is needed, at least in those applications involving determination that a person is younger or older than some limit, is to put bounds on AE measurement "noise" - i.e. to ensure that errors are inside some limit. In those Challenge-T applications, the appropriate task is to limit false positives.

2. Performance Metrics

This section details performance measures for age estimation algorithms. The metrics are statistics estimated by applying an AE algorithm to N images for which we have a known age, a_k, to get an

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estimated age, $\hat{a}_k$. Unless stated otherwise, these are based on the absolute error

$$\varepsilon_k = |\hat{a}_k - a_k| \tag{1}$$

2.1. Mean Absolute Error

Mean Absolute Error (MAE) is defined as the mean difference between the actual and estimated ages:

$$\text{MAE} = \frac{1}{N}\sum_{k=1}^{N} \varepsilon_k \tag{2}$$

This serves as our primary accuracy measure. We do not use mean squared error (MSE) root mean squared error (RMS) as the $(x)^2$ nature greatly magnifies large magnitude errors. In applications where large under- or over-estimations have impact, these metrics may be preferable.

2.2. Median Absolute Error

Median Absolute Error (MDAE) is defined as the median of the absolute error values, ε_k. The median is a robust statistic meaning that it is insensitive to outliers. Given N ordered error values,

$$\text{MDAE} = \begin{cases} \varepsilon_{(N+1)/2}, & \text{if N is odd} \\ (\varepsilon_{N/2} + \varepsilon_{N/2+1})/2 & \text{if N is even} \end{cases} \tag{3}$$

Outliers can exist in datasets due to several reasons: First is that some people might look naturally young or prematurely very old; Second is that medical (e.g. botox) or surgical (e.g. tuck) interventions are specifically intended at reducing apparent age; Third is that ground truth age could be incorrect due to key-data-entry typos or similar clerical errors; and Fourth is that ground truth age can be faulty either due to lack of birth certificates in poor countries, or due to intentional deception.

2.3. Standard deviation

The **Standard Deviation (SD)** is used to quantify variation around the mean. It has been adopted in the AEV industry as a supplement MAE[1].

$$\text{SD} = \frac{1}{N-1}\sum_{k=1}^{N} (\varepsilon_k - \text{MAE})^2 \tag{4}$$

This statistic only quantifies variation around the mean, so an algorithm could have low SD yet be systematically underestimating or overestimating age, i.e. large MAE. For this reason we consider SD as a secondary performance indicator.

2.4. Accuracy

Overall **Accuracy (ACC)** is defined as the proportion of test images for which the absolute error is below a threshold, T,

$$\text{ACC}(T) = 1 - \frac{1}{N}\sum_{k=1}^{N} H(\varepsilon_k - T) \tag{5}$$

[1] Yoti, Age Esimation White Paper (December 2023), 15

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where $H(x)$ is the step function

$$H(x) = \begin{cases} 0, & \text{if } x < 0 \\ 1, & \text{if } x \geq 0 \end{cases} \tag{6}$$

2.5. Inequities Across Demographic Groups

The **Gini coefficient**[2] has long been used in Economics to quantify earnings or wealth inequality across a population. Here we adopt it to express variability in accuracy across M demographic groups. This has been done for biometric error rates, particularly in ISO/IEC 19795-10:2024.

$$G = \frac{\sum_{i=1}^{M} \sum_{j=1}^{M} \left| x_i - x_j \right|}{2M(M-1)\mu}, \tag{7}$$

where μ is the arithmetic mean of x. This can be applied to MAE, MDAE or any other statistic.

2.6. Age Verification

The FATE API includes an optional *verifyAge* function that accepts an image and an age threshold, and requires the implementation under test to return a confidence score, with larger values indicating that the subject is indeed above the legal age threshold.

We apply the function to images drawn from two groups, those below and those above a legal age, say 18:

- ▷ **Under 18s**. Given N images of underage people, we obtain the k-th confidence score, c_k, and compute a false positive rate (FPR) as the fraction for which the algorithm gives confidence higher than a threshold T.

$$\text{FPR}(T) = \frac{1}{N} \sum_{k=1}^{N} H(c_k - T) \tag{8}$$

  The reported FPR is actually a weighted sum over subjects who are 17, 16, 15 and 14. The weights come from equation (16), expressing the higher prior likelihood that a 17-year old would attempt to defeat an age verification system than would someone younger - see discussion in section 2.7.3.

$$\text{FPR}(T) = \frac{\sum_{i=14}^{17} p_i \text{FPR}_i(T)}{\sum_{i=14}^{17} p_i} \tag{9}$$

  where $\text{FPR}_i(T)$ is computed over N_i images.

- ▷ **Over 18s** The corresponding false negative rate (FNR) is computed as an equally weighted sum of subjects who are truly above the legal age yet who are assigned low confidence of being so:

$$\text{FNR}(T) = \frac{1}{30 - 18 + 1} \sum_{i=18}^{30} \text{FNR}_i(T) \tag{10}$$

  where FNR_i is the FNR estimates for just people of age i:

$$\text{FNR}_i(T) = 1 - \frac{1}{N_i} \sum_{k=1}^{N_i} H(c_k - T) \tag{11}$$

[2] See https://mathworld.wolfram.com/GiniCoefficient.html.

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This represents a population of users who are uniformly aged 18 to 30.

2.7. Challenge-T

A main application of AEV systems is in verifying that a person is above a certain legally mandated age. For example, for alcohol purchases, this age is 21 years in most United States jurisdictions. Recognizing AEV algorithms naturally have age estimation errors, systems are typically configured to require another form of age verification if the estimated age is below a challenge age, T. The value of T depends on the legal restiction age, L, and the accuracy of the age estimator. For L = 18, T = 25 is common. For L = 21, a higher value of T would be required to achieve the same accuracy.

For an evaluation of AE algorithms we seek figures of merit for the effectivess at the stated objective and for convenience for the legal population.

2.7.1. False Positive Rate

In Challenge-T applications, a false positive occurs if the true age is less than the legal age limit, L, and the estimated age is greater than or equal to the challenge age, T. The false positive rate is estimated over a set of N samples for which $a_k < L$.

$$\mathrm{FPR} = \frac{1}{N}\sum_i H(\hat{a}_k - T) \tag{12}$$

2.7.2. False Negative Rate

In Challenge-T applications, a false negative occurs when someone above the legal age is estimated to have age below the challenge age, T. The false negative rate is estimated over a set of N samples for which $a_k \geq L$.

$$\mathrm{FNR} = 1 - \frac{1}{N}\sum_i H(\hat{a}_k - T) \tag{13}$$

2.7.3. Ineffectiveness

The **Ineffectiveness** quantifies how well the system prevents people below the legal age limit (L) from accessing the prohibited service or item. We define it in terms of how often it allows under-age persons to go unchalleneged:

$$\mathrm{INEFFECTIVENESS}(T) = \frac{\sum_{i=0}^{\mathrm{L}-1} w_i\, p_i\, \mathrm{FPR}_i}{\sum_{i=0}^{\mathrm{L}-1} w_i\, p_i} \tag{14}$$

where w_i is the proportion of the population who have age i, p_i is the likelihood that a person of age i would even try to defeat the system, and FPR_i is an empirical false positive rate for persons of age i. The denominator normalizes so that ineffectiveness represents a false positive rate residing

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on $[0,1]$. FPR_i is estimated as the proportion of N_i individuals whose age is estimated at or above T

$$\mathrm{FPR}_i(T) = \frac{1}{N_i}\sum_{k=1}^{N_i} H(a_k - T) \tag{15}$$

The weights w_i should be estimated by an analyst from demographic tables. The probabilities p_i might be estimated via empiricial observation or via social modelling. For the purpose of this report we assume an exponential model for this prior probability.

$$p_i = \alpha \exp(i - \mathrm{L} + 1) \tag{16}$$

For example, with L = 18 and $\alpha = 0.6$ the formula says that 60% of 17-year olds would try ($p_{17} = 0.6$) but only 1.1% of 13 year olds would ($p_{13} = 0.011$). This may be pessimistic for 17 year olds in many societies but for our purpose - comparison of AEV algorithms - we do not refine this further. To do so would require some sociological study. The model is ad hoc and certainly imprecise in real operations but is used here to illustrate what a local policy analyst should adapt or replace in real operations.

Note that if false positive rates vary across sex or ethnicity, the weights could be adapted for specific populations, for example it may be known that p_i for women is less than that for men. In that case equation 14 could include doubly subscripted variables (p_{is}, FPR_{is}, etc., with s denoting sex).

2.7.4. Inconvenience

We additionally need a metric that quantifies how well the system does not inconvenience people above the legal age L. Inconvenience occurs when they are challenged and estimated to have age below T.

$$\mathrm{INCONVENIENCE}(T) = \frac{\sum_{i=\mathrm{L}}^{\mathrm{MA}} w_i\, p_i\, \mathrm{FNR}_i}{\sum_{i=\mathrm{L}}^{\mathrm{MA}} w_i\, p_i} \tag{17}$$

where T is the challenge age, MA is the maximum age of persons in the population, w_i is the proportion of the population who have age i, p_i is the likelihood that a person of age i would use the system at all, and FNR_i is an empirical false negative rate for persons of age i. This is estimated as the proportion of N_i individuals whose age is estimated below T.

This formulation treats everyone at or above the legal age equally. One might argue that those of, or older than, the legal age but younger than the challange age should expect to be inconvenienced and that this should be discounted in the equation. We reject this, maintaining the existence of a challenge policy is needed because the age estimation technology is imperfect.

2.8. Variance in age estimates from frontal images

Given the fully frontal, minimal activity, face videos described in 3.6 we quantify noise in the age estimates as follows.

For the i-th video, the algorithm under test is applied to each of the $j = 1 \ldots n_i$ frames producing age estimates x_{ij} or a non-zero return code, r_{ij} indicating failure to compute or elective refusal to compute. For each video we compute an overall age estimate as the arithmetic mean,

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$$\alpha_i = \frac{\sum_j^{n_i} x_{ij} \delta_{0r_{ij}}}{\sum_j^{n_i} \delta_{0r_{ij}}} \tag{18}$$

where the Kronecker δ assigns zero weight to failed estimations. We then produce an overall noise statistic as the mean absolute error computed over all frames of all videos. The videos have the same length to within about 0.2%.

$$\eta = \sum_i \sum_j^{n_i} |x_{ij} - \alpha_i| \tag{19}$$

These values are tabulated on the variability tab of the AEV results page.

2.9. Variance in age estimates with head yaw

Given the right-left head pose variation videos described in 3.7 we quantify angular dependence as described below using head pose yaw estimates produced by a leading algorithm submitted to the FATE Quality track.

For the i-th video, the age estimation algorithm is applied to each of the n_i frames producing age estimates x_{ij} or a non-zero return code, r_{ij} indicating failure, or elective refusal, to compute.

Using head yaw estimates ϕ_{ij} for each frame, we compute an overall age estimate as the mean over frontal frames - those for which $\phi_{ij} > 6\,\text{deg}$.

$$\alpha_i = \frac{\sum_j^{n_i} x_{ij} \delta_{0r_{ij}} \left(1 - H(|\phi_{ij}| - 6)\right)}{\sum_j^{n_i} \quad \delta_{0r_{ij}} \left(1 - H(|\phi_{ij}| - 6)\right)} \tag{20}$$

where the Kronecker δ assigns zero weight to failed estimations, and the Heaviside function $H(x)$ is 1 for $x \geq 0$ and 0 otherwise.

We then recover an overall yaw sensitivity statistic u via simple linear regression.

$$|x_{ij} - \alpha_i| = u \sin|\phi_{ij}| + \varepsilon_{ij} \tag{21}$$

where the sine is used to discount variations at small yaw angles. As $sin(\pi/2) = 1$ the coefficient u can be interpreted as the increase in age estimation error for 90 degrees of head rotation, smaller values connoting less pose sensitivity. This interpretation is limited because the the videos have yaw variations rarely extending beyond 60 degrees. The u values are tabulated on the variability tab of the AEV results page.

3. Datasets

Table 9 shows the number of photographs and people in the datasets used in this report.

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Name	Visa	Mugshots	Application	Border	Kalina Everyday
Section	3.1	3.2	3.3	3.4	3.5
DOB Precision	YYYY-MM-DD	YYYY	YYYY-MM-DD	YYYY-MM-DD	YYYY-MM-DD
Age Precision	YYYY-MM-DD	YYYY	YYYY-MM-DD	YYYY-MM-DD	YYYY-MM-DD
Age Range	0-99	17-99	14-98	14-91	20-21, 28-34, 42-43
Num. Images	6 249 294	1 482 667	1 054 704	2 715 230	1 991
Num. People	5 738 091	1 482 667	802 332	632 520	1
Purpose	Exact repeat of 2014 study	AE accuracy on standard photos	Challenge-T and demographics	Effect of of quality	Longitudinal demonstration

Table 9. *Properties of the datasets.*

3.1. Visa Images

These images were used in the NIST 2014 Performance of Automated Age Estimation Algorithms[10] study. The images are of size 252x300 pixels. The mean interocular distance(IOD) is 69 pixels. The images are of subjects who applied for visas in United States consular facilities in Mexico. Many of the images are live capture. A minority of the images are photographs of paper photographs. When these images are passed to the algorithm, they are labeled with type "iso".

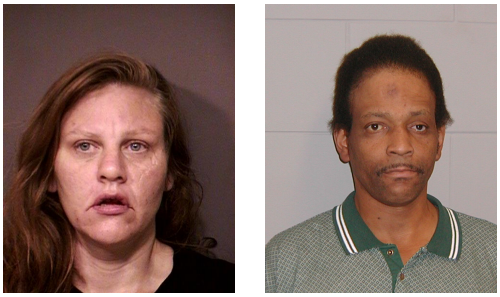

Fig. 4. *Examples of mugshot images used in the evaluation. Image source: NIST Special Database 32: Multiple Encounter Deceased Subjects (MEDS).*

3.2. Mugshot Images

The images are collected in the United States in routine post-arrest booking processes. While the images are accompanied by one of five race labels specified in an EBTS standard[3] we don't use them as they are unreliable. These images have reasonable compliance with the ANSI/NIST ITL 1-2011 Type 10 standard's subject acquisition profiles levels 10-20 for frontal images[11]. As shown in Figure 4 the images are of visually good quality, mostly sharp and well exposed per the standardized photographic equipment specified for their capture. The most common departure from standard requirements is the presence of mild pose variations around frontal. The images vary in size, with many being 480x600 pixels. They are JPEG compressed to produce filesizes of between 18 and 36 kilobytes. When these images are provided as input into the algorithm, they are labeled with the type "mugshot".

[3]This standard is published by the Criminal Justice Information Services (CJIS) Division of the Federal Bureau of Investigation in the United States Department of Justice. It defines data records for transactions that (law enforcement) agencies can make with the FBI. Version 10.0.7 of the standard was published on December 5, 2016. See https://www.fbibiospecs.cjis.gov.

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3.3. Application Images

The images are collected in an attended interview in immigration offices in the United States. The dataset is from a global population born in more than 100 countries, but for this study we use only those images from 34 countries grouped into six regions - see 5.4. The images are collected using dedicated capture equipment and lighting. They have a uniform, usually white background. As shown in Figure 5, the images have geometry in good conformance with the ISO/IEC19794-5 Full Frontal image type, pose is closely frontal, and eyeglasses are absent. The images, of size 300x300 pixels, are smaller than normally indicated by ISO. When these images are passed to an algorithm, they are labeled with the type "iso".

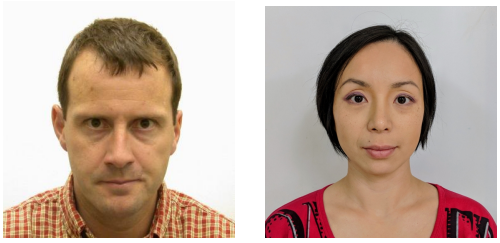

Fig. 5. *The figure gives simulated samples of application type image used in the evaluation. Image sources: Authors.*

3.4. Border Crossing Images

These images are taken with a webcam oriented by an immigration officer toward a cooperating subject - see the examples in Figure 6. The images are captured under time constraints, so roll, pitch and yaw often depart from frontal presentation, not exceeding ±45 degrees. Images sometimes have moderate contrast because the background can be bright. This can lead to an under-exposed face. Resolution is limited by the use of inexpensive cameras, compression, and resizing to 240 x 300 pixels. The images have mean interocular distance of 38 pixels. We excluded images for which a leading face recognition engine found more than one face (typically from someone standing in the background). When these images are passed to an algorithm, they are labeled with the type "wild".

Fig. 6. *The figure gives simulated samples of border type images used in the evaluation. The ages are 18yr 4mo, 41yr 3mo, and 52yr 2mo. Image sources: Author (right) and NIST Special Database 32 the Multiple Encounter Deceased Subjects dataset.*

3.5. Kalina Everyday

The artist Noah Kalina has collected a self portrait every day since 2000. NIST purchased twelve months of photos for the years 2001 and 2023, and photos from January to June for each year

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2009, 2010, 2011, 2012, 2013, 2014, and 2015. The images are attractive for longitudinal studies of age estimation (and face recognition), because they are collected with a fixed two-handed selfie technique. They therefore exhibit very little difference in head orientation, distance to camera, and margin around the head. The main sources of day-to-day variation are hairstyle and illumination. Also, the artist appears in various locations, so the backgrounds differ. All photos from 2001 have size 640x480, and all other years are 2816x2112. When these images are provided as input into the algorithm, they are labeled with the type "mugshot".

3.6. Frontal videos

This dataset is comprised of frames extracted from close-up, fully-frontal, high quality videos of people looking at a camera. The subjects are not asked to do anything. While they occasionally blink, swallow, purse their lips, or move their head slightly, they are largely motionless.

The are 482 indviduals. Each video has a 30 second duration. The video frame rate is 30 frames per second. Age estimation is done on each frame independently.

3.7. Yaw variation videos

This dataset is comprised of frames extracted from close-up high quality videos of people who are initially looking forward toward a camera and who then move their heads rightward, back to frontal, and then leftwards, and then back to frontal where they remain for more than 10 seconds. Subjects occasionally blink, swallow, or purse their lips. The maximum head rotation varies by subject but extends to from 30 degrees to 60 degrees.

The are 29 videos, one per indvidual. Each video has a 30 second duration. The video frame rate is 30 frames per second. Age estimation is done on each frame independently.

4. Algorithms

The FATE activity is open to participation worldwide, and the test will evaluate submissions on an ongoing basis. There is no charge to participate. The requirements to submit algorithms to NIST are described in the FATE Age Estimation And Verification Application Programming Interface (API)[12] document. Participants provide their submissions in the form of libraries compiled on a specific Linux kernel, which are linked against NIST's test harness to produce executables. NIST provides a validation package to participants to ensure that NIST's execution of submitted libraries produces the expected output on NIST's test machines.

Table 10. *Participant location, organization name, algorithm name, and submission date.*

	Location	Developer Name	Algorithm	Submission Date
1	DE	Cognitec Systems GmbH	cognitec-000	2025-07-11
2	CZ	Czech Technical University in Prague	cvut-001	2024-06-14
3	CZ	Czech Technical University in Prague	cvut-002	2024-11-04
4	CZ	Czech Technical University in Prague	cvut-003	2025-05-06
5	TW	Cyberlink Corp	cyberlink-000	2025-03-11
6	TW	Cyberlink Corp	cyberlink-001	2025-07-30
7	IE	Daon	daon-000	2025-05-08
8	IE	Daon	daon-001	2025-11-19

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Table 10. *Participant location, organization name, algorithm name, and submission date. (continued)*

	Location	Developer Name	Algorithm	Submission Date
9	DE	Dermalog	dermalog-001	2023-11-02
10	DE	Dermalog	dermalog-002	2025-01-13
11	CN	Hangzhuo AIlu Network Information Technology	hzailu-001	2025-03-28
12	FR	Idemia	idemia-001	2024-08-26
13	FR	Idemia	idemia-002	2025-06-23
14	CZ	Brno University of Technology-FIT DCGM	inbut-000	2024-09-11
15	US	Incode Technologies Inc	incode-000	2023-09-05
16	US	Incode Technologies Inc	incode-001	2025-03-28
17	SK	Innovatrics	innovatrics-000	2025-02-05
18	SK	Innovatrics	innovatrics-001	2025-06-05
19	SK	Innovatrics	innovatrics-002	2025-10-27
20	US	Jumio	jumio-000	2024-08-30
21	LT	Neurotechnology	neurotechnology-000	2023-10-17
22	LT	Neurotechnology	neurotechnology-001	2024-07-19
23	LT	Nominder	nominder-000	2024-07-22
24	LT	Nominder	nominder-001	2024-11-25
25	GB	Ondato UAB	ondato-000	2024-11-08
26	GB	Ondato UAB	ondato-001	2025-03-07
27	AU	Privately SA	privately-000	2026-01-14
28	US	Regula Forensics	regula-000	2025-07-23
29	US	ROC	roc-000	2023-11-03
30	US	ROC	roc-001	2024-10-29
31	US	ROC	roc-002	2026-02-06
32	GB	Shufti	shufti-000	2026-01-26
33	FR	Unissey	unissey-001	2023-09-19
34	AE	Viante.AI	viante-000	2024-11-25
35	GB	Yoti	yoti-001	2023-09-19
36	GB	Yoti	yoti-002	2024-09-17
37	GB	Yoti	yoti-003	2025-07-08
38	GB	Yoti	yoti-004	2026-01-07
39	PT	Youverse	youverse-000	2025-07-30

This report documents the results of algorithms submitted to FATE AEV for testing. Table 10 lists the algorithms that were tested.

Table 11. *Algorithm resources: The size of the algorithm (the models + the libraries); the median duration (in milliseconds) for AE function calls. Timing was conducted over 1000 function invocations with an input image of 640x480 pixels.*

Algorithm	MB		Millisecs		Integer Age Estimates
	Config	Lib	Estimate Age (One Media)	Verify Age (One Media)	
cognitec-000	137.93	25.92	292.11	293.47	No
cvut-001	2886.72	958.17	813.03	828.61	Yes
cvut-002	353.46	943.60	812.03	812.11	Yes
cvut-003	353.48	944.11	823.00	815.05	No
cyberlink-000	117.50	130.30	419.67	404.31	No
cyberlink-001	266.37	130.34	675.39	689.25	No
daon-000	115.02	65.12	362.26	-	No
daon-001	565.14	65.20	1395.44	-	No
dermalog-001	0.00	187.52	26.70	30.86	Yes
dermalog-002	0.00	168.32	27.41	31.32	Yes
hzailu-001	185.49	280.69	100.55	106.88	Yes
idemia-001	481.48	118.64	646.44	642.18	No
idemia-002	1444.45	64.44	632.31	644.35	No
inbut-000	0.00	791.00	711.81	708.56	No

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Table 11. *Algorithm resources: The size of the algorithm (the models + the libraries); the median duration (in milliseconds) for AE function calls. Timing was conducted over 1000 function invocations with an input image of 640x480 pixels. (continued)*

Algorithm	MB		Millisecs		Integer Age Estimates
	Config	Lib	Estimate Age (One Media)	Verify Age (One Media)	
incode-000	457.10	40.46	235.54	242.18	No
incode-001	910.32	40.46	868.99	872.13	No
innovatrics-000	0.00	2491.85	975.28	966.19	No
innovatrics-001	0.00	2474.18	981.35	979.77	No
innovatrics-002	0.00	2367.96	1128.20	1133.49	No
jumio-000	0.00	626.68	256.02	251.88	No
neurotechnology-000	113.42	95.91	153.18	156.60	Yes
neurotechnology-001	53.42	119.96	96.70	101.57	Yes
nominder-000	64.81	111.53	193.62	191.53	No
nominder-001	118.72	111.54	249.76	254.01	No
ondato-000	196.65	33.20	578.83	570.83	No
ondato-001	196.65	33.20	562.06	564.68	No
privately-000	293.60	27.33	63.59	-	No
regula-000	273.34	37.84	822.56	-	No
roc-000	0.00	473.82	134.15	134.08	No
roc-001	0.00	565.40	683.73	689.05	No
roc-002	0.00	737.29	1036.74	1037.68	No
shufti-000	194.02	52.54	612.70	616.65	No
unissey-001	0.00	952.42	113.34	117.91	Yes
viante-000	1224.51	16.15	1184.30	1183.37	Yes
yoti-001	226.95	428.53	267.86	257.46	No
yoti-002	243.55	427.93	377.59	379.94	No
yoti-003	810.14	934.89	734.52	724.69	No
yoti-004	810.14	1028.74	1093.71	1044.49	No
youverse-000	84.39	315.24	311.41	308.26	No

Table 11 gives technical information about the algorithms. Column two shows the size of static read-only data provided with the algorithms. FATE AEV is a black-box evaluation, so we don't know and don't inquire as to what this data is. It typically includes small configuration files and much larger deep neural network (DNN) model files for face detection and age estimation. Some developers (e.g. roc) include such data in the libraries contained in the "lib" directory whose size is noted in column three. The fourth and fifth columns note execution duration for a call to the age estimation function and age verification funcion, that accepts in-memory image data and produced an estimated age value, and true/false decision. The timing is measured by calling high-resolution C++ std::chrono timers immdiately before and after the function call. Timing is measured over 1000 images of size 640x480 pixels. Duration is measured on one core of a server-class Intel chip running in a machine that is otherwise idle. The final column notes whether age estimates are continuous (fractional parts of a year) or discrete (integer number of years).

Integer age estimates will imply increased MAE for those datasets where fractional actual age information is available.

Note the duration varies by an order of magnitude; the total size of the config and lib directory varies by about a factor of five - which may have relevance to the use of these algorithms on embedded or low-powered devices.

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5. Results

The following subsections address accuracy gains since 2014, comparative accuracy, Challenge-T performance, demographics, and the effect of quality.

5.1. Age Estimation Improvements Since 2014

We measure algorithmic accuracy gains since 2014 by running the 2024 algorithms on the exact dataset used in 2014[4]. This set consists of 6.2 million *Visa* images with about 5.7 million people collected in Mexico with ages spanning 0 to 100.

Figure 7 shows the proportion of images estimated to have error less than the number of years given on the horizontal axis. The 2014 algorithms are shown with dotted lines, recent entries with solid lines. Table 12 shows the top-performing algorithm on this dataset, Incode-000, has a reduction of 1.19 years in mean absolute error (MAE) compared to the leader from 2014, Cognitec-001. Three other performance variables improve also. Only one algorithm is inferior.

Figure 8 shows the same gain in MAE and the proportion of images whose age estimate is better than the best 2014 algorithm. That proportion is never larger than 61%. This result implies a degree of randomness - an improved algorithm doesn't always give better estimates.

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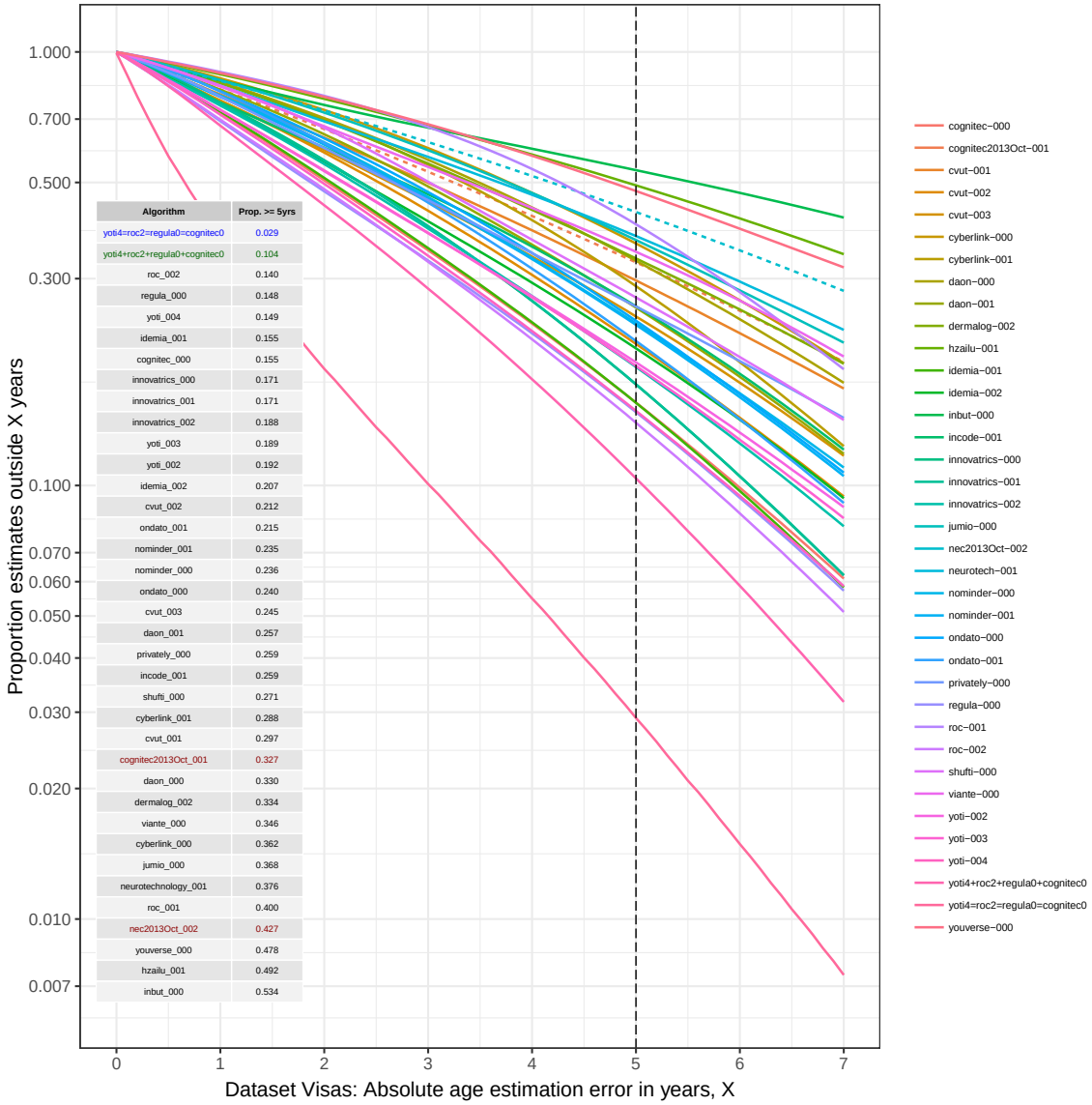
[4]See NIST Interagency Report 7995.



Algorithm	Prop. >= 5yrs
yoti4=roc2=regula0=cognitec0	0.029
yoti4+roc2+regula0+cognitec0	0.104
roc_002	0.140
regula_000	0.148
yoti_004	0.149
idemia_001	0.155
cognitec_000	0.155
innovatrics_000	0.171
innovatrics_001	0.171
innovatrics_002	0.188
yoti_003	0.189
yoti_002	0.192
idemia_002	0.207
cvut_002	0.212
ondato_001	0.215
nominder_001	0.235
nominder_000	0.236
ondato_000	0.240
cvut_003	0.245
daon_001	0.257
privately_000	0.259
incode_001	0.259
shufti_000	0.271
cyberlink_001	0.288
cvut_001	0.297
cognitec2013Oct_001	0.327
daon_000	0.330
dermalog_002	0.334
viante_000	0.346
cyberlink_000	0.362
jumio_000	0.368
neurotechnology_001	0.376
roc_001	0.400
nec2013Oct_002	0.427
youverse_000	0.478
hzailu_001	0.492
inbut_000	0.534

Fig. 7. *This plot shows the accuracy of the 2024 algorithms compared against two top-performing 2014 algorithms. The lines plot cumulative accuracy at absolute age estimation error levels. Results were generated with the* 6 172 425 *images of the Mexican visa population.*

Table 12. *Age estimation error statistics for the 2024 algorithms and the two most accurate algorithms from 2014 (in red). The values are mean and median absolute error (MAE, MDAE), standard deviation of the abs. error (SD), and mean error (ME). Dataset is the Mexican visa sample. MAE, MDAE, SD values are lower the better. ME values closer to zero the better, positive values are overestimate and negative values are underestimate.*

Algorithm	MAE	MDAE	ME	SD
regula-000	2.58	1.88	1.18	2.39
roc-002	2.55	1.91	1.07	2.31
yoti-004	2.66	1.98	1.06	2.44
cognitec-000	2.70	2.04	0.39	2.42
idemia-001	2.70	2.07	1.23	2.37
yoti-002	2.99	2.19	1.43	2.79

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Table 12. *Age estimation error statistics for the 2024 algorithms and the two most accurate algorithms from 2014 (in red). The values are mean and median absolute error (MAE, MDAE), standard deviation of the abs. error (SD), and mean error (ME). Dataset is the Mexican visa sample. MAE, MDAE, SD values are lower the better. ME values closer to zero the better, positive values are overestimate and negative values are underestimate. (continued)*

Algorithm	MAE	MDAE	ME	SD
yoti-003	2.96	2.20	1.63	2.75
innovatrics-002	2.97	2.30	1.02	2.59
incode-000	3.08	2.33	1.48	2.74
innovatrics-001	2.89	2.35	1.07	2.40
idemia-002	3.09	2.36	2.04	2.67
innovatrics-000	2.90	2.36	1.12	2.39
yoti-001	3.30	2.46	1.74	2.95
cvut-002	3.19	2.53	1.05	2.72
cvut-003	3.37	2.64	1.70	2.89
privately-000	3.65	2.67	-0.16	3.37
ondato-001	3.28	2.68	1.17	2.64
nominder-001	3.36	2.71	1.65	2.79
nominder-000	3.41	2.75	1.26	2.83
incode-001	3.43	2.76	2.64	2.89
ondato-000	3.46	2.84	1.06	2.82
daon-001	3.54	2.93	2.22	2.78
cvut-001	4.18	3.00	0.01	5.08
unissey-001	3.87	3.00	0.87	3.35
shufti-000	3.98	3.02	1.95	4.57
roc-000	3.81	3.12	2.64	3.05
dermalog-001	4.01	3.21	2.46	3.29
cognitec2013Oct-001	4.27	3.25	0.30	3.86
cyberlink-001	3.81	3.35	1.45	2.81
viante-000	4.17	3.39	3.20	3.29
dermalog-002	4.29	3.42	2.27	3.55
daon-000	4.15	3.49	2.12	3.21
neurotechnology-000	4.54	3.52	-0.19	3.96
neurotechnology-001	4.65	3.69	-0.09	3.98
jumio-000	4.98	3.77	3.61	5.05
cyberlink-000	4.40	3.78	2.77	3.31
nec2013Oct-002	5.32	4.19	0.31	4.61
roc-001	4.55	4.27	4.00	2.88
youverse-000	6.27	4.77	-2.20	5.61
hzailu-001	5.79	4.91	4.13	4.35
inbut-000	6.49	5.55	5.82	5.03

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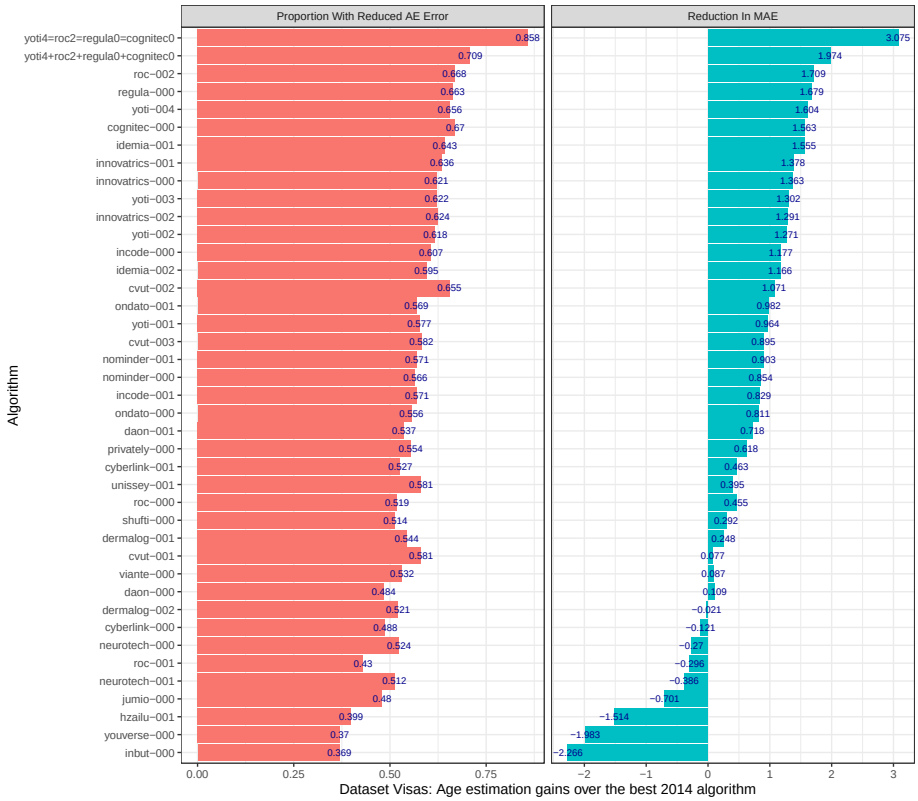

Fig. 8. *For 2024 algorithms, the right panel shows the fraction of images that have better accuracy estimates than the best-performing algorithm in our 2014 report (Cognitec-001 submitted to NIST 2013-10). The left panel shows the mean reduction in absolute age estimation error - negative values show worse performance now than in 2014. These results were generated over a consensus set of 6 166 298 images for which all algorithms returned an age estimate.*

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5.2. Comparing Algorithms

The prior section gives a ranking of algorithms on one dataset. We consider here three different datasets. Table 13 summarizes the mean age absolute error (MAE) for men and women, in three age groups, and in three datasets.

The table also includes the failure-to-process rate (FTP). FTP is uniformly very low, meaning the algorithms are able to process almost all photographs. Some algorithms may include a quality filter to electively decline to process images that the algorithm considers not suitable for AE. Low FTP is likely a product of face detection algorithms today that have very low false negative rates on cooperative datasets such as these. Note also it is a characteristic of deep neural networks to operate on *any* array of input pixels regardless of their semantic content.

Table 13. *By sex, mean absolute error (MAE), and failure to process proportion (FTP) for three age bands. Lower values are better.*

			Ages 18-30		Ages 31-50		Ages 51-80	
			Female	Male	Female	Male	Female	Male
Algorithm	**Dataset**	**FTP**	**MAE**	**MAE**	**MAE**	**MAE**	**MAE**	**MAE**
cognitec-000	Mugshot	0.000	2.8	2.4	3.4	2.9	4.3	3.9
cognitec-000	Application	0.000	3.0	2.6	3.6	3.1	4.0	4.1
cognitec-000	Border	0.002	3.2	3.3	4.0	3.0	5.8	5.3
cvut-001	Mugshot	0.022	4.0	3.4	5.1	4.5	6.2	5.4
cvut-001	Application	0.000	3.6	3.2	6.1	4.2	6.9	7.0
cvut-001	Border	0.002	3.8	3.4	7.8	6.1	7.4	7.5
cvut-002	Mugshot	0.022	2.9	2.6	4.3	3.6	5.1	4.9
cvut-002	Application	0.000	3.4	2.9	6.0	4.6	6.5	5.9
cvut-002	Border	0.001	3.3	3.2	4.5	3.8	6.1	5.8
cvut-003	Mugshot	0.022	3.1	2.6	3.9	3.3	4.8	4.6
cvut-003	Application	0.000	3.1	2.7	5.0	4.0	5.8	5.3
cvut-003	Border	0.001	3.1	2.9	4.4	3.8	5.8	5.5
cyberlink-000	Mugshot	0.000	3.4	3.5	4.4	3.8	5.4	4.8
cyberlink-000	Application	0.000	3.1	3.3	4.8	3.6	5.1	4.8
cyberlink-000	Border	0.000	3.4	3.2	5.8	4.2	5.8	5.5
cyberlink-001	Mugshot	0.000	3.1	2.8	4.1	3.5	5.0	4.1
cyberlink-001	Application	0.000	3.0	2.8	5.0	3.4	5.4	5.1
cyberlink-001	Border	0.000	3.6	2.9	7.0	4.4	7.4	6.6
daon-000	Mugshot	0.000	4.1	4.2	4.7	3.9	5.1	4.3
daon-000	Application	0.000	4.3	3.8	5.0	3.8	5.3	4.5
daon-000	Border	0.000	5.0	4.4	6.5	4.2	8.3	5.7
daon-001	Mugshot	0.000	3.6	3.5	4.0	3.4	4.2	4.0
daon-001	Application	0.000	3.8	3.5	4.1	3.2	4.2	3.7
daon-001	Border	0.001	4.4	3.7	5.3	3.6	6.7	4.8
dermalog-001	Mugshot	0.001	4.4	3.6	4.7	4.3	5.2	4.7
dermalog-001	Application	0.000	3.6	3.1	4.5	4.3	5.6	4.8
dermalog-001	Border	0.000	4.3	4.3	4.1	3.9	5.4	4.5
dermalog-002	Mugshot	0.001	4.8	3.7	5.5	4.3	5.8	5.6
dermalog-002	Application	0.000	3.7	3.3	5.2	5.2	6.2	6.6
dermalog-002	Border	0.000	4.4	4.5	5.2	4.8	6.3	5.6
hzailu-001	Mugshot	0.000	6.5	7.0	6.1	5.4	7.1	6.5
hzailu-001	Application	0.000	4.4	5.2	5.3	4.5	6.9	5.8
hzailu-001	Border	0.000	4.3	5.2	5.6	4.7	7.4	6.4
idemia-001	Mugshot	0.000	2.5	2.2	3.1	2.8	3.8	3.3
idemia-001	Application	0.000	2.9	2.7	3.5	2.8	4.0	3.6
idemia-001	Border	0.000	3.1	2.7	3.9	3.0	4.5	3.9
idemia-002	Mugshot	0.000	3.3	2.2	3.3	2.8	3.3	3.4
idemia-002	Application	0.000	3.2	2.6	3.4	2.9	3.6	3.6
idemia-002	Border	0.000	3.5	2.7	3.8	3.1	3.9	3.9

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Table 13. *By sex, mean absolute error (MAE), and failure to process proportion (FTP) for three age bands. Lower values are better. (continued)*

			Ages 18-30		Ages 31-50		Ages 51-80	
			Female	Male	Female	Male	Female	Male
Algorithm	**Dataset**	**FTP**	**MAE**	**MAE**	**MAE**	**MAE**	**MAE**	**MAE**
inbut-000	Mugshot	0.000	2.9	2.9	3.4	3.1	4.5	3.8
inbut-000	Application	0.000	3.2	3.6	3.4	3.4	4.0	3.5
inbut-000	Border	0.000	2.9	2.9	5.2	3.9	6.1	4.7
incode-000	Mugshot	0.000	3.6	2.6	3.5	3.1	3.7	3.9
incode-000	Application	0.000	3.3	2.7	3.5	3.2	3.5	3.6
incode-000	Border	0.001	4.8	4.3	4.5	4.1	4.8	4.3
incode-001	Mugshot	0.001	3.5	2.4	3.2	2.9	3.1	3.4
incode-001	Application	0.000	3.4	2.9	3.2	3.1	3.1	3.1
incode-001	Border	0.001	4.3	4.2	4.5	4.1	4.0	3.6
innovatrics-000	Mugshot	0.000	2.4	2.0	3.2	2.8	4.8	3.9
innovatrics-000	Application	0.000	2.6	2.4	3.9	3.2	5.0	4.1
innovatrics-000	Border	0.001	2.8	2.5	4.9	3.6	6.0	4.9
innovatrics-001	Mugshot	0.000	2.4	2.0	3.3	2.9	4.8	3.8
innovatrics-001	Application	0.000	2.5	2.3	4.4	3.4	4.8	4.0
innovatrics-001	Border	0.001	2.9	2.5	5.2	3.8	5.5	4.6
innovatrics-002	Mugshot	0.000	2.7	2.3	3.5	3.1	5.2	4.3
innovatrics-002	Application	0.000	2.8	2.7	4.2	3.4	4.7	3.9
innovatrics-002	Border	0.001	3.5	2.8	5.6	3.9	5.6	4.6
jumio-000	Mugshot	0.002	4.2	2.5	3.3	3.0	3.7	3.7
jumio-000	Application	0.002	3.6	2.8	3.2	3.0	3.7	3.5
jumio-000	Border	0.048	4.9	4.0	4.1	3.7	7.0	5.9
neurotechnology-000	Mugshot	0.000	3.7	3.4	5.8	4.6	6.8	5.5
neurotechnology-000	Application	0.000	3.8	3.4	7.9	5.7	9.0	7.1
neurotechnology-000	Border	0.001	4.3	3.4	8.9	6.3	10.6	7.5
neurotechnology-001	Mugshot	0.000	3.4	3.0	6.3	5.0	6.9	5.5
neurotechnology-001	Application	0.000	3.8	3.2	8.0	5.9	9.0	7.1
neurotechnology-001	Border	0.002	4.3	3.3	9.0	6.4	10.6	7.5
nominder-000	Mugshot	0.000	3.2	2.9	3.7	3.4	4.6	4.0
nominder-000	Application	0.000	3.1	3.2	4.5	3.4	5.8	4.7
nominder-000	Border	0.001	3.3	3.1	5.3	4.1	6.9	5.9
nominder-001	Mugshot	0.001	2.7	2.2	3.2	2.8	4.0	3.4
nominder-001	Application	0.000	2.8	2.6	4.3	3.3	4.9	4.4
nominder-001	Border	0.001	3.2	2.8	5.6	4.0	6.5	5.8
ondato-000	Mugshot	0.000	3.4	2.8	3.8	3.5	4.1	3.7
ondato-000	Application	0.000	3.1	3.0	4.1	3.5	4.1	3.7
ondato-000	Border	0.001	3.5	3.0	7.2	4.8	8.9	6.7
ondato-001	Mugshot	0.000	3.4	2.6	3.5	3.3	4.1	3.8
ondato-001	Application	0.000	2.9	2.6	3.7	3.2	4.3	3.8
ondato-001	Border	0.001	3.4	2.8	7.0	4.7	8.2	6.6
privately-000	Mugshot	0.000	3.9	2.8	6.1	4.9	8.0	6.1
privately-000	Application	0.000	3.5	3.0	5.9	5.7	7.5	7.0
privately-000	Border	0.000	4.0	3.5	6.2	5.3	7.9	6.6
regula-000	Mugshot	0.000	2.9	2.0	3.4	3.2	3.5	3.7
regula-000	Application	0.000	2.6	2.3	3.1	3.0	3.2	3.2
regula-000	Border	0.001	3.1	2.6	3.8	3.7	4.0	3.9
roc-000	Mugshot	0.000	3.0	2.5	3.9	3.2	4.4	3.8
roc-000	Application	0.000	3.6	3.4	3.8	3.2	4.2	3.9
roc-000	Border	0.001	3.9	3.8	4.2	3.4	4.8	4.3
roc-001	Mugshot	0.000	2.6	2.3	3.3	3.0	3.6	3.4
roc-001	Application	0.000	3.1	2.9	3.1	3.0	3.4	3.4
roc-001	Border	0.001	3.3	3.2	3.2	3.0	3.7	3.5
roc-002	Mugshot	0.000	2.4	2.0	3.2	2.9	3.7	3.7
roc-002	Application	0.000	2.7	2.4	3.1	2.8	3.5	3.5
roc-002	Border	0.001	3.1	2.9	3.1	2.8	3.7	3.5

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Table 13. *By sex, mean absolute error (MAE), and failure to process proportion (FTP) for three age bands. Lower values are better. (continued)*

			Ages 18-30		Ages 31-50		Ages 51-80	
			Female	Male	Female	Male	Female	Male
Algorithm	**Dataset**	**FTP**	**MAE**	**MAE**	**MAE**	**MAE**	**MAE**	**MAE**
shufti-000	Mugshot	0.002	4.2	2.9	4.0	3.5	4.1	3.9
shufti-000	Application	0.000	4.1	4.3	3.8	3.8	4.5	4.0
shufti-000	Border	0.009	4.8	4.2	5.5	4.1	7.6	5.2
unissey-001	Mugshot	0.000	4.3	3.6	6.3	4.8	6.0	5.3
unissey-001	Application	0.000	3.9	3.7	5.0	4.2	6.1	5.8
unissey-001	Border	0.001	4.1	3.4	7.1	5.8	8.4	7.2
viante-000	Mugshot	0.001	4.0	4.4	3.8	3.8	4.0	3.5
viante-000	Application	0.000	3.5	4.3	3.3	3.4	3.7	3.4
viante-000	Border	0.001	3.1	3.5	3.8	3.3	5.2	4.1
yoti-001	Mugshot	0.002	3.8	2.4	3.9	3.4	3.7	3.7
yoti-001	Application	0.000	4.7	3.2	3.8	3.2	3.8	3.5
yoti-001	Border	0.003	5.2	4.1	4.8	4.0	5.1	4.2
yoti-002	Mugshot	0.000	3.2	2.4	3.5	3.1	3.6	3.6
yoti-002	Application	0.000	3.5	2.8	3.1	2.9	3.7	3.3
yoti-002	Border	0.000	4.1	3.5	4.2	3.7	4.4	3.8
yoti-003	Mugshot	0.000	3.1	2.3	3.4	3.1	3.4	3.5
yoti-003	Application	0.000	3.4	2.8	3.0	2.9	3.3	3.2
yoti-003	Border	0.000	3.9	3.5	3.7	3.3	4.4	3.8
yoti-004	Mugshot	0.000	2.6	1.9	3.4	3.1	3.4	3.5
yoti-004	Application	0.000	2.7	2.3	2.9	2.8	3.4	3.1
yoti-004	Border	0.000	3.5	3.0	3.9	3.4	4.8	3.8
youverse-000	Mugshot	0.001	3.8	3.3	5.8	4.8	9.6	9.2
youverse-000	Application	0.000	3.7	3.3	7.3	4.8	12.3	9.7
youverse-000	Border	0.001	5.1	4.6	9.2	5.6	16.0	11.0

The table shows MAE trending higher with age group, reflecting wider variation in the amount of ageing evidence in human faces. This effect is much larger in some algorithms, perhaps reflecting commercial focus on AE estimation in younger subjects, and is absent for one algorithm (yoti-001) operating on women. MAE is often highest in the lower quality *Border* image dataset, and lowest in the *Application* photos. There are exceptions and these observations are overlaid by a higher MAE in women than in men that applies to all algorithms, all datasets and both age groups. The lowest MAE values are 2.4 and 2.5 years from yoti-001 and roc-000 operating on *Mugshot* photos of men, age 18-30. The incode-001 algorithm achieves 2.7 years on *Application* photos.

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5.3. Challenge Age Analysis

A primary application of AEV technology is in preventing underage subjects from accessing alcohol, cigarettes, and adult content. Given some legal restriction age L[5], AE is applied with a threshold age T, which is necessarily larger than L, with a supplemental challenge process being applied to anyone whose age estimate is below T. The difference $T - L$ is sometimes termed the buffer size. For $L = 18$ a seven year buffer is conventional, so $T = 25$ is typical. A false positive occurs if a person of age below L is estimated to have age at or above T. A false negative occurs if a person of age at or above L is estimated to have age below T. This is formalized in section 2. Smaller T values are desirable, because they imply lower false negative rates (FNR). Smaller T values are sustainable only if false positive rates (FPR) remain low enough to meet some policy-driven criterion.

To mimic a Challenge-25 application, Table 14 shows FPR for persons aged 14-17 who are estimated to have age at or above 25. The sample is from the global traveler population. Likewise Table 15 shows FPR for persons aged 14-20 who are estimated to have age at or above 28. The *Mugshot* entries are estimated from persons aged 18-20.

Table 14. *False positive rate (FPR) and mean absolute error (MAE) for persons 14-17 estimated at 25 or more. Border photos have inferior quality to the application photos. Lower values are better.*

		Male		Female	
Algorithm	**Data**	**FPR**	**MAE**	**FPR**	**MAE**
cognitec-000	Border	0.051	3.4	0.050	3.3
cognitec-000	Application	0.005	1.9	0.014	2.2
cvut-001	Border	0.043	3.2	0.117	4.4
cvut-001	Application	0.039	2.8	0.100	3.7
cvut-002	Border	0.077	4.2	0.131	5.1
cvut-002	Application	0.011	2.4	0.032	3.3
cvut-003	Border	0.049	3.8	0.115	4.9
cvut-003	Application	0.008	2.3	0.029	3.4
cyberlink-000	Border	0.081	3.8	0.106	4.2
cyberlink-000	Application	0.054	4.2	0.091	5.2
cyberlink-001	Border	0.031	2.9	0.027	3.0
cyberlink-001	Application	0.013	3.1	0.023	3.7
daon-000	Border	0.202	5.4	0.110	4.3
daon-000	Application	0.094	4.3	0.067	3.5
daon-001	Border	0.115	4.1	0.077	3.3
daon-001	Application	0.045	3.3	0.034	3.0
dermalog-001	Border	0.166	4.3	0.283	5.9
dermalog-001	Application	0.051	3.6	0.112	4.7
dermalog-002	Border	0.190	5.1	0.344	6.8
dermalog-002	Application	0.034	3.2	0.167	5.2
hzailu-001	Border	0.423	7.6	0.393	7.3
hzailu-001	Application	0.341	6.9	0.361	6.9
idemia-001	Border	0.008	2.0	0.015	2.4
idemia-001	Application	0.004	2.0	0.012	2.5
idemia-002	Border	0.005	1.7	0.013	2.1
idemia-002	Application	0.002	1.7	0.009	1.9
inbut-000	Border	0.062	3.4	0.090	4.3
inbut-000	Application	0.100	4.1	0.114	4.6
incode-000	Border	0.065	2.9	0.177	4.8
incode-000	Application	0.006	1.8	0.033	2.6
incode-001	Border	0.046	3.2	0.134	4.8

[5]For example, L = 18 for alcohol and cigarettes in the United Kingdom, and L = 21 in most jurisdictions in the United States.

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Table 14. *False positive rate (FPR) and mean absolute error (MAE) for persons 14-17 estimated at 25 or more. Border photos have inferior quality to the application photos. Lower values are better. (continued)*

		Male		Female	
Algorithm	**Data**	**FPR**	**MAE**	**FPR**	**MAE**
incode-001	Application	0.006	1.8	0.034	3.0
innovatrics-000	Border	0.017	2.5	0.039	3.4
innovatrics-000	Application	0.007	2.5	0.030	3.5
innovatrics-001	Border	0.013	2.5	0.032	3.1
innovatrics-001	Application	0.005	2.4	0.024	3.4
innovatrics-002	Border	0.009	1.4	0.018	2.0
innovatrics-002	Application	0.008	1.6	0.034	2.7
jumio-000	Border	0.229	7.0	0.429	9.4
jumio-000	Application	0.021	3.0	0.088	4.8
neurotechnology-000	Border	0.182	5.7	0.128	4.7
neurotechnology-000	Application	0.248	6.3	0.178	5.4
neurotechnology-001	Border	0.148	5.4	0.103	4.5
neurotechnology-001	Application	0.157	5.6	0.125	4.9
nominder-000	Border	0.075	4.5	0.074	4.2
nominder-000	Application	0.020	2.7	0.041	3.6
nominder-001	Border	0.026	3.7	0.036	3.8
nominder-001	Application	0.007	2.8	0.021	3.9
ondato-000	Border	0.056	3.7	0.060	4.0
ondato-000	Application	0.027	2.9	0.073	4.6
ondato-001	Border	0.040	3.4	0.046	3.8
ondato-001	Application	0.014	3.0	0.051	4.5
privately-000	Border	0.091	4.0	0.137	4.8
privately-000	Application	0.014	2.9	0.065	3.7
regula-000	Border	0.011	1.9	0.039	2.9
regula-000	Application	0.003	1.5	0.012	2.4
roc-000	Border	0.089	4.9	0.144	5.3
roc-000	Application	0.041	4.2	0.073	4.6
roc-001	Border	0.029	4.1	0.062	4.5
roc-001	Application	0.013	3.6	0.040	4.4
roc-002	Border	0.024	3.3	0.047	3.6
roc-002	Application	0.006	2.2	0.016	2.8
shufti-000	Border	0.062	3.5	0.085	4.2
shufti-000	Application	0.029	3.0	0.067	4.1
unissey-001	Border	0.080	3.1	0.106	3.5
unissey-001	Application	0.107	3.4	0.127	3.7
viante-000	Border	0.113	3.8	0.216	5.1
viante-000	Application	0.138	4.9	0.253	6.2
yoti-001	Border	0.103	3.4	0.196	5.0
yoti-001	Application	0.012	1.7	0.090	3.4
yoti-002	Border	0.067	2.7	0.196	4.8
yoti-002	Application	0.009	1.7	0.063	3.2
yoti-003	Border	0.077	3.0	0.197	5.0
yoti-003	Application	0.008	1.6	0.056	3.1
yoti-004	Border	0.052	3.0	0.166	4.9
yoti-004	Application	0.005	1.7	0.026	3.2
youverse-000	Border	0.248	5.7	0.143	4.5
youverse-000	Application	0.026	2.6	0.051	3.3

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Table 15. *False positive rate (FPR) and mean absolute error (MAE) for persons 14-20 estimated at 28 or more. Border photos have inferior quality to the mugshot and application photos. The mugshots are from people 18-20. Lower values are better.*

		Male		Female	
Algorithm	**Data**	**FPR**	**MAE**	**FPR**	**MAE**
cognitec-000	Mugshot	0.009	2.2	0.020	2.8
cognitec-000	Border	0.041	3.4	0.032	3.1
cognitec-000	Application	0.007	2.0	0.013	2.4
cvut-001	Mugshot	0.045	3.4	0.070	3.4
cvut-001	Border	0.019	3.2	0.042	4.1
cvut-001	Application	0.029	2.8	0.052	3.4
cvut-002	Mugshot	0.012	2.3	0.021	2.6
cvut-002	Border	0.060	4.2	0.078	4.5
cvut-002	Application	0.012	2.3	0.015	2.7
cvut-003	Mugshot	0.011	2.6	0.034	3.6
cvut-003	Border	0.026	3.8	0.047	4.4
cvut-003	Application	0.009	2.3	0.017	2.8
cyberlink-000	Mugshot	0.053	3.8	0.074	4.1
cyberlink-000	Border	0.055	3.7	0.040	3.7
cyberlink-000	Application	0.051	4.2	0.050	4.6
cyberlink-001	Mugshot	0.018	2.7	0.032	3.1
cyberlink-001	Border	0.025	2.8	0.017	2.6
cyberlink-001	Application	0.014	2.9	0.016	3.1
daon-000	Mugshot	0.083	4.4	0.078	4.1
daon-000	Border	0.136	5.3	0.072	4.5
daon-000	Application	0.066	4.2	0.048	3.8
daon-001	Mugshot	0.038	3.5	0.052	3.4
daon-001	Border	0.076	4.3	0.054	3.8
daon-001	Application	0.037	3.5	0.030	3.4
dermalog-001	Mugshot	0.069	3.7	0.123	4.5
dermalog-001	Border	0.147	4.8	0.211	5.9
dermalog-001	Application	0.034	3.4	0.069	4.2
dermalog-002	Mugshot	0.067	3.5	0.144	5.2
dermalog-002	Border	0.146	5.1	0.222	6.4
dermalog-002	Application	0.031	3.1	0.081	5.0
hzailu-001	Mugshot	0.406	7.9	0.403	7.9
hzailu-001	Border	0.269	7.2	0.240	6.6
hzailu-001	Application	0.246	6.9	0.247	6.6
idemia-001	Mugshot	0.004	1.9	0.009	2.7
idemia-001	Border	0.011	2.1	0.011	2.4
idemia-001	Application	0.009	2.2	0.012	2.6
idemia-002	Mugshot	0.004	2.0	0.033	3.2
idemia-002	Border	0.007	1.8	0.014	2.5
idemia-002	Application	0.006	1.8	0.012	2.4
inbut-000	Mugshot	0.041	2.7	0.044	3.3
inbut-000	Border	0.031	3.6	0.038	3.8
inbut-000	Application	0.072	3.8	0.075	4.2
incode-000	Mugshot	0.010	1.9	0.048	3.1
incode-000	Border	0.061	3.1	0.138	4.8
incode-000	Application	0.008	2.0	0.027	2.9
incode-001	Mugshot	0.009	1.6	0.055	3.4
incode-001	Border	0.052	3.0	0.110	4.3
incode-001	Application	0.011	1.9	0.038	3.1
innovatrics-000	Mugshot	0.005	1.8	0.011	2.9
innovatrics-000	Border	0.013	2.6	0.017	3.0
innovatrics-000	Application	0.008	2.4	0.015	3.1
innovatrics-001	Mugshot	0.004	1.8	0.010	2.8
innovatrics-001	Border	0.010	2.4	0.014	2.7
innovatrics-001	Application	0.007	2.3	0.013	3.0
innovatrics-002	Mugshot	0.006	1.7	0.018	2.7
innovatrics-002	Border	0.011	1.9	0.013	2.3

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Table 15. *False positive rate (FPR) and mean absolute error (MAE) for persons 14-20 estimated at 28 or more. Border photos have inferior quality to the mugshot and application photos. The mugshots are from people 18-20. Lower values are better. (continued)*

		Male		Female	
Algorithm	**Data**	**FPR**	**MAE**	**FPR**	**MAE**
innovatrics-002	Application	0.010	2.1	0.020	2.8
jumio-000	Mugshot	0.014	2.2	0.109	4.6
jumio-000	Border	0.156	6.0	0.298	8.1
jumio-000	Application	0.019	2.7	0.067	4.4
neurotechnology-000	Mugshot	0.083	4.3	0.106	4.7
neurotechnology-000	Border	0.070	4.9	0.047	4.0
neurotechnology-000	Application	0.101	5.6	0.057	4.6
neurotechnology-001	Mugshot	0.036	3.6	0.049	3.8
neurotechnology-001	Border	0.043	4.6	0.034	3.8
neurotechnology-001	Application	0.040	4.9	0.027	4.1
nominder-000	Mugshot	0.019	2.5	0.038	3.2
nominder-000	Border	0.036	4.2	0.041	3.7
nominder-000	Application	0.025	3.0	0.031	3.5
nominder-001	Mugshot	0.008	2.1	0.024	3.3
nominder-001	Border	0.017	3.4	0.020	3.1
nominder-001	Application	0.009	2.6	0.015	3.3
ondato-000	Mugshot	0.018	2.4	0.054	3.6
ondato-000	Border	0.031	3.4	0.023	3.3
ondato-000	Application	0.022	2.9	0.040	4.1
ondato-001	Mugshot	0.013	2.3	0.050	3.7
ondato-001	Border	0.023	3.2	0.021	3.2
ondato-001	Application	0.012	2.8	0.030	4.0
privately-000	Mugshot	0.011	2.6	0.035	3.7
privately-000	Border	0.056	4.0	0.062	4.5
privately-000	Application	0.008	2.6	0.029	3.7
regula-000	Mugshot	0.004	1.4	0.020	2.6
regula-000	Border	0.010	1.9	0.032	2.8
regula-000	Application	0.005	1.6	0.012	2.3
roc-000	Mugshot	0.010	2.0	0.026	2.7
roc-000	Border	0.058	4.4	0.093	4.7
roc-000	Application	0.030	3.8	0.049	4.1
roc-001	Mugshot	0.007	1.9	0.014	2.5
roc-001	Border	0.025	3.7	0.046	4.1
roc-001	Application	0.015	3.3	0.030	4.0
roc-002	Mugshot	0.003	1.2	0.004	1.6
roc-002	Border	0.023	3.1	0.039	3.4
roc-002	Application	0.008	2.1	0.014	2.6
shufti-000	Mugshot	0.019	2.4	0.099	4.2
shufti-000	Border	0.063	3.6	0.078	4.2
shufti-000	Application	0.044	3.2	0.066	3.9
unissey-001	Mugshot	0.064	2.9	0.082	3.2
unissey-001	Border	0.050	3.1	0.060	3.4
unissey-001	Application	0.091	3.7	0.092	3.8
viante-000	Mugshot	0.098	5.1	0.116	5.7
viante-000	Border	0.099	4.2	0.126	4.9
viante-000	Application	0.111	5.3	0.123	6.0
yoti-001	Mugshot	0.007	1.8	0.057	3.2
yoti-001	Border	0.081	4.0	0.168	5.4
yoti-001	Application	0.017	2.3	0.093	4.1
yoti-002	Mugshot	0.005	1.8	0.026	2.7
yoti-002	Border	0.053	3.4	0.129	5.1
yoti-002	Application	0.010	2.2	0.046	3.5
yoti-003	Mugshot	0.005	1.5	0.025	2.4
yoti-003	Border	0.052	3.5	0.121	5.1
yoti-003	Application	0.011	2.0	0.046	3.4
yoti-004	Mugshot	0.004	1.5	0.011	2.3

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Table 15. *False positive rate (FPR) and mean absolute error (MAE) for persons 14-20 estimated at 28 or more. Border photos have inferior quality to the mugshot and application photos. The mugshots are from people 18-20. Lower values are better. (continued)*

		Male		Female	
Algorithm	**Data**	**FPR**	**MAE**	**FPR**	**MAE**
yoti-004	Border	0.033	3.3	0.080	4.8
yoti-004	Application	0.006	1.9	0.017	3.3
youverse-000	Mugshot	0.051	2.9	0.071	3.8
youverse-000	Border	0.181	5.6	0.083	4.3
youverse-000	Application	0.030	2.7	0.031	3.1

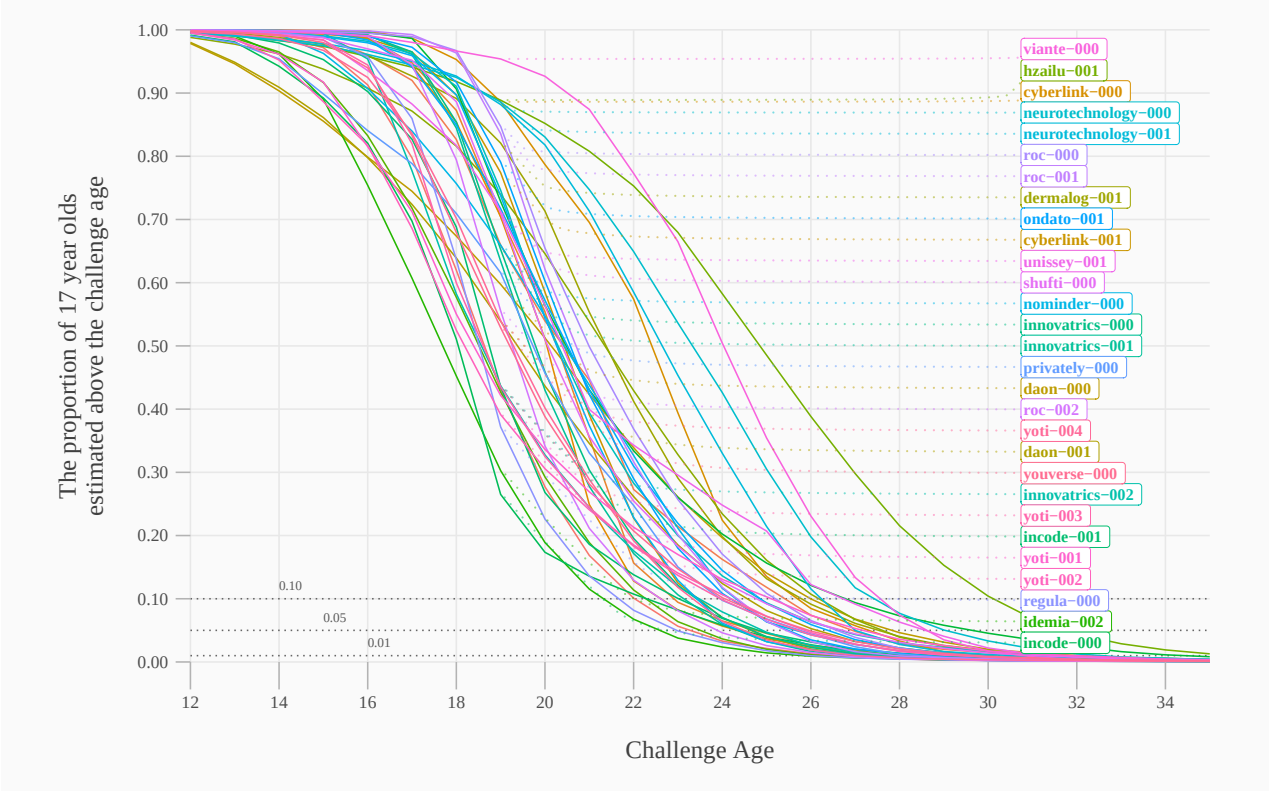

Fig. 9. *The proportion of 17 year olds whose age is estimated as at or above the given challenge age. The Application images are of subjects from the set of countries used in the demographics analysis.*

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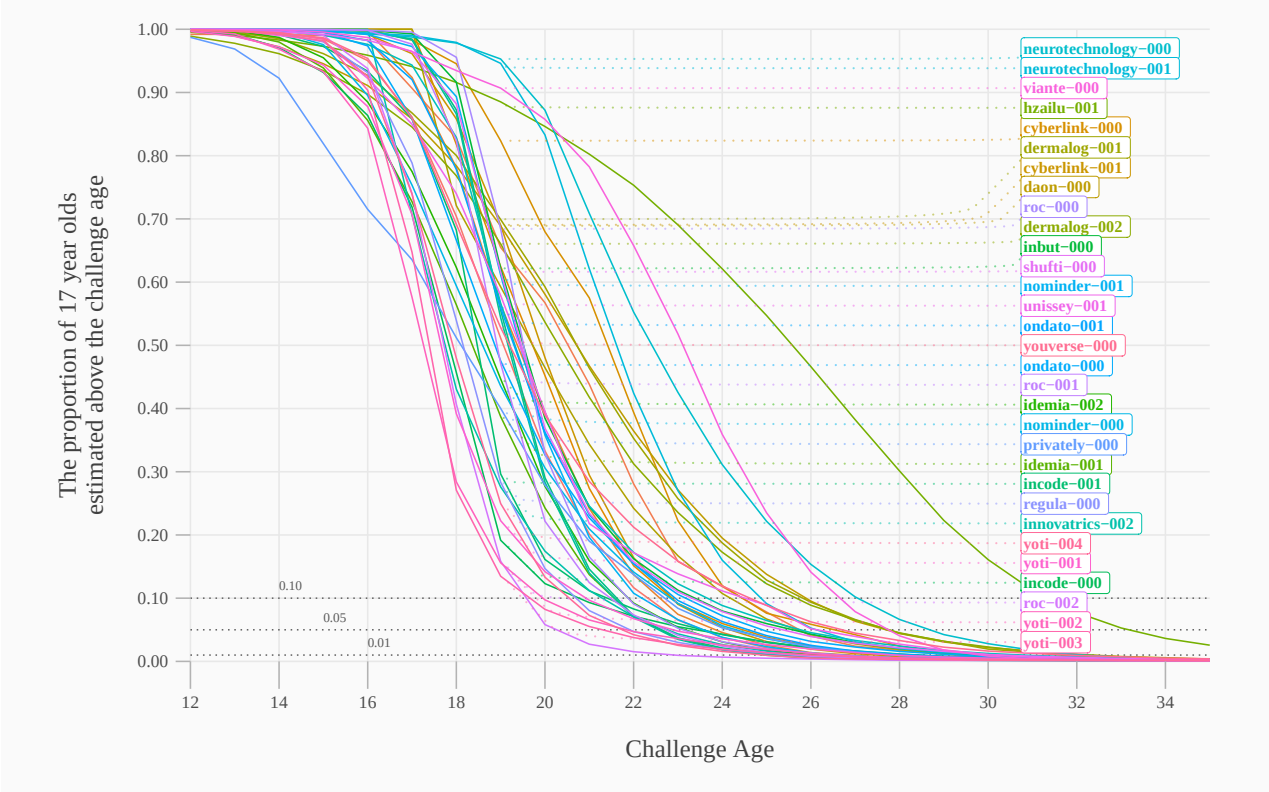

Fig. 10. *The proportion of 17 year olds whose age is estimated as at or above the given challenge age. The Mugshot images are of subjects from the set of countries used in the demographics analysis.*

The seven-year buffer has been adopted operationally (L = 18, T = 25). It would usually be useful, if FPR objectives can be met, to reduce the T value to give improved false negative rates. We consider this in two ways. First in Figures 9 and 10 we plot for 17 year olds FPR against challenge age, T. The curves vary by algorithm, and decline monotonically with challenge age T. We also show, in Table 16, the T value needed to achieve three particular FPR objectives, 10%, 5% and 1% for 17 year olds. The results improve for younger persons. The *Application* images are from a global population so the results are dependent on the underlying demographic-specific FPR values documented in the next section. The *Mugshot* images are from a domestic population, 72% of which are men.

While a rough model of this change is shift invariant FPR(A, T) ≈ FPR(A+k, T+k) meaning we'd expect similar FPR for Age-18-Challenge-25 as we would for Age-21-Challenge-28, it only holds approximately so empirical measurements should be preferred.

Table 16. *For Application images, challenge ages need to attain FPR below that specified, by actual age. Lower values are better*

	FPR = 0.10						**FPR = 0.05**						**FPR = 0.01**					
Algorithm	15	16	17	18	19	20	15	16	17	18	19	20	15	16	17	18	19	20
cognitec-000	20	21	23	23	25	26	21	23	24	25	26	27	24	26	27	28	29	31
cvut-001	23	25	26	26	27	28	26	26	27	28	29	30	28	30	31	31	33	34
cvut-002	22	22	23	24	26	26	22	24	25	26	27	28	26	27	28	29	30	32
cvut-003	21	22	23	24	25	26	22	23	25	25	27	28	26	27	28	28	31	32
cyberlink-000	24	25	26	27	28	29	25	26	28	28	29	30	28	29	31	30	32	33
cyberlink-001	22	23	24	25	26	27	23	24	25	26	27	28	25	27	28	29	30	31

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Table 16. *For Application images, challenge ages need to attain FPR below that specified, by actual age. Lower values are better (continued)*

	FPR = 0.10						FPR = 0.05						FPR = 0.01					
Algorithm	15	16	17	18	19	20	15	16	17	18	19	20	15	16	17	18	19	20
daon-000	24	25	26	27	28	29	26	27	28	29	30	31	30	31	33	33	34	36
daon-001	22	24	25	26	27	28	24	25	27	27	28	30	27	29	30	31	32	34
dermalog-001	25	25	26	27	28	29	26	27	28	28	30	30	30	31	32	32	33	34
dermalog-002	25	26	27	27	28	29	27	27	28	29	30	30	30	30	32	32	33	34
hzailu-001	29	30	31	31	32	33	30	31	32	33	34	34	35	35	36	NA	NA	NA
idemia-001	20	22	23	24	25	26	21	23	24	25	26	27	24	25	27	28	29	31
idemia-002	19	21	22	23	24	25	20	22	23	24	25	27	23	25	26	27	29	31
inbut-000	25	26	27	27	28	29	28	29	30	30	31	31	34	35	35	34	36	NA
incode-000	19	21	23	24	25	27	21	23	25	26	27	28	25	28	29	29	31	32
incode-001	20	22	24	25	26	27	22	24	25	26	28	29	25	28	29	30	32	33
innovatrics-000	22	23	24	24	26	26	23	24	25	26	27	28	25	27	28	28	29	31
innovatrics-001	21	22	24	24	25	26	23	24	25	25	26	27	25	26	27	28	29	30
innovatrics-002	21	22	24	25	26	27	23	24	25	26	27	28	25	27	28	29	30	32
jumio-000	23	24	25	26	27	28	25	26	27	28	29	30	29	30	32	32	33	34
neurotechnology-000	27	27	28	28	29	29	28	29	30	30	30	31	32	32	33	33	33	34
neurotechnology-001	26	26	27	27	27	28	27	27	27	28	28	29	29	30	31	31	32	34
nominder-000	23	24	25	25	26	28	24	25	26	27	28	29	27	28	30	30	32	33
nominder-001	22	23	24	24	25	26	23	24	25	25	26	27	25	26	28	28	30	31
ondato-000	23	24	25	26	27	28	25	26	27	27	28	29	28	29	30	31	32	34
ondato-001	23	24	25	25	26	27	24	25	26	27	28	29	27	28	29	29	31	32
privately-000	23	24	24	25	26	27	24	25	26	27	27	28	27	29	29	29	30	31
regula-000	20	21	22	23	24	25	21	22	23	24	26	27	24	25	26	28	29	30
roc-000	24	25	26	26	27	28	25	26	27	28	29	30	28	29	30	31	32	33
roc-001	22	24	25	26	27	28	24	25	26	27	28	29	26	27	28	29	31	33
roc-002	21	22	23	24	25	26	22	23	24	25	26	28	24	26	27	28	29	31
shufti-000	23	24	25	26	28	29	24	26	27	28	30	31	29	30	32	33	35	36
unissey-001	25	26	27	28	29	30	26	28	29	30	30	31	30	31	32	32	33	35
viante-000	26	27	28	29	29	30	27	28	29	30	31	31	30	30	31	32	33	34
yoti-001	21	24	26	27	28	29	24	26	28	28	30	31	29	30	32	33	35	36
yoti-002	21	23	25	26	27	28	23	25	26	27	28	29	27	29	30	30	32	33
yoti-003	21	23	24	25	27	28	23	25	26	27	28	29	27	28	30	30	32	33
yoti-004	21	23	24	25	26	26	23	24	25	26	27	28	25	26	28	28	30	31
youverse-000	22	23	25	25	26	27	24	25	26	27	28	29	28	29	30	31	32	33

5.3.1. Age Verification vs. Age Estimation

Our API includes an age estimation function returning a continuous valued age *and* an age verification function returning a boolean value indicating whether the subject is above an age limit. This latter function is included to allow developers to build and submit a dedicated classifier for particular age thresholds.

Table 17 shows that five developers implemented the function by simply calling the general purpose age estimation function and return TRUE if the age is at or above the input threshold. One developer, Unissey, implemented the age verification function returning true if the age is above (not at-or-above) the challenge age; this matters because their AE algorithm only returns integer age estimates. So that the FPR value shown for their AV function is actually that for challenge-26 not challenge-25.

In conclusion, we do not have any evidence (yet) that an age-verification classifier can outperform a regression-like estimator on the same task.

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Table 17. *Compare false positive rate (FPR) for AE and AV for persons 14-17 estimated at 25 or more. Border photos have inferior quality to the application photos. Lower values are better.*

		AE-FPR		AV-FPR	
Algorithm	**Data**	**Male**	**Female**	**Male**	**Female**
cvut-001	Border	0.043	0.117	0.043	0.117
cvut-001	Application	0.039	0.100	0.038	0.099
cvut-002	Border	0.077	0.131	0.077	0.131
cvut-002	Application	0.011	0.032	0.011	0.032
cyberlink-000	Border	0.081	0.106	0.081	0.106
cyberlink-000	Application	0.054	0.091	0.054	0.091
dermalog-001	Border	0.166	0.283	0.166	0.283
dermalog-001	Application	0.051	0.112	0.051	0.112
dermalog-002	Border	0.190	0.344	0.190	0.344
dermalog-002	Application	0.034	0.167	0.034	0.167
hzailu-001	Border	0.423	0.393	0.323	0.305
hzailu-001	Application	0.341	0.361	0.259	0.282
idemia-001	Border	0.008	0.015	0.008	0.015
idemia-001	Application	0.004	0.012	0.004	0.012
inbut-000	Border	0.062	0.090	0.062	0.090
inbut-000	Application	0.100	0.114	0.100	0.113
incode-000	Border	0.065	0.177	0.065	0.177
incode-000	Application	0.006	0.033	0.006	0.033
incode-001	Border	0.046	0.134	0.046	0.133
incode-001	Application	0.006	0.034	0.006	0.034
innovatrics-000	Border	0.017	0.039	0.016	0.039
innovatrics-000	Application	0.007	0.030	0.007	0.029
jumio-000	Border	0.229	0.429	0.229	0.428
jumio-000	Application	0.021	0.088	0.021	0.088
neurotechnology-000	Border	0.182	0.128	0.182	0.128
neurotechnology-000	Application	0.248	0.178	0.248	0.178
neurotechnology-001	Border	0.148	0.103	0.148	0.103
neurotechnology-001	Application	0.157	0.125	0.157	0.125
nominder-000	Border	0.075	0.074	0.074	0.074
nominder-000	Application	0.020	0.041	0.019	0.041
nominder-001	Border	0.026	0.036	0.026	0.036
nominder-001	Application	0.007	0.021	0.007	0.021
ondato-000	Border	0.056	0.060	0.055	0.060
ondato-000	Application	0.027	0.073	0.027	0.073
ondato-001	Border	0.040	0.046	0.040	0.046
ondato-001	Application	0.014	0.051	0.014	0.051
roc-000	Border	0.089	0.144	0.089	0.144
roc-000	Application	0.041	0.073	0.041	0.073
roc-001	Border	0.029	0.062	0.029	0.062
roc-001	Application	0.013	0.040	0.013	0.039
unissey-001	Border	0.080	0.106	0.044	0.060
unissey-001	Application	0.107	0.127	0.061	0.074
viante-000	Border	0.113	0.216	0.080	0.160
viante-000	Application	0.138	0.253	0.083	0.163
yoti-001	Border	0.103	0.196	0.103	0.196
yoti-001	Application	0.012	0.090	0.012	0.089
yoti-002	Border	0.067	0.196	0.067	0.196
yoti-002	Application	0.009	0.063	0.009	0.063

5.4. Demographic Analysis

The demographic analysis of race in this report is enabled by using country-of-birth as a proxy for ethnicity. We employ only those countries for which birth is a more or less reliable indication of

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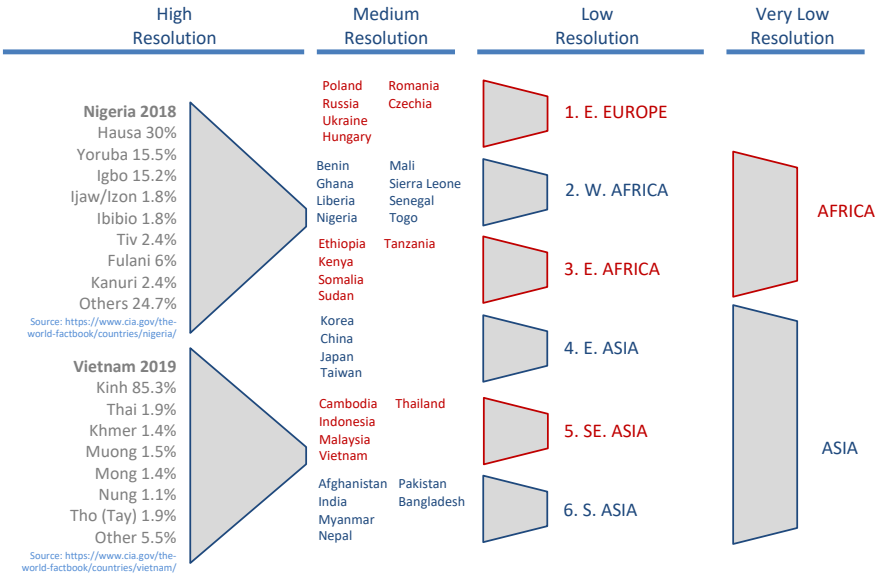

Fig. 11. *Countries and regions used in quantifying demographic dependence on race. The fine-grained or local ethnicities shown at left are not available to us. The rightmost grouping is possible but not useful.*

ethnicity as discussed below. To increase sample sizes, and reduce the verbosity and complexity of our results tables, we group countries into regions as follows:

- ▷ **East Africa:** Ethiopia, Kenya, Somalia, Sudan, Tanzania
- ▷ **West Africa:** Nigeria, Liberia, Sierra Leone, Benin, Ghana, Mali, Senegal, Togo
- ▷ **East Europe:** Poland, Ukraine, Russia, Hungary, Romania, Czechia
- ▷ **East Asia:** Korea, China, Japan, Taiwan
- ▷ **South East Asia:** Cambodia, Indonesia, Malaysia, Thailand, Vietnam
- ▷ **South Asia:** Afghanistan, India, Myanmar, Nepal, Pakistan, Bangladesh

Our use of proxy is imperfect in two ways. First, it ignores local ethnic variations: As discussed in Figure 11 our country labels are a lower "resolution" indication of ethnicity than the local ethnicities shown for Nigeria and Vietnam as examples. Our metadata does not include local information, only country-of-birth. Our region labels are, in-turn, an even lower resolution indication of ethnicity. If we find that age estimation accuracy shows region-of-birth dependence, then it would suggest country-level analysis is warranted. Second, some part of a population will have trans-national ancestry. This is probably not problematic if that proportion is low relative to inter-country variability in AEV accuracy. For this reason, we ignore countries where there has been considerable transcontinental immigration, such as the United Kingdom, France, and the United States.

Country-of-birth information has obvious operational relevance to deployment. But a higher goal would be to understand the effect of phenotypes which are a large set of features evident in a face such as high cheek bones, aquiline nose, prominent eye brows, and skin tone. Skin tone, which is just one of those phenotypes, is sometimes considered synonymous with race, has been shown to be

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related to recognition false negative rates due to photography difficulties. However, for many face recognition algorithms, false positive rates vary with country-of-birth independent of skin tone e.g., they are higher in West Africa *and* China. This is considered to be an effect of under-representation of certain ethnicities in the algorithm training data.

5.4.1. Fitzpatrick Skin Type

We do not use the Fitzpatrick skin type (FST)[13]. It was designed as dermatological statement of photosensitivity (sun-burn) but in recent years has been appropriated by AI researchers as a ready means of quantifying racial sensitivity of algorithms. This is far from sufficient and problematic for three reasons. First, Fitzpatrick types are not an accurate measure of skin pigmentation[14]. Second, FST was orginally to be determined by a dermatological examination - recovery from a digital image is imprecise because the spectrum of the illuminant is usually unknown, and the settings of the camera and display device matter[15]. Finally, and most importantly, skin tone is but one phenotype accessible by AI algorithms extracting information from photographs of skin [16]. Deep neural networks for age estimation and other operations should be expected to find information that minimizes the cost function specified by the staff training the algorithm. A researcher would want to know whether hard tissue (e.g. high cheek bones, square jaws, aquiline noses) and soft tissue phenotypes (lips, eyelids, freckles) impact the cost function. For a summary of the issues see this presentation [17], and note slide 14 which shows intra-person variability of skin color in photographs.

We did not attempt to recover FST from our test photographs.

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Table 18. *For Application images, Challenge-25 FPR, by region of birth and sex. The final columns indicate the groups that give the highest and lowest FPR and the Gini summary of variability. Gini is computed over the 12 FPR values to its left; lower values are better.*

Algorithm	Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
cognitec-000	16	0.05 ± 0.02	0.008 ± 0.005	0.000 ± 0.000	0.005 ± 0.004	0.01 ± 0.01	0.06 ± 0.03	0.02 ± 0.01	0.002 ± 0.002	0.003 ± 0.003	0.003 ± 0.003	0.003 ± 0.003	0.01 ± 0.01	W Africa F	E Europe F	0.66
cognitec-000	17	0.08 ± 0.03	0.015 ± 0.005	0.006 ± 0.006	0.025 ± 0.009	0.02 ± 0.01	0.09 ± 0.03	0.006 ± 0.006	0.010 ± 0.004	0.000 ± 0.000	0.014 ± 0.007	0.02 ± 0.01	0.04 ± 0.02	W Africa F	E Europe M	0.55
cognitec-000	18	0.11 ± 0.02	0.027 ± 0.007	0.02 ± 0.01	0.030 ± 0.008	0.04 ± 0.01	0.14 ± 0.03	0.04 ± 0.01	0.018 ± 0.005	0.004 ± 0.004	0.029 ± 0.008	0.03 ± 0.01	0.05 ± 0.02	W Africa F	E Europe M	0.45
cvut-001	16	0.38 ± 0.04	0.08 ± 0.02	0.03 ± 0.02	0.07 ± 0.02	0.06 ± 0.02	0.29 ± 0.05	0.11 ± 0.03	0.024 ± 0.007	0.009 ± 0.009	0.03 ± 0.01	0.01 ± 0.01	0.16 ± 0.05	E Africa F	E Europe M	0.58
cvut-001	17	0.46 ± 0.05	0.12 ± 0.02	0.04 ± 0.02	0.11 ± 0.02	0.07 ± 0.03	0.34 ± 0.05	0.17 ± 0.04	0.05 ± 0.01	0.03 ± 0.01	0.07 ± 0.02	0.05 ± 0.02	0.27 ± 0.05	E Africa F	E Europe M	0.50
cvut-001	18	0.50 ± 0.04	0.13 ± 0.01	0.05 ± 0.02	0.14 ± 0.02	0.09 ± 0.02	0.37 ± 0.04	0.25 ± 0.04	0.056 ± 0.009	0.06 ± 0.02	0.10 ± 0.01	0.03 ± 0.01	0.28 ± 0.05	E Africa F	S E Asia M	0.47
cvut-002	16	0.12 ± 0.03	0.015 ± 0.006	0.02 ± 0.01	0.019 ± 0.009	0.02 ± 0.01	0.14 ± 0.04	0.04 ± 0.02	0.003 ± 0.002	0.009 ± 0.009	0.013 ± 0.007	0.003 ± 0.003	0.03 ± 0.02	W Africa F	E Asia M	0.62
cvut-002	17	0.17 ± 0.04	0.024 ± 0.007	0.03 ± 0.02	0.05 ± 0.01	0.04 ± 0.02	0.22 ± 0.05	0.05 ± 0.02	0.006 ± 0.003	0.008 ± 0.008	0.04 ± 0.01	0.01 ± 0.01	0.11 ± 0.04	W Africa F	E Asia M	0.55
cvut-002	18	0.19 ± 0.03	0.028 ± 0.007	0.05 ± 0.02	0.08 ± 0.01	0.04 ± 0.01	0.25 ± 0.04	0.09 ± 0.02	0.014 ± 0.005	0.02 ± 0.01	0.07 ± 0.01	0.008 ± 0.006	0.15 ± 0.03	W Africa F	S E Asia M	0.52
cvut-003	16	0.10 ± 0.03	0.011 ± 0.005	0.02 ± 0.01	0.011 ± 0.006	0.02 ± 0.01	0.15 ± 0.04	0.04 ± 0.02	0.001 ± 0.001	0.003 ± 0.003	0.006 ± 0.004	0.000 ± 0.000	0.02 ± 0.01	W Africa F	S E Asia M	0.70
cvut-003	17	0.15 ± 0.04	0.022 ± 0.007	0.02 ± 0.01	0.03 ± 0.01	0.03 ± 0.02	0.20 ± 0.04	0.03 ± 0.02	0.004 ± 0.003	0.003 ± 0.003	0.03 ± 0.01	0.006 ± 0.006	0.08 ± 0.03	W Africa F	E Europe M	0.60
cvut-003	18	0.14 ± 0.03	0.026 ± 0.007	0.03 ± 0.01	0.053 ± 0.010	0.04 ± 0.01	0.25 ± 0.04	0.10 ± 0.02	0.011 ± 0.004	0.015 ± 0.009	0.030 ± 0.008	0.006 ± 0.006	0.12 ± 0.03	W Africa F	S E Asia M	0.56
cyberlink-000	16	0.18 ± 0.04	0.10 ± 0.02	0.05 ± 0.02	0.08 ± 0.02	0.10 ± 0.03	0.22 ± 0.05	0.14 ± 0.03	0.033 ± 0.009	0.01 ± 0.01	0.05 ± 0.01	0.08 ± 0.03	0.09 ± 0.04	W Africa F	E Europe M	0.36
cyberlink-000	17	0.28 ± 0.05	0.14 ± 0.02	0.06 ± 0.02	0.12 ± 0.02	0.17 ± 0.04	0.28 ± 0.05	0.20 ± 0.04	0.09 ± 0.01	0.04 ± 0.02	0.12 ± 0.02	0.11 ± 0.03	0.19 ± 0.04	W Africa F	E Europe M	0.30
cyberlink-000	18	0.26 ± 0.03	0.20 ± 0.02	0.11 ± 0.02	0.15 ± 0.02	0.22 ± 0.03	0.32 ± 0.04	0.31 ± 0.04	0.13 ± 0.01	0.06 ± 0.02	0.18 ± 0.02	0.21 ± 0.03	0.24 ± 0.04	W Africa F	E Europe M	0.23
cyberlink-001	16	0.05 ± 0.02	0.021 ± 0.008	0.02 ± 0.01	0.022 ± 0.009	0.03 ± 0.01	0.08 ± 0.03	0.04 ± 0.02	0.010 ± 0.005	0.009 ± 0.009	0.015 ± 0.008	0.011 ± 0.008	0.02 ± 0.02	W Africa F	E Europe M	0.39
cyberlink-001	17	0.10 ± 0.03	0.034 ± 0.009	0.03 ± 0.02	0.03 ± 0.01	0.05 ± 0.02	0.12 ± 0.03	0.04 ± 0.02	0.020 ± 0.006	0.02 ± 0.01	0.03 ± 0.01	0.03 ± 0.02	0.05 ± 0.02	W Africa F	E Europe M	0.34
cyberlink-001	18	0.12 ± 0.03	0.054 ± 0.010	0.04 ± 0.01	0.06 ± 0.01	0.06 ± 0.02	0.14 ± 0.03	0.09 ± 0.02	0.041 ± 0.008	0.02 ± 0.01	0.06 ± 0.01	0.04 ± 0.01	0.09 ± 0.03	W Africa F	E Europe M	0.30
daon-000	16	0.12 ± 0.03	0.08 ± 0.01	0.01 ± 0.01	0.06 ± 0.02	0.08 ± 0.03	0.16 ± 0.04	0.15 ± 0.03	0.12 ± 0.02	0.03 ± 0.01	0.12 ± 0.02	0.13 ± 0.03	0.07 ± 0.03	W Africa F	E Europe F	0.29
daon-000	17	0.21 ± 0.04	0.10 ± 0.02	0.03 ± 0.02	0.09 ± 0.02	0.13 ± 0.03	0.25 ± 0.05	0.23 ± 0.04	0.17 ± 0.02	0.03 ± 0.01	0.19 ± 0.02	0.16 ± 0.04	0.13 ± 0.04	W Africa F	E Europe M	0.30
daon-000	18	0.18 ± 0.03	0.11 ± 0.01	0.04 ± 0.02	0.09 ± 0.01	0.11 ± 0.02	0.27 ± 0.04	0.31 ± 0.04	0.19 ± 0.02	0.05 ± 0.02	0.26 ± 0.02	0.19 ± 0.03	0.23 ± 0.04	E Africa M	E Europe F	0.31
daon-001	16	0.07 ± 0.02	0.033 ± 0.009	0.008 ± 0.008	0.023 ± 0.009	0.03 ± 0.02	0.11 ± 0.03	0.07 ± 0.02	0.07 ± 0.01	0.003 ± 0.003	0.04 ± 0.01	0.04 ± 0.02	0.03 ± 0.02	W Africa F	E Europe M	0.39
daon-001	17	0.14 ± 0.03	0.06 ± 0.01	0.02 ± 0.01	0.04 ± 0.01	0.06 ± 0.02	0.18 ± 0.04	0.13 ± 0.04	0.10 ± 0.01	0.008 ± 0.008	0.09 ± 0.02	0.10 ± 0.03	0.11 ± 0.04	W Africa F	E Europe M	0.35
daon-001	18	0.12 ± 0.03	0.08 ± 0.01	0.03 ± 0.01	0.05 ± 0.01	0.06 ± 0.02	0.23 ± 0.04	0.21 ± 0.03	0.12 ± 0.01	0.03 ± 0.01	0.17 ± 0.02	0.11 ± 0.02	0.15 ± 0.03	W Africa F	E Europe F	0.34
dermalog-001	16	0.10 ± 0.03	0.10 ± 0.02	0.21 ± 0.04	0.16 ± 0.02	0.16 ± 0.04	0.06 ± 0.03	0.05 ± 0.02	0.05 ± 0.01	0.04 ± 0.02	0.10 ± 0.02	0.08 ± 0.02	0.04 ± 0.02	E Europe F	W Africa M	0.32
dermalog-001	17	0.13 ± 0.04	0.14 ± 0.02	0.31 ± 0.04	0.24 ± 0.03	0.20 ± 0.04	0.07 ± 0.03	0.10 ± 0.03	0.07 ± 0.01	0.04 ± 0.02	0.12 ± 0.02	0.10 ± 0.03	0.09 ± 0.03	E Europe F	E Europe M	0.33
dermalog-001	18	0.13 ± 0.03	0.16 ± 0.01	0.27 ± 0.04	0.25 ± 0.02	0.20 ± 0.03	0.12 ± 0.03	0.13 ± 0.03	0.07 ± 0.01	0.05 ± 0.02	0.18 ± 0.02	0.10 ± 0.02	0.14 ± 0.03	E Europe F	E Europe M	0.26
dermalog-002	16	0.07 ± 0.02	0.23 ± 0.02	0.24 ± 0.04	0.19 ± 0.03	0.21 ± 0.04	0.10 ± 0.03	0.04 ± 0.02	0.038 ± 0.009	0.04 ± 0.02	0.03 ± 0.01	0.04 ± 0.02	0.03 ± 0.02	E Europe F	W Africa M	0.45
dermalog-002	17	0.11 ± 0.03	0.29 ± 0.02	0.31 ± 0.05	0.26 ± 0.03	0.30 ± 0.05	0.14 ± 0.03	0.07 ± 0.03	0.05 ± 0.01	0.06 ± 0.02	0.09 ± 0.02	0.08 ± 0.03	0.05 ± 0.02	E Europe F	W Africa M	0.39
dermalog-002	18	0.13 ± 0.03	0.35 ± 0.02	0.39 ± 0.04	0.29 ± 0.02	0.32 ± 0.03	0.14 ± 0.03	0.12 ± 0.03	0.08 ± 0.01	0.11 ± 0.03	0.13 ± 0.02	0.11 ± 0.02	0.11 ± 0.03	E Europe F	E Asia M	0.33
hzailu-001	16	0.33 ± 0.05	0.33 ± 0.02	0.56 ± 0.05	0.43 ± 0.03	0.43 ± 0.04	0.52 ± 0.06	0.51 ± 0.05	0.25 ± 0.02	0.38 ± 0.05	0.58 ± 0.03	0.46 ± 0.05	0.56 ± 0.06	S Asia M	E Asia M	0.14
hzailu-001	17	0.39 ± 0.05	0.40 ± 0.03	0.66 ± 0.05	0.51 ± 0.03	0.48 ± 0.05	0.61 ± 0.05	0.55 ± 0.05	0.34 ± 0.02	0.44 ± 0.05	0.68 ± 0.03	0.53 ± 0.05	0.67 ± 0.05	S Asia M	E Asia M	0.13
hzailu-001	18	0.46 ± 0.04	0.47 ± 0.02	0.73 ± 0.04	0.55 ± 0.02	0.51 ± 0.03	0.63 ± 0.04	0.70 ± 0.04	0.40 ± 0.02	0.55 ± 0.04	0.77 ± 0.02	0.57 ± 0.04	0.74 ± 0.04	S Asia M	E Asia M	0.12
idemia-001	16	0.02 ± 0.01	0.007 ± 0.004	0.000 ± 0.000	0.004 ± 0.004	0.03 ± 0.02	0.05 ± 0.03	0.02 ± 0.01	0.002 ± 0.002	0.003 ± 0.003	0.002 ± 0.002	0.000 ± 0.000	0.005 ± 0.005	W Africa F	E Europe F	0.67
idemia-001	17	0.04 ± 0.02	0.023 ± 0.007	0.003 ± 0.003	0.021 ± 0.009	0.05 ± 0.02	0.09 ± 0.03	0.01 ± 0.01	0.007 ± 0.004	0.000 ± 0.000	0.009 ± 0.005	0.006 ± 0.006	0.04 ± 0.02	W Africa F	E Europe M	0.55
idemia-001	18	0.08 ± 0.02	0.030 ± 0.008	0.014 ± 0.009	0.031 ± 0.008	0.04 ± 0.01	0.11 ± 0.03	0.04 ± 0.02	0.019 ± 0.006	0.000 ± 0.000	0.031 ± 0.008	0.022 ± 0.010	0.06 ± 0.02	W Africa F	E Europe M	0.42
idemia-002	16	0.03 ± 0.02	0.004 ± 0.003	0.000 ± 0.000	0.005 ± 0.004	0.01 ± 0.01	0.03 ± 0.02	0.01 ± 0.01	0.001 ± 0.001	0.003 ± 0.003	0.000 ± 0.000	0.000 ± 0.000	0.000 ± 0.000	W Africa F	E Europe F	0.71
idemia-002	17	0.03 ± 0.02	0.013 ± 0.005	0.03 ± 0.02	0.018 ± 0.008	0.02 ± 0.01	0.07 ± 0.03	0.000 ± 0.000	0.004 ± 0.003	0.000 ± 0.000	0.006 ± 0.004	0.006 ± 0.006	0.03 ± 0.02	W Africa F	E Africa M	0.55
idemia-002	18	0.07 ± 0.02	0.015 ± 0.005	0.04 ± 0.02	0.025 ± 0.007	0.03 ± 0.01	0.09 ± 0.03	0.02 ± 0.01	0.012 ± 0.004	0.000 ± 0.000	0.012 ± 0.005	0.011 ± 0.007	0.03 ± 0.01	W Africa F	E Europe M	0.48
inbut-000	16	0.26 ± 0.04	0.06 ± 0.01	0.19 ± 0.04	0.09 ± 0.02	0.09 ± 0.03	0.35 ± 0.06	0.23 ± 0.05	0.07 ± 0.01	0.12 ± 0.03	0.11 ± 0.02	0.12 ± 0.03	0.22 ± 0.05	W Africa F	E Asia F	0.33
inbut-000	17	0.39 ± 0.05	0.08 ± 0.01	0.22 ± 0.04	0.16 ± 0.02	0.11 ± 0.03	0.40 ± 0.05	0.30 ± 0.05	0.10 ± 0.01	0.12 ± 0.03	0.13 ± 0.02	0.13 ± 0.03	0.27 ± 0.05	W Africa F	E Asia F	0.32
inbut-000	18	0.40 ± 0.04	0.10 ± 0.01	0.23 ± 0.03	0.15 ± 0.02	0.11 ± 0.02	0.45 ± 0.04	0.27 ± 0.03	0.10 ± 0.01	0.15 ± 0.03	0.14 ± 0.02	0.08 ± 0.02	0.24 ± 0.04	W Africa F	S E Asia M	0.33
incode-000	16	0.08 ± 0.03	0.026 ± 0.009	0.04 ± 0.02	0.03 ± 0.01	0.05 ± 0.02	0.09 ± 0.03	0.03 ± 0.02	0.002 ± 0.002	0.006 ± 0.006	0.004 ± 0.003	0.006 ± 0.006	0.01 ± 0.01	W Africa F	E Asia M	0.52
incode-000	17	0.11 ± 0.03	0.05 ± 0.01	0.07 ± 0.03	0.06 ± 0.02	0.06 ± 0.02	0.11 ± 0.03	0.02 ± 0.01	0.006 ± 0.004	0.003 ± 0.003	0.017 ± 0.007	0.01 ± 0.01	0.05 ± 0.02	E Africa F	E Europe M	0.46
incode-000	18	0.15 ± 0.03	0.07 ± 0.01	0.08 ± 0.02	0.08 ± 0.01	0.09 ± 0.02	0.13 ± 0.03	0.04 ± 0.01	0.013 ± 0.004	0.013 ± 0.009	0.023 ± 0.006	0.015 ± 0.008	0.06 ± 0.02	E Africa F	E Europe M	0.42
incode-001	16	0.07 ± 0.02	0.023 ± 0.008	0.04 ± 0.02	0.03 ± 0.01	0.06 ± 0.02	0.08 ± 0.03	0.02 ± 0.01	0.005 ± 0.003	0.003 ± 0.003	0.004 ± 0.003	0.000 ± 0.000	0.005 ± 0.005	W Africa F	S E Asia M	0.57
incode-001	17	0.11 ± 0.03	0.07 ± 0.01	0.06 ± 0.02	0.06 ± 0.02	0.06 ± 0.02	0.16 ± 0.03	0.02 ± 0.01	0.011 ± 0.004	0.000 ± 0.000	0.011 ± 0.006	0.02 ± 0.01	0.04 ± 0.02	W Africa F	E Europe M	0.49
incode-001	18	0.13 ± 0.03	0.10 ± 0.01	0.08 ± 0.02	0.10 ± 0.01	0.15 ± 0.02	0.19 ± 0.04	0.04 ± 0.01	0.022 ± 0.006	0.009 ± 0.007	0.025 ± 0.008	0.03 ± 0.01	0.06 ± 0.02	W Africa F	E Europe M	0.43
innovatrics-000	16	0.11 ± 0.03	0.015 ± 0.006	0.005 ± 0.005	0.015 ± 0.008	0.02 ± 0.01	0.12 ± 0.04	0.03 ± 0.02	0.001 ± 0.001	0.003 ± 0.003	0.006 ± 0.004	0.000 ± 0.000	0.02 ± 0.01	W Africa F	S E Asia M	0.70
innovatrics-000	17	0.20 ± 0.04	0.020 ± 0.007	0.01 ± 0.01	0.07 ± 0.02	0.01 ± 0.01	0.22 ± 0.05	0.03 ± 0.01	0.006 ± 0.004	0.000 ± 0.000	0.020 ± 0.008	0.003 ± 0.003	0.07 ± 0.03	W Africa F	E Europe M	0.68
innovatrics-000	18	0.23 ± 0.03	0.029 ± 0.007	0.02 ± 0.01	0.08 ± 0.01	0.03 ± 0.01	0.25 ± 0.04	0.07 ± 0.02	0.015 ± 0.005	0.011 ± 0.007	0.043 ± 0.009	0.010 ± 0.007	0.10 ± 0.03	W Africa F	S E Asia M	0.58
innovatrics-001	16	0.09 ± 0.03	0.008 ± 0.005	0.005 ± 0.005	0.011 ± 0.006	0.005 ± 0.005	0.13 ± 0.03	0.03 ± 0.02	0.000 ± 0.000	0.003 ± 0.003	0.006 ± 0.004	0.000 ± 0.000	0.01 ± 0.01	W Africa F	E Asia M	0.75
innovatrics-001	17	0.17 ± 0.04	0.014 ± 0.005	0.02 ± 0.01	0.04 ± 0.01	0.01 ± 0.01	0.22 ± 0.04	0.02 ± 0.01	0.004 ± 0.003	0.000 ± 0.000	0.012 ± 0.006	0.003 ± 0.003	0.06 ± 0.02	W Africa F	E Europe M	0.71
innovatrics-001	18	0.20 ± 0.03	0.024 ± 0.006	0.02 ± 0.01	0.051 ± 0.009	0.020 ± 0.009	0.25 ± 0.04	0.06 ± 0.02	0.011 ± 0.004	0.007 ± 0.005	0.026 ± 0.007	0.006 ± 0.004	0.11 ± 0.03	W Africa F	S E Asia M	0.63
innovatrics-002	16	0.15 ± 0.03	0.011 ± 0.005	0.01 ± 0.01	0.018 ± 0.009	0.010 ± 0.008	0.18 ± 0.05	0.03 ± 0.02	0.001 ± 0.001	0.003 ± 0.003	0.006 ± 0.004	0.003 ± 0.003	0.03 ± 0.02	W Africa F	E Asia M	0.73

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innovatrics-002	17	0.22 ± 0.04	0.024 ± 0.007	0.04 ± 0.02	0.05 ± 0.01	0.02 ± 0.01	0.31 ± 0.05	0.05 ± 0.02	0.008 ± 0.004	0.003 ± 0.003	0.021 ± 0.009	0.003 ± 0.003	0.09 ± 0.03	W Africa F	S E Asia M	0.68
innovatrics-002	18	0.26 ± 0.03	0.032 ± 0.007	0.03 ± 0.01	0.07 ± 0.01	0.04 ± 0.01	0.33 ± 0.04	0.09 ± 0.02	0.018 ± 0.005	0.015 ± 0.009	0.044 ± 0.009	0.010 ± 0.006	0.13 ± 0.03	W Africa F	S E Asia M	0.59
jumio-000	16	0.18 ± 0.04	0.06 ± 0.01	0.11 ± 0.03	0.10 ± 0.02	0.12 ± 0.03	0.22 ± 0.05	0.04 ± 0.02	0.009 ± 0.005	0.08 ± 0.03	0.006 ± 0.004	0.011 ± 0.008	0.02 ± 0.01	W Africa F	S Asia M	0.50
jumio-000	17	0.25 ± 0.05	0.10 ± 0.01	0.16 ± 0.04	0.16 ± 0.02	0.15 ± 0.03	0.29 ± 0.05	0.04 ± 0.02	0.019 ± 0.006	0.11 ± 0.03	0.017 ± 0.008	0.03 ± 0.02	0.06 ± 0.03	W Africa F	S Asia M	0.45
jumio-000	18	0.28 ± 0.04	0.15 ± 0.01	0.18 ± 0.03	0.18 ± 0.02	0.20 ± 0.03	0.37 ± 0.04	0.07 ± 0.02	0.039 ± 0.008	0.13 ± 0.03	0.041 ± 0.009	0.03 ± 0.01	0.10 ± 0.03	W Africa F	S E Asia M	0.40
neurotechnology-000	16	0.31 ± 0.05	0.20 ± 0.02	0.08 ± 0.03	0.10 ± 0.02	0.16 ± 0.03	0.59 ± 0.06	0.66 ± 0.05	0.29 ± 0.02	0.03 ± 0.01	0.14 ± 0.02	0.19 ± 0.04	0.76 ± 0.05	W Africa M	E Europe M	0.47
neurotechnology-000	17	0.39 ± 0.05	0.24 ± 0.02	0.12 ± 0.03	0.13 ± 0.02	0.21 ± 0.04	0.64 ± 0.05	0.76 ± 0.05	0.36 ± 0.03	0.06 ± 0.02	0.20 ± 0.02	0.28 ± 0.04	0.84 ± 0.05	W Africa M	E Europe M	0.41
neurotechnology-000	18	0.40 ± 0.04	0.26 ± 0.02	0.13 ± 0.03	0.14 ± 0.02	0.23 ± 0.03	0.66 ± 0.04	0.77 ± 0.04	0.41 ± 0.02	0.10 ± 0.03	0.27 ± 0.02	0.34 ± 0.03	0.85 ± 0.03	W Africa M	E Europe M	0.38
neurotechnology-001	16	0.07 ± 0.02	0.21 ± 0.02	0.08 ± 0.03	0.10 ± 0.02	0.17 ± 0.04	0.06 ± 0.03	0.05 ± 0.02	0.30 ± 0.02	0.03 ± 0.01	0.12 ± 0.02	0.21 ± 0.04	0.03 ± 0.02	E Asia M	E Europe M	0.41
neurotechnology-001	17	0.08 ± 0.03	0.26 ± 0.02	0.14 ± 0.03	0.13 ± 0.02	0.23 ± 0.04	0.09 ± 0.03	0.12 ± 0.03	0.37 ± 0.02	0.06 ± 0.02	0.20 ± 0.03	0.26 ± 0.04	0.10 ± 0.03	E Asia M	E Europe M	0.32
neurotechnology-001	18	0.12 ± 0.02	0.26 ± 0.02	0.13 ± 0.03	0.14 ± 0.02	0.23 ± 0.03	0.11 ± 0.03	0.16 ± 0.03	0.41 ± 0.02	0.10 ± 0.02	0.25 ± 0.02	0.35 ± 0.04	0.15 ± 0.03	E Asia M	E Europe M	0.28
nominder-000	16	0.08 ± 0.03	0.028 ± 0.009	0.01 ± 0.01	0.03 ± 0.01	0.05 ± 0.02	0.18 ± 0.04	0.03 ± 0.01	0.026 ± 0.008	0.009 ± 0.009	0.013 ± 0.007	0.01 ± 0.01	0.02 ± 0.02	W Africa F	E Europe M	0.52
nominder-000	17	0.14 ± 0.03	0.06 ± 0.01	0.04 ± 0.02	0.04 ± 0.01	0.06 ± 0.02	0.27 ± 0.05	0.04 ± 0.02	0.05 ± 0.01	0.008 ± 0.008	0.04 ± 0.01	0.03 ± 0.01	0.10 ± 0.03	W Africa F	E Europe M	0.47
nominder-000	18	0.17 ± 0.03	0.10 ± 0.01	0.05 ± 0.02	0.05 ± 0.01	0.07 ± 0.02	0.31 ± 0.04	0.09 ± 0.02	0.07 ± 0.01	0.03 ± 0.01	0.08 ± 0.01	0.06 ± 0.02	0.12 ± 0.03	W Africa F	E Europe M	0.37
nominder-001	16	0.04 ± 0.02	0.015 ± 0.006	0.02 ± 0.01	0.010 ± 0.006	0.03 ± 0.02	0.12 ± 0.04	0.01 ± 0.01	0.009 ± 0.005	0.003 ± 0.003	0.004 ± 0.003	0.008 ± 0.008	0.005 ± 0.005	W Africa F	E Europe M	0.61
nominder-001	17	0.08 ± 0.03	0.024 ± 0.007	0.03 ± 0.01	0.03 ± 0.01	0.03 ± 0.02	0.18 ± 0.04	0.01 ± 0.01	0.016 ± 0.006	0.008 ± 0.008	0.016 ± 0.007	0.03 ± 0.01	0.04 ± 0.02	W Africa F	E Europe M	0.51
nominder-001	18	0.10 ± 0.02	0.033 ± 0.008	0.04 ± 0.02	0.033 ± 0.009	0.05 ± 0.01	0.24 ± 0.04	0.04 ± 0.02	0.039 ± 0.008	0.016 ± 0.009	0.031 ± 0.008	0.03 ± 0.01	0.07 ± 0.02	W Africa F	E Europe M	0.43
ondato-000	16	0.14 ± 0.03	0.06 ± 0.01	0.05 ± 0.02	0.05 ± 0.01	0.08 ± 0.03	0.23 ± 0.05	0.07 ± 0.02	0.026 ± 0.007	0.009 ± 0.009	0.017 ± 0.008	0.03 ± 0.01	0.05 ± 0.03	W Africa F	E Europe M	0.47
ondato-000	17	0.23 ± 0.04	0.11 ± 0.02	0.05 ± 0.02	0.10 ± 0.02	0.10 ± 0.03	0.30 ± 0.05	0.10 ± 0.03	0.045 ± 0.010	0.011 ± 0.008	0.05 ± 0.01	0.05 ± 0.02	0.16 ± 0.04	W Africa F	E Europe M	0.43
ondato-000	18	0.24 ± 0.03	0.14 ± 0.01	0.07 ± 0.02	0.12 ± 0.01	0.13 ± 0.02	0.34 ± 0.04	0.14 ± 0.03	0.06 ± 0.01	0.02 ± 0.01	0.07 ± 0.01	0.06 ± 0.02	0.16 ± 0.03	W Africa F	E Europe M	0.38
ondato-001	16	0.10 ± 0.03	0.04 ± 0.01	0.04 ± 0.02	0.05 ± 0.01	0.05 ± 0.02	0.16 ± 0.05	0.05 ± 0.02	0.014 ± 0.005	0.003 ± 0.003	0.007 ± 0.004	0.008 ± 0.008	0.04 ± 0.02	W Africa F	E Europe M	0.50
ondato-001	17	0.16 ± 0.04	0.07 ± 0.01	0.04 ± 0.02	0.10 ± 0.02	0.11 ± 0.03	0.22 ± 0.04	0.06 ± 0.02	0.018 ± 0.006	0.006 ± 0.006	0.024 ± 0.008	0.04 ± 0.02	0.09 ± 0.03	W Africa F	E Europe M	0.46
ondato-001	18	0.20 ± 0.03	0.12 ± 0.01	0.07 ± 0.02	0.12 ± 0.01	0.14 ± 0.02	0.26 ± 0.04	0.11 ± 0.03	0.036 ± 0.007	0.013 ± 0.009	0.05 ± 0.01	0.04 ± 0.01	0.12 ± 0.03	W Africa F	E Europe M	0.39
privately-000	16	0.06 ± 0.02	0.11 ± 0.02	0.03 ± 0.02	0.06 ± 0.01	0.13 ± 0.03	0.08 ± 0.03	0.02 ± 0.01	0.026 ± 0.008	0.01 ± 0.01	0.006 ± 0.004	0.03 ± 0.01	0.005 ± 0.005	S E Asia F	W Africa M	0.49
privately-000	17	0.08 ± 0.03	0.14 ± 0.02	0.07 ± 0.03	0.08 ± 0.02	0.12 ± 0.03	0.11 ± 0.03	0.01 ± 0.01	0.037 ± 0.009	0.003 ± 0.003	0.015 ± 0.006	0.03 ± 0.01	0.03 ± 0.02	E Asia F	E Europe M	0.46
privately-000	18	0.10 ± 0.02	0.19 ± 0.02	0.08 ± 0.02	0.10 ± 0.01	0.18 ± 0.02	0.11 ± 0.03	0.05 ± 0.02	0.043 ± 0.008	0.007 ± 0.005	0.010 ± 0.004	0.03 ± 0.01	0.03 ± 0.01	E Asia F	E Europe M	0.45
regula-000	16	0.03 ± 0.02	0.003 ± 0.002	0.003 ± 0.003	0.004 ± 0.004	0.02 ± 0.01	0.05 ± 0.02	0.02 ± 0.01	0.001 ± 0.001	0.003 ± 0.003	0.002 ± 0.002	0.003 ± 0.003	0.009 ± 0.009	W Africa F	E Asia M	0.62
regula-000	17	0.07 ± 0.02	0.013 ± 0.006	0.02 ± 0.01	0.03 ± 0.01	0.02 ± 0.01	0.09 ± 0.03	0.003 ± 0.003	0.002 ± 0.002	0.000 ± 0.000	0.007 ± 0.005	0.011 ± 0.008	0.03 ± 0.02	W Africa F	E Europe M	0.59
regula-000	18	0.10 ± 0.02	0.015 ± 0.005	0.03 ± 0.01	0.034 ± 0.009	0.04 ± 0.01	0.14 ± 0.03	0.015 ± 0.009	0.009 ± 0.004	0.002 ± 0.002	0.014 ± 0.006	0.011 ± 0.007	0.06 ± 0.02	W Africa F	E Europe M	0.56
roc-000	16	0.11 ± 0.03	0.14 ± 0.02	0.005 ± 0.005	0.03 ± 0.01	0.11 ± 0.03	0.14 ± 0.04	0.05 ± 0.02	0.06 ± 0.01	0.003 ± 0.003	0.018 ± 0.008	0.05 ± 0.02	0.05 ± 0.03	W Africa F	E Europe M	0.45
roc-000	17	0.18 ± 0.04	0.17 ± 0.02	0.02 ± 0.01	0.07 ± 0.01	0.13 ± 0.03	0.22 ± 0.04	0.07 ± 0.03	0.12 ± 0.02	0.000 ± 0.000	0.04 ± 0.01	0.11 ± 0.03	0.11 ± 0.03	W Africa F	E Europe M	0.38
roc-000	18	0.19 ± 0.03	0.22 ± 0.02	0.05 ± 0.02	0.07 ± 0.01	0.20 ± 0.03	0.26 ± 0.04	0.13 ± 0.03	0.17 ± 0.01	0.007 ± 0.005	0.07 ± 0.01	0.14 ± 0.03	0.15 ± 0.03	W Africa F	E Europe M	0.33
roc-001	16	0.09 ± 0.03	0.04 ± 0.01	0.000 ± 0.000	0.023 ± 0.009	0.05 ± 0.02	0.09 ± 0.03	0.03 ± 0.02	0.014 ± 0.006	0.003 ± 0.003	0.004 ± 0.003	0.01 ± 0.01	0.01 ± 0.01	E Africa F	E Europe F	0.57
roc-001	17	0.14 ± 0.04	0.10 ± 0.02	0.003 ± 0.003	0.07 ± 0.02	0.10 ± 0.03	0.18 ± 0.04	0.05 ± 0.02	0.042 ± 0.010	0.003 ± 0.003	0.019 ± 0.008	0.03 ± 0.02	0.08 ± 0.03	W Africa F	E Europe F	0.47
roc-001	18	0.19 ± 0.03	0.15 ± 0.01	0.02 ± 0.01	0.10 ± 0.01	0.14 ± 0.02	0.23 ± 0.04	0.09 ± 0.02	0.09 ± 0.01	0.002 ± 0.002	0.045 ± 0.009	0.06 ± 0.02	0.13 ± 0.03	W Africa F	E Europe M	0.39
roc-002	16	0.03 ± 0.02	0.019 ± 0.007	0.000 ± 0.000	0.005 ± 0.004	0.04 ± 0.02	0.04 ± 0.02	0.02 ± 0.01	0.004 ± 0.003	0.003 ± 0.003	0.002 ± 0.002	0.008 ± 0.008	0.005 ± 0.005	W Africa F	E Europe F	0.57
roc-002	17	0.05 ± 0.02	0.040 ± 0.010	0.008 ± 0.008	0.025 ± 0.009	0.06 ± 0.02	0.05 ± 0.02	0.012 ± 0.009	0.014 ± 0.005	0.000 ± 0.000	0.010 ± 0.006	0.02 ± 0.01	0.04 ± 0.02	S E Asia F	E Europe M	0.42
roc-002	18	0.08 ± 0.02	0.07 ± 0.01	0.007 ± 0.005	0.030 ± 0.009	0.07 ± 0.02	0.06 ± 0.02	0.03 ± 0.01	0.037 ± 0.007	0.002 ± 0.002	0.023 ± 0.007	0.02 ± 0.01	0.05 ± 0.02	E Africa F	E Europe M	0.39
shufti-000	16	0.13 ± 0.03	0.05 ± 0.01	0.11 ± 0.03	0.06 ± 0.02	0.07 ± 0.02	0.12 ± 0.04	0.10 ± 0.03	0.027 ± 0.007	0.02 ± 0.01	0.022 ± 0.009	0.02 ± 0.01	0.03 ± 0.02	E Africa F	E Europe M	0.38
shufti-000	17	0.21 ± 0.04	0.09 ± 0.01	0.14 ± 0.03	0.14 ± 0.02	0.11 ± 0.03	0.17 ± 0.04	0.11 ± 0.03	0.05 ± 0.01	0.02 ± 0.01	0.05 ± 0.01	0.06 ± 0.02	0.09 ± 0.03	E Africa F	E Europe M	0.32
shufti-000	18	0.24 ± 0.03	0.14 ± 0.01	0.17 ± 0.03	0.18 ± 0.02	0.15 ± 0.02	0.20 ± 0.04	0.16 ± 0.03	0.09 ± 0.01	0.03 ± 0.01	0.12 ± 0.01	0.09 ± 0.02	0.11 ± 0.03	E Africa F	E Europe M	0.22
unissey-001	16	0.12 ± 0.03	0.19 ± 0.02	0.10 ± 0.03	0.10 ± 0.02	0.16 ± 0.03	0.19 ± 0.05	0.11 ± 0.03	0.17 ± 0.02	0.05 ± 0.02	0.10 ± 0.02	0.17 ± 0.04	0.08 ± 0.04	E Asia F	E Europe M	0.21
unissey-001	17	0.17 ± 0.04	0.26 ± 0.02	0.19 ± 0.04	0.15 ± 0.02	0.21 ± 0.04	0.29 ± 0.05	0.20 ± 0.04	0.26 ± 0.02	0.04 ± 0.02	0.15 ± 0.02	0.23 ± 0.04	0.14 ± 0.03	W Africa F	E Europe M	0.20
unissey-001	18	0.22 ± 0.03	0.32 ± 0.02	0.22 ± 0.03	0.18 ± 0.02	0.24 ± 0.03	0.32 ± 0.04	0.27 ± 0.04	0.32 ± 0.02	0.12 ± 0.03	0.26 ± 0.02	0.28 ± 0.03	0.25 ± 0.04	E Asia F	E Europe M	0.14
viante-000	16	0.49 ± 0.04	0.21 ± 0.02	0.03 ± 0.02	0.41 ± 0.03	0.39 ± 0.05	0.43 ± 0.06	0.28 ± 0.05	0.14 ± 0.02	0.01 ± 0.01	0.21 ± 0.03	0.23 ± 0.04	0.28 ± 0.06	E Africa F	E Europe M	0.34
viante-000	17	0.60 ± 0.05	0.33 ± 0.03	0.12 ± 0.04	0.51 ± 0.03	0.46 ± 0.05	0.57 ± 0.05	0.43 ± 0.05	0.25 ± 0.02	0.02 ± 0.01	0.35 ± 0.03	0.37 ± 0.05	0.47 ± 0.05	E Africa F	E Europe M	0.27
viante-000	18	0.65 ± 0.04	0.42 ± 0.02	0.18 ± 0.03	0.56 ± 0.02	0.56 ± 0.03	0.61 ± 0.04	0.54 ± 0.04	0.36 ± 0.02	0.06 ± 0.02	0.48 ± 0.02	0.47 ± 0.04	0.55 ± 0.05	E Africa F	E Europe M	0.21
yoti-001	16	0.13 ± 0.03	0.08 ± 0.01	0.11 ± 0.03	0.12 ± 0.02	0.15 ± 0.03	0.17 ± 0.04	0.02 ± 0.01	0.010 ± 0.005	0.003 ± 0.003	0.006 ± 0.004	0.003 ± 0.003	0.02 ± 0.02	W Africa F	S E Asia M	0.54
yoti-001	17	0.18 ± 0.04	0.14 ± 0.02	0.19 ± 0.04	0.21 ± 0.02	0.18 ± 0.04	0.24 ± 0.05	0.02 ± 0.01	0.036 ± 0.009	0.003 ± 0.003	0.021 ± 0.008	0.02 ± 0.01	0.08 ± 0.03	W Africa F	E Europe M	0.46
yoti-001	18	0.23 ± 0.04	0.19 ± 0.02	0.26 ± 0.04	0.25 ± 0.02	0.26 ± 0.03	0.32 ± 0.04	0.07 ± 0.02	0.059 ± 0.009	0.03 ± 0.01	0.043 ± 0.009	0.04 ± 0.01	0.10 ± 0.03	W Africa F	E Europe M	0.40
yoti-002	16	0.07 ± 0.02	0.07 ± 0.01	0.04 ± 0.02	0.07 ± 0.02	0.13 ± 0.03	0.11 ± 0.04	0.02 ± 0.01	0.011 ± 0.005	0.003 ± 0.003	0.008 ± 0.006	0.01 ± 0.01	0.009 ± 0.009	S E Asia F	E Europe M	0.54
yoti-002	17	0.10 ± 0.03	0.12 ± 0.02	0.06 ± 0.02	0.14 ± 0.02	0.16 ± 0.04	0.18 ± 0.04	0.012 ± 0.009	0.028 ± 0.007	0.006 ± 0.006	0.018 ± 0.007	0.011 ± 0.008	0.04 ± 0.02	W Africa F	E Europe M	0.51
yoti-002	18	0.12 ± 0.02	0.16 ± 0.02	0.09 ± 0.02	0.18 ± 0.02	0.22 ± 0.03	0.19 ± 0.03	0.04 ± 0.02	0.043 ± 0.008	0.005 ± 0.005	0.043 ± 0.009	0.03 ± 0.01	0.07 ± 0.02	S E Asia F	E Europe M	0.43
yoti-003	16	0.07 ± 0.02	0.06 ± 0.01	0.04 ± 0.02	0.04 ± 0.01	0.10 ± 0.03	0.10 ± 0.03	0.02 ± 0.01	0.010 ± 0.005	0.003 ± 0.003	0.003 ± 0.003	0.008 ± 0.008	0.009 ± 0.009	W Africa F	E Europe M	0.54
yoti-003	17	0.11 ± 0.03	0.12 ± 0.02	0.05 ± 0.02	0.12 ± 0.02	0.14 ± 0.03	0.14 ± 0.04	0.012 ± 0.009	0.020 ± 0.007	0.006 ± 0.006	0.016 ± 0.008	0.03 ± 0.02	0.04 ± 0.02	W Africa F	E Europe M	0.46
yoti-003	18	0.14 ± 0.03	0.15 ± 0.02	0.05 ± 0.02	0.14 ± 0.02	0.19 ± 0.03	0.16 ± 0.03	0.03 ± 0.01	0.041 ± 0.007	0.005 ± 0.005	0.037 ± 0.009	0.03 ± 0.01	0.06 ± 0.02	S E Asia F	E Europe M	0.42
yoti-004	16	0.04 ± 0.02	0.031 ± 0.009	0.011 ± 0.008	0.022 ± 0.009	0.05 ± 0.02	0.03 ± 0.02	0.01 ± 0.01	0.003 ± 0.002	0.003 ± 0.003	0.003 ± 0.003	0.003 ± 0.003	0.000 ± 0.000	S E Asia F	W Africa M	0.57
yoti-004	17	0.06 ± 0.02	0.05 ± 0.01	0.011 ± 0.008	0.06 ± 0.02	0.09 ± 0.03	0.09 ± 0.03	0.012 ± 0.009	0.011 ± 0.005	0.003 ± 0.003	0.011 ± 0.006	0.011 ± 0.008	0.03 ± 0.02	W Africa F	E Europe M	0.50
yoti-004	18	0.08 ± 0.02	0.09 ± 0.01	0.02 ± 0.01	0.08 ± 0.01	0.12 ± 0.02	0.12 ± 0.03	0.02 ± 0.01	0.014 ± 0.004	0.000 ± 0.000	0.022 ± 0.006	0.013 ± 0.008	0.04 ± 0.02	S E Asia F	E Europe M	0.48
youverse-000	16	0.13 ± 0.03	0.015 ± 0.006	0.07 ± 0.02	0.06 ± 0.02	0.02 ± 0.01	0.13 ± 0.04	0.07 ± 0.02	0.009 ± 0.004	0.02 ± 0.01	0.03 ± 0.01	0.03 ± 0.02	0.09 ± 0.03	E Africa F	E Asia M	0.44
youverse-000	17	0.18 ± 0.04	0.037 ± 0.009	0.13 ± 0.03	0.09 ± 0.02	0.04 ± 0.02	0.24 ± 0.04	0.12 ± 0.03	0.021 ± 0.007	0.03 ± 0.02	0.07 ± 0.01	0.02 ± 0.01	0.17 ± 0.04	W Africa F	S E Asia M	0.44

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youverse-000	18	0.20 ± 0.04	0.046 ± 0.009	0.16 ± 0.03	0.13 ± 0.02	0.05 ± 0.01	0.24 ± 0.04	0.22 ± 0.04	0.031 ± 0.007	0.08 ± 0.02	0.11 ± 0.02	0.04 ± 0.01	0.25 ± 0.04	W Africa M	E Asia M	0.37

5.4.2. Empirical results

Using sex and region-of-birth metadata, Table 18 shows dependence of Challenge-25 false positive rates on twelve demographic groups. The images are higher quality office application portraits. Expanded information is given in Appendix A.3 which includes Tables 113 to 180 showing Challenge-25 false positive rates for ages 14-34, both sexes, six regions of birth and all algorithms.

Each tabulated data point is computed from hundreds or thousands of images. For 17 year olds, the largest group is East Asian men with 1563 images and the smallest group is 316 West African men. For 18 year olds those numbers rise to 2269 and 420. The uncertainty estimates reflect this; they are computed by bootstrapping 1000 times and computing the interval that gives 95% coverage of the FPR values i.e. quantile (0.025,0.975).

For 16-18 year olds, general accuracy trends are few but we see FPR varies substantially with algorithm, sex, and region of birth. Generally, FPR is higher in women, but the degree is quite strongly algorithm dependent, and for unissey-001 men usually have higher FPR. We expect performance variations to be algorithm-specific, because 1) AI-based models are widely held to underperform on demographic groups that are under-represented in the training data and 2) algorithms are usually trained on image sets curated or owned by the developer.

Figures 18- 87 give one summary of those tables by showing the groups that have worst- and best-case overall mean error for all true age values from 14 to 45. Figures are included for *Application* and *Border* images, both on one page. The figures include both positive and negative errors, positive corresponding to overestimation of age by an algorithm, and negative stating underestimation. A smaller magnitude of error is better. The images are application-type images.

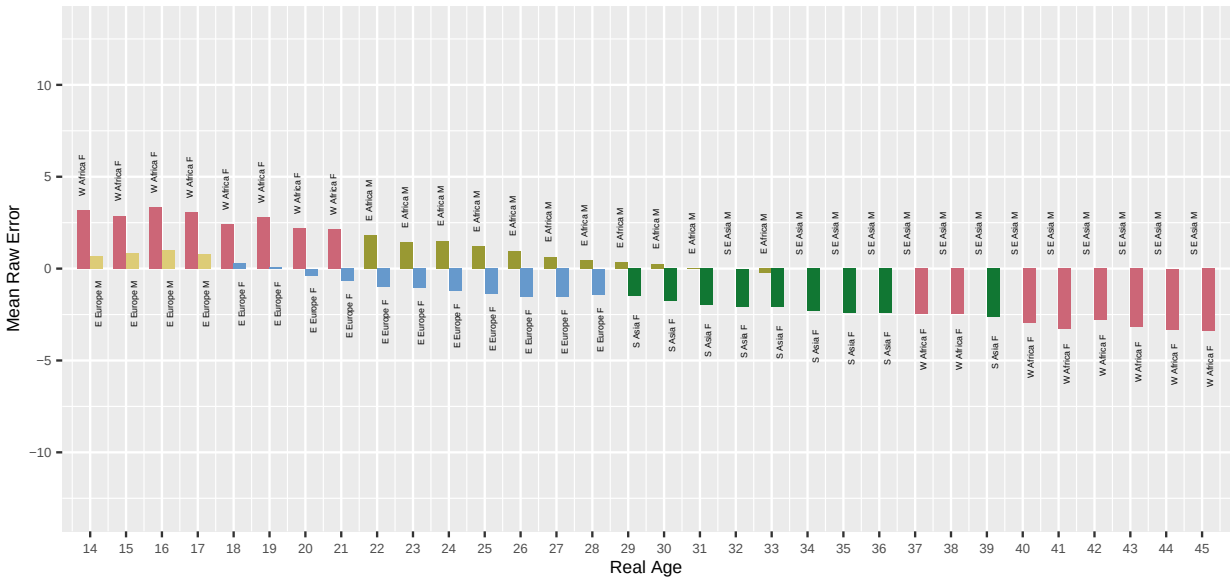

Fig. 12. *For algorithm cognitec-000 applied to Application photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

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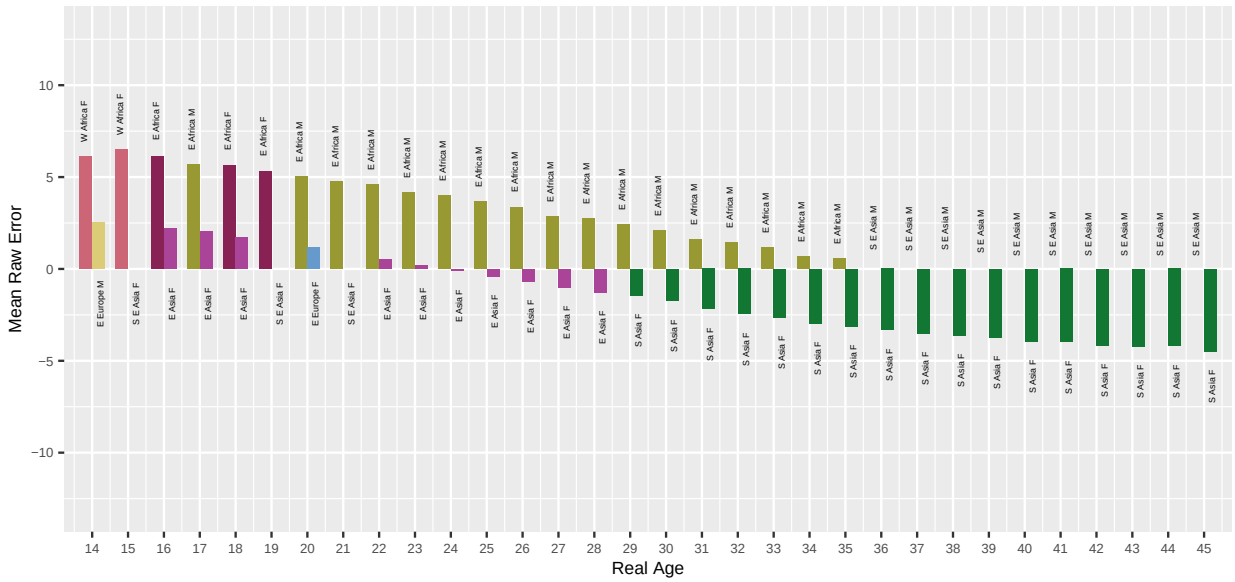

Fig. 13. *For algorithm cognitec-000 applied to Border photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

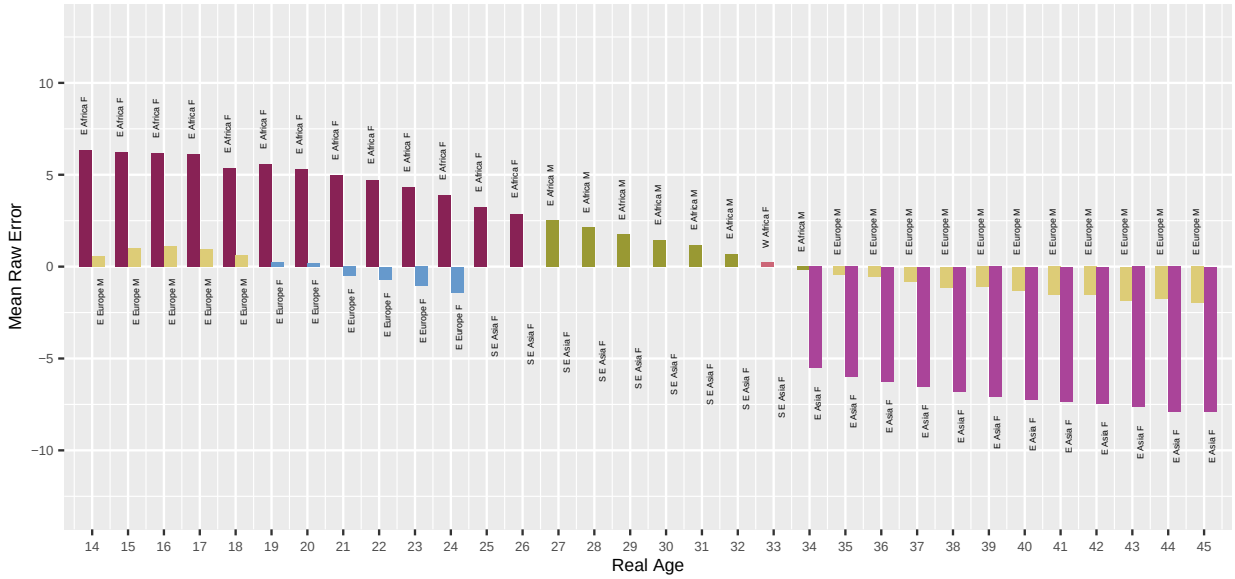

Fig. 14. *For algorithm cvut-001 applied to Application photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

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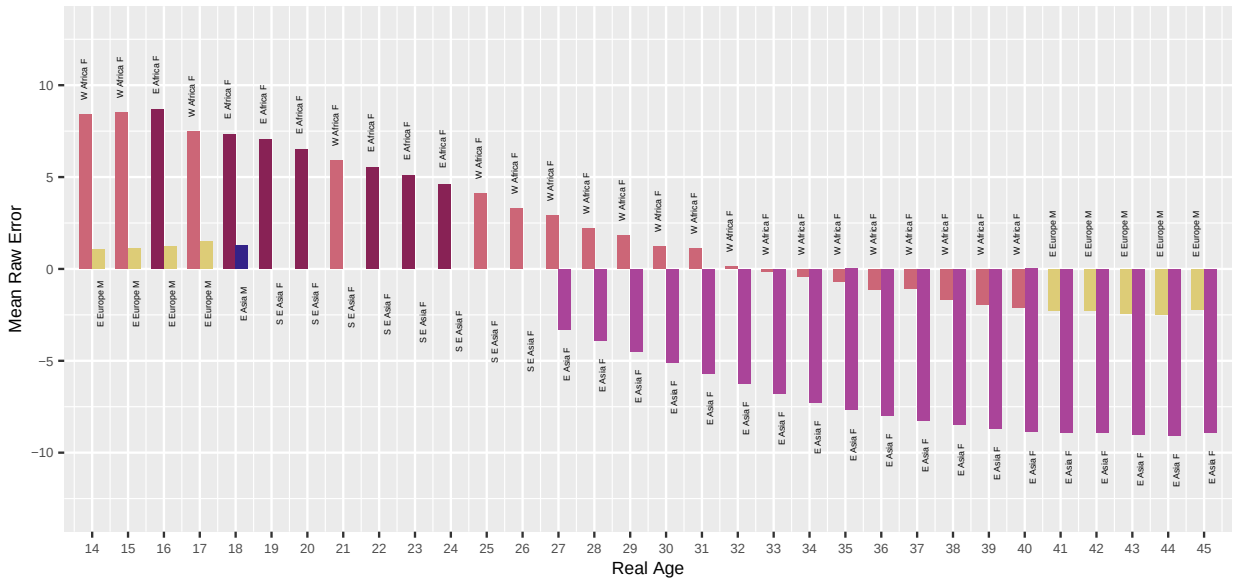

Fig. 15. *For algorithm cvut-001 applied to Border photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

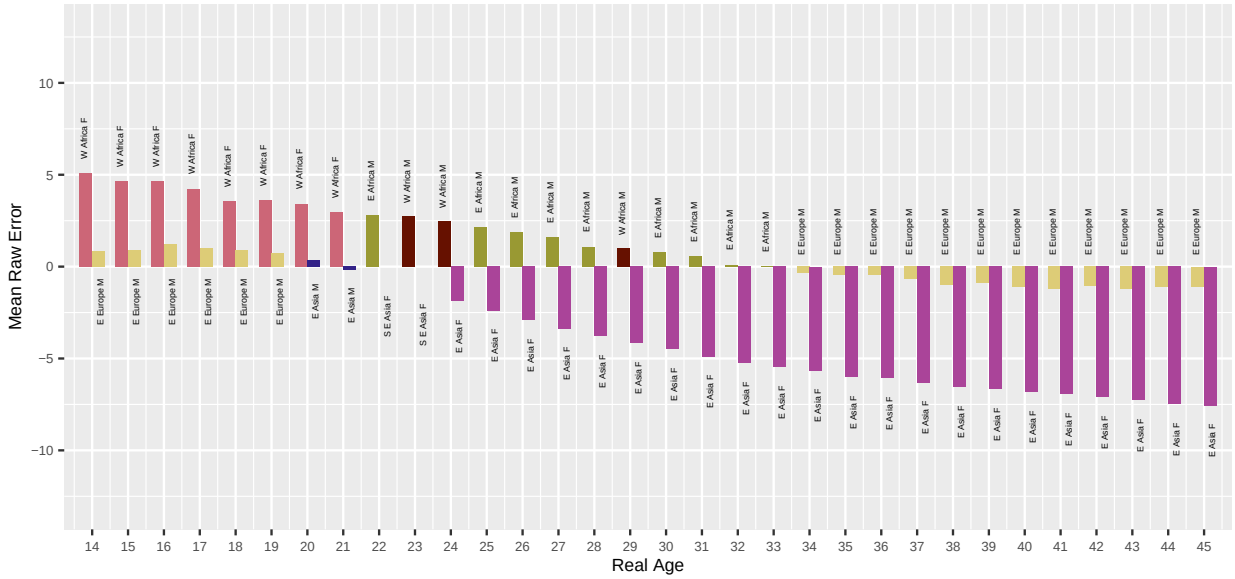

Fig. 16. *For algorithm cvut-002 applied to Application photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

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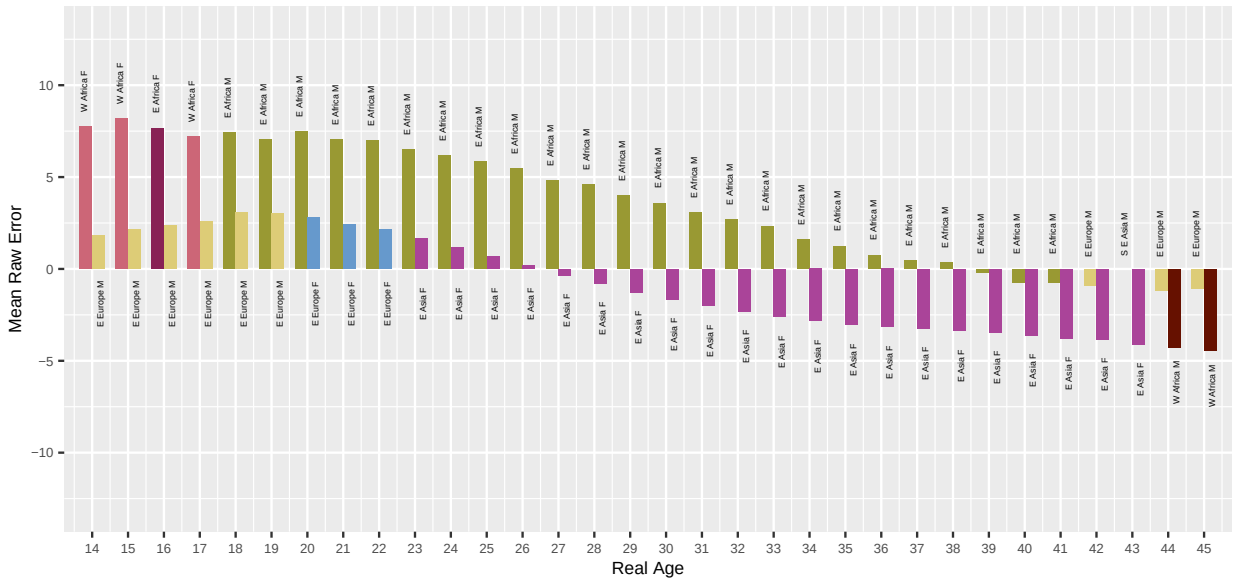

Fig. 17. *For algorithm cvut-002 applied to Border photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

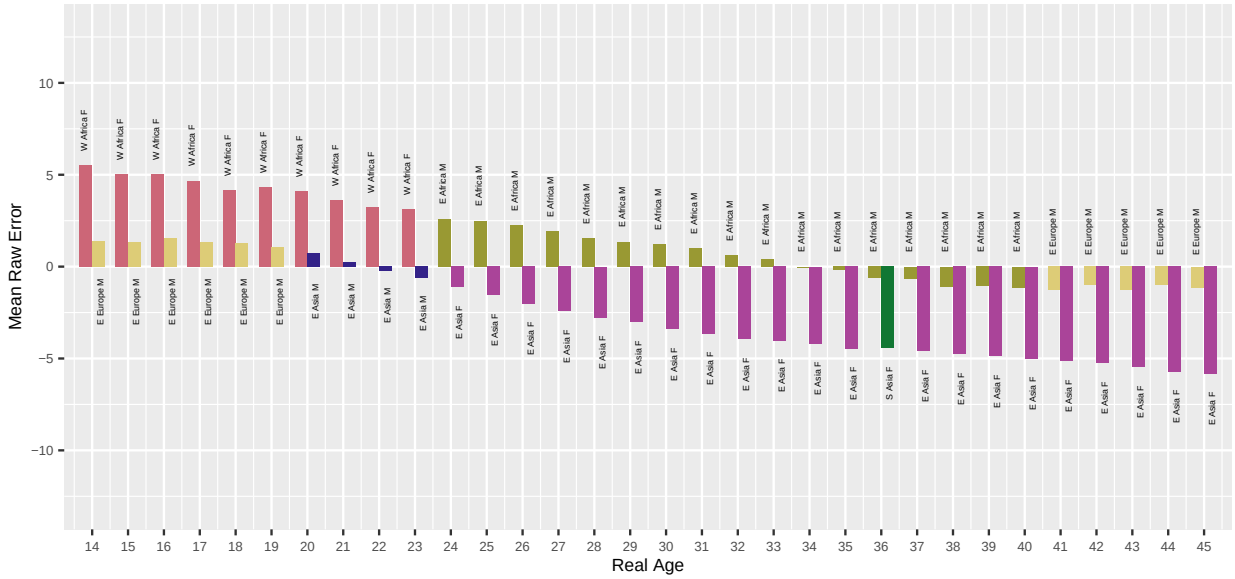

Fig. 18. *For algorithm cvut-003 applied to Application photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

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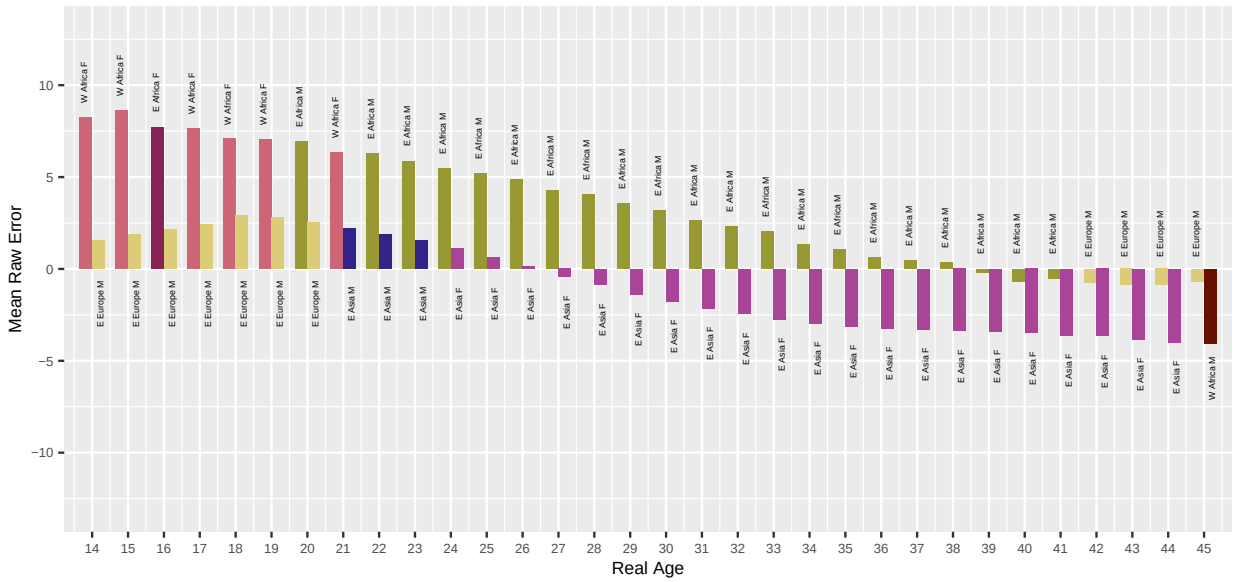

Fig. 19. *For algorithm cvut-003 applied to Border photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

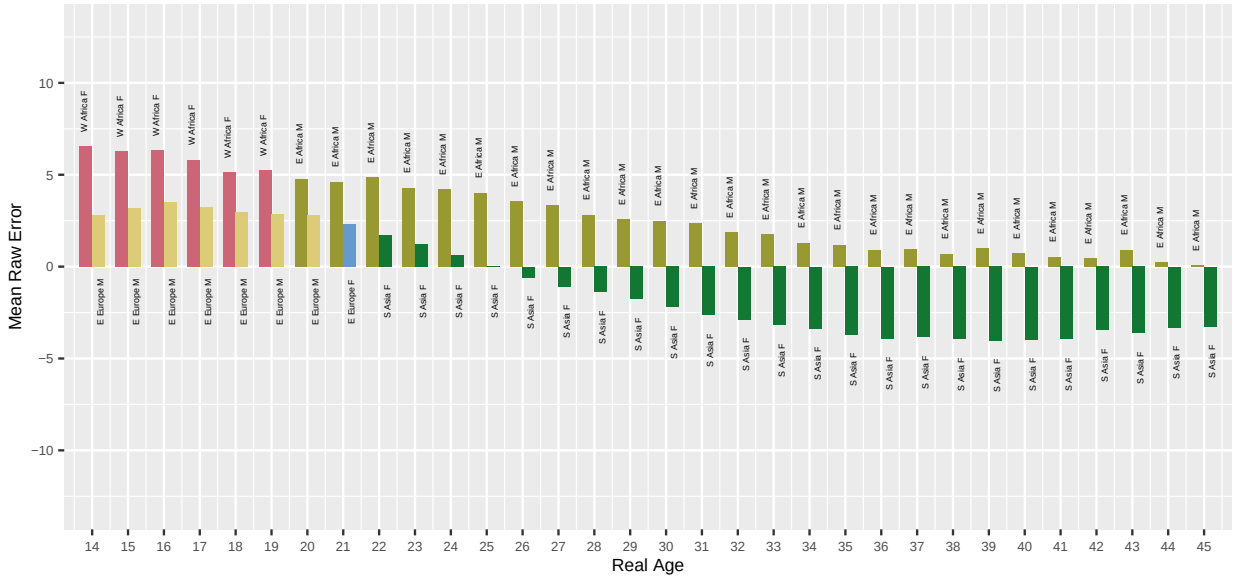

Fig. 20. *For algorithm cyberlink-000 applied to Application photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

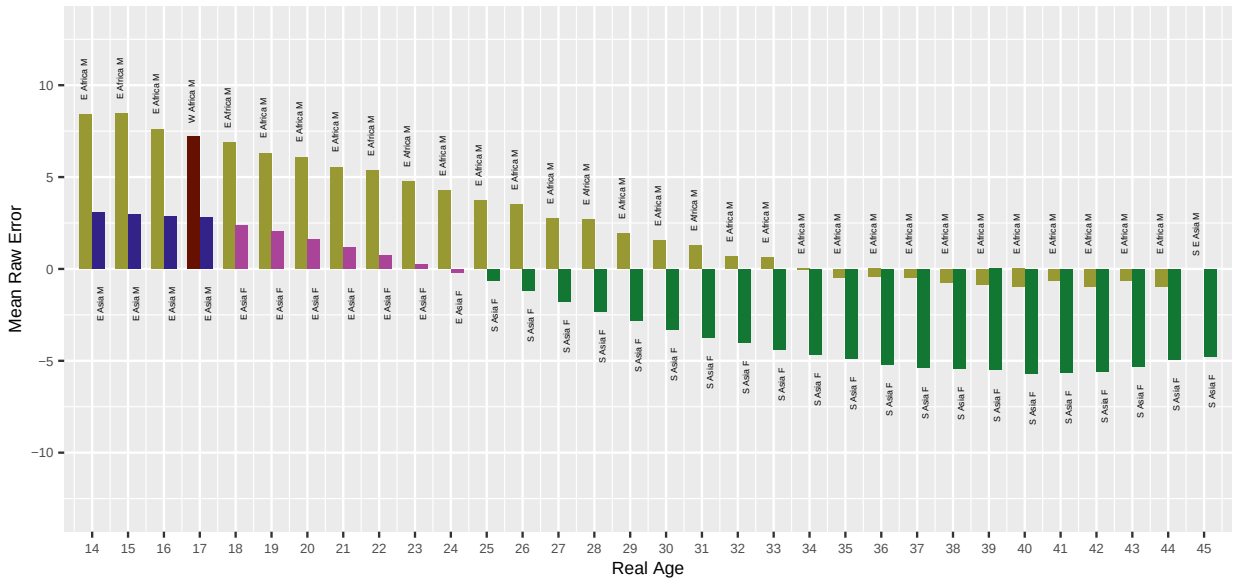

Fig. 21. *For algorithm cyberlink-000 applied to Border photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

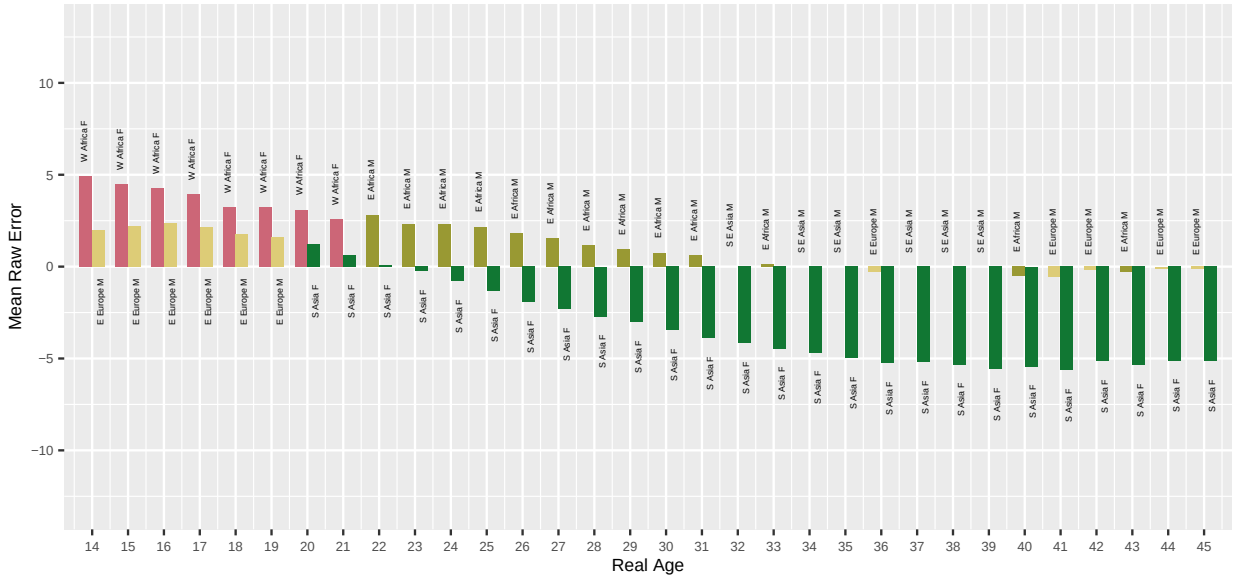

Fig. 22. *For algorithm cyberlink-001 applied to Application photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

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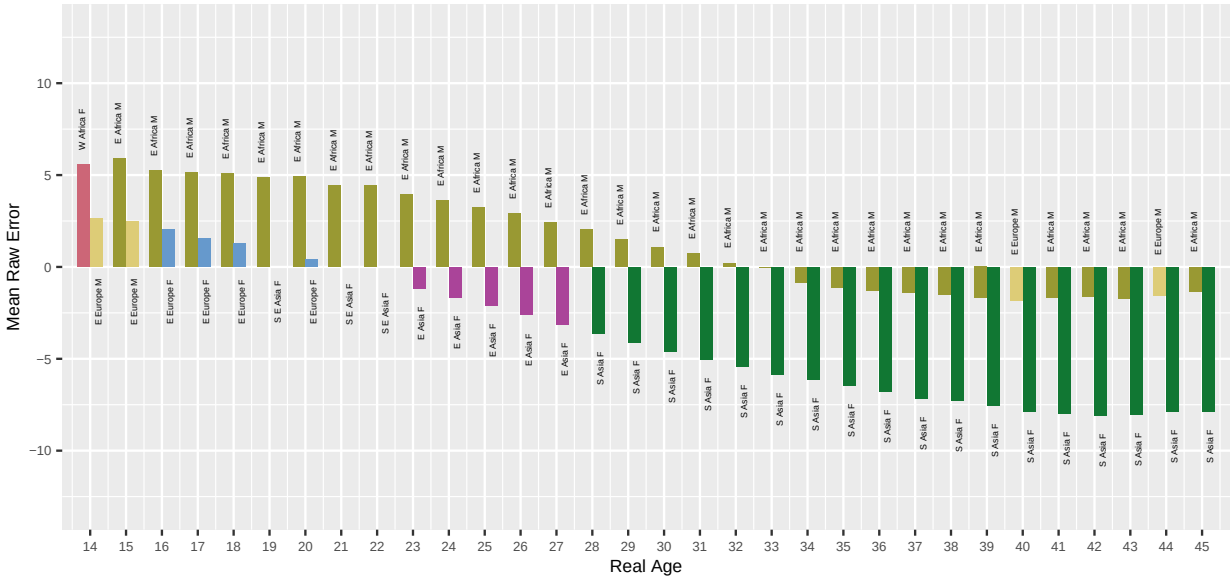

Fig. 23. *For algorithm cyberlink-001 applied to Border photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

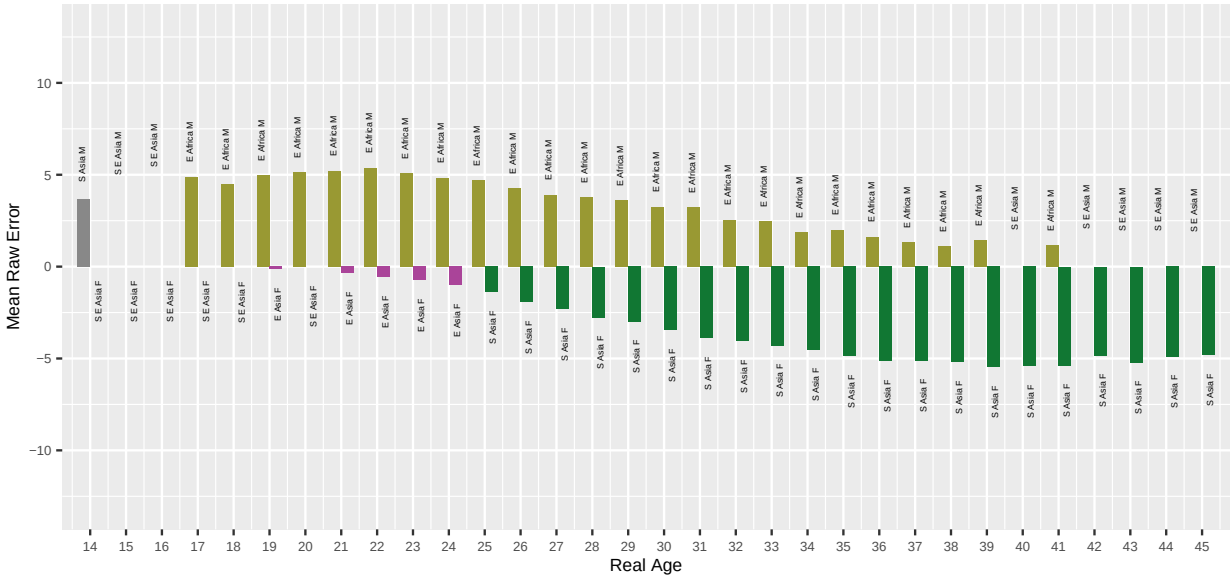

Fig. 24. *For algorithm daon-000 applied to Application photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

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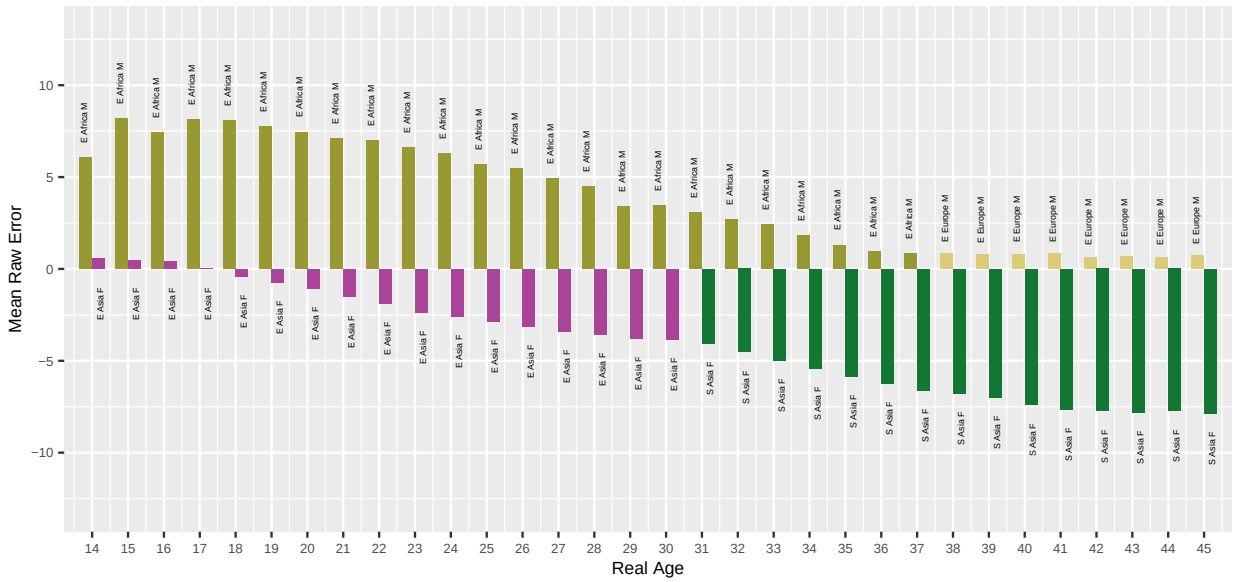

Fig. 25. *For algorithm daon-000 applied to Border photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

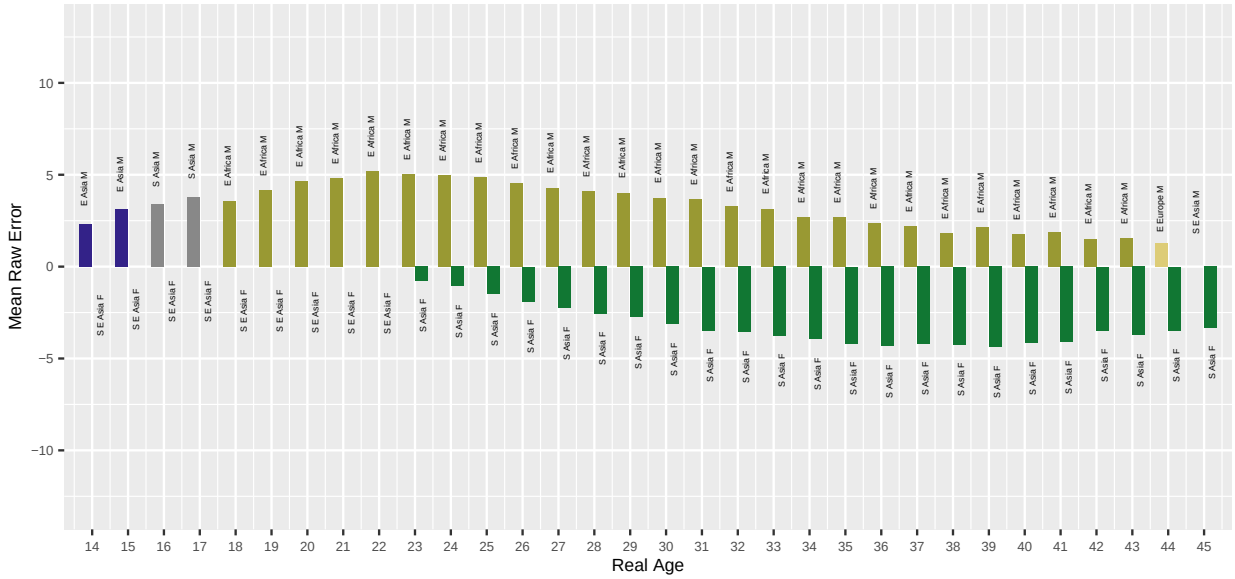

Fig. 26. *For algorithm daon-001 applied to Application photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

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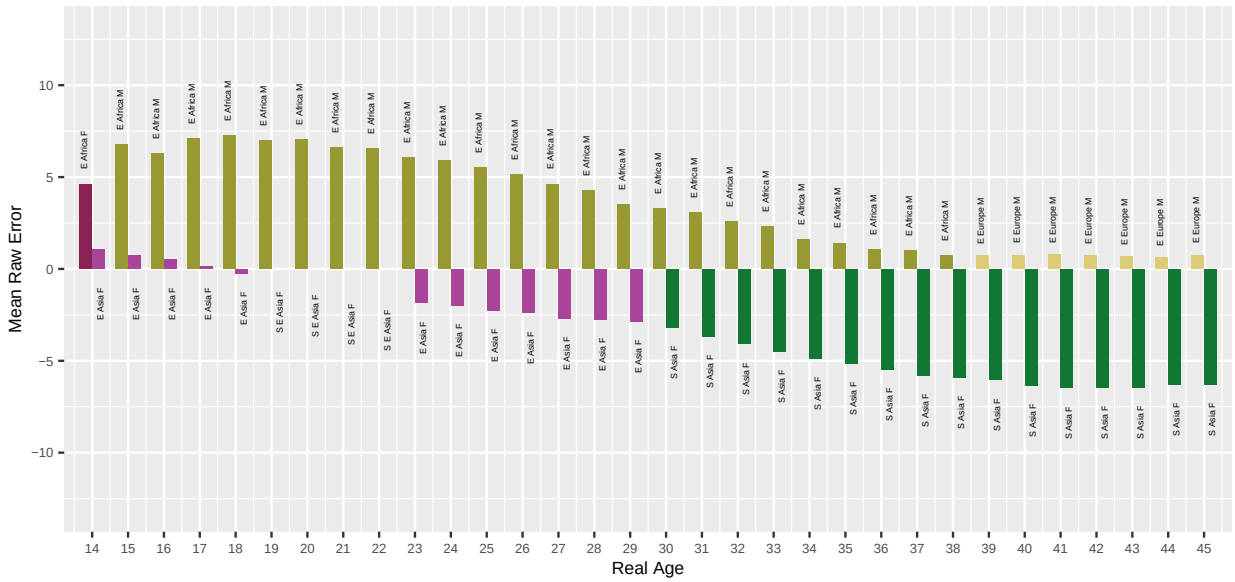

Fig. 27. *For algorithm daon-001 applied to Border photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

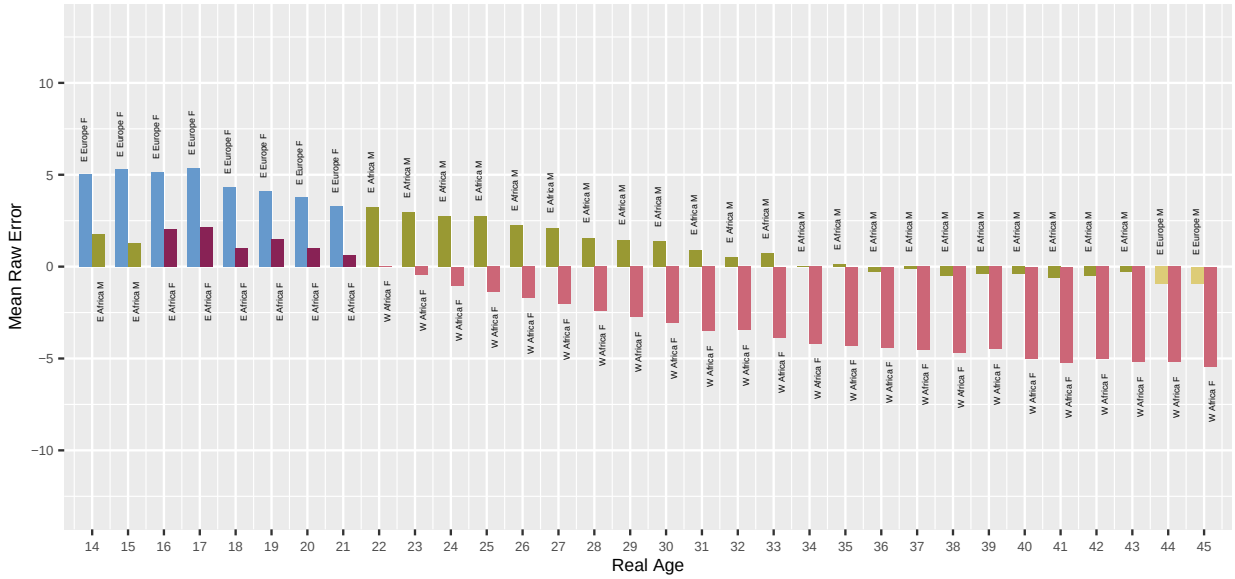

Fig. 28. *For algorithm dermalog-001 applied to Application photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

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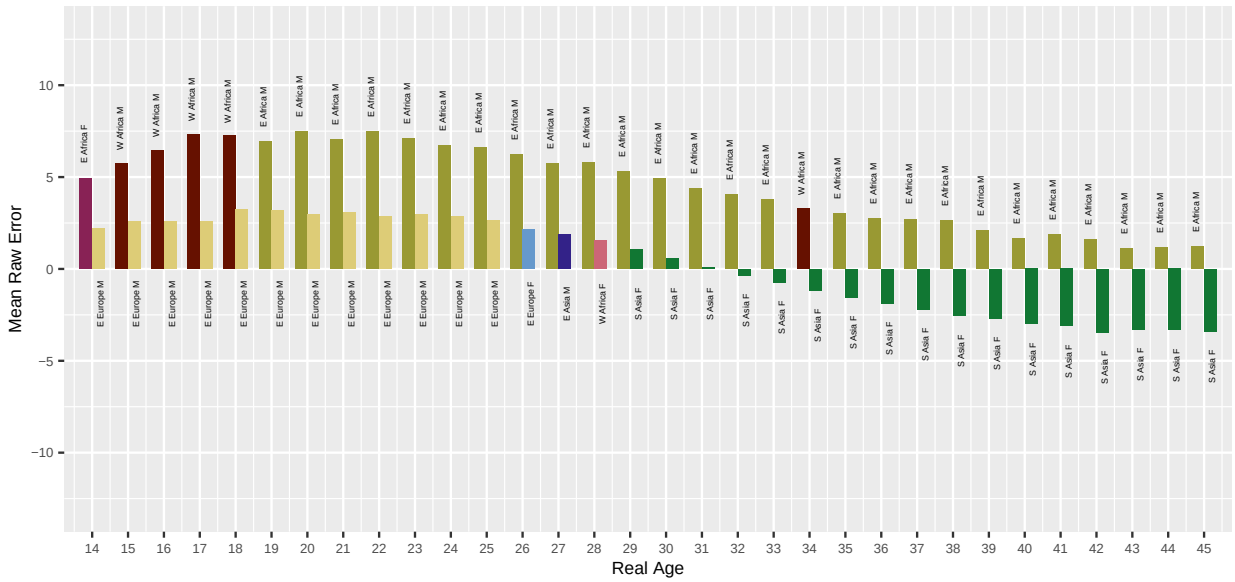

Fig. 29. *For algorithm dermalog-001 applied to Border photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

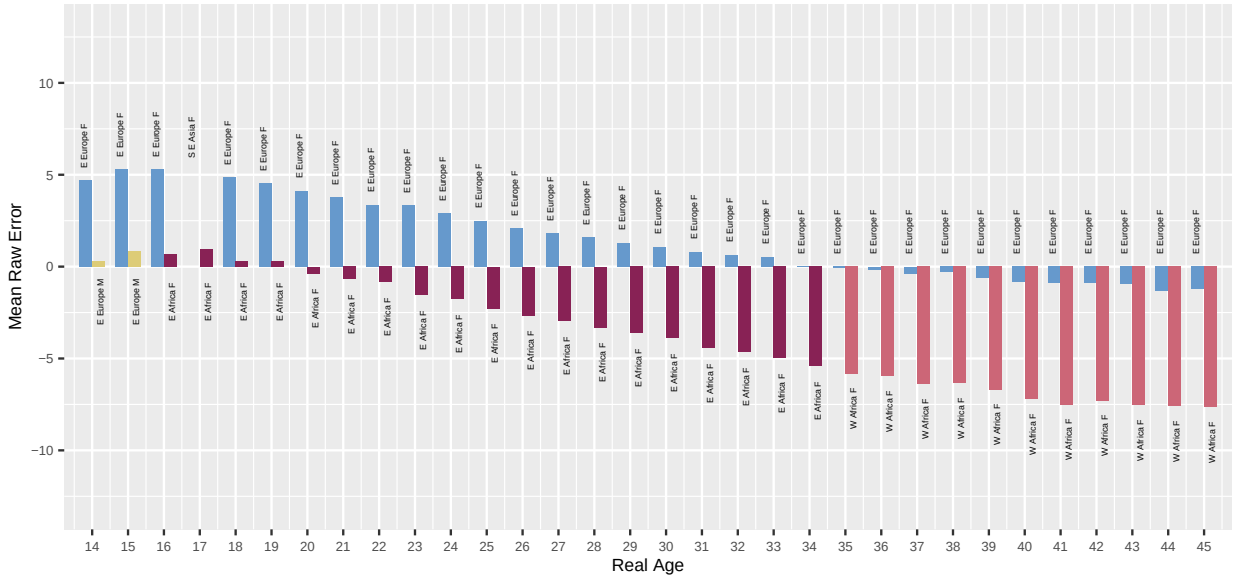

Fig. 30. *For algorithm dermalog-002 applied to Application photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

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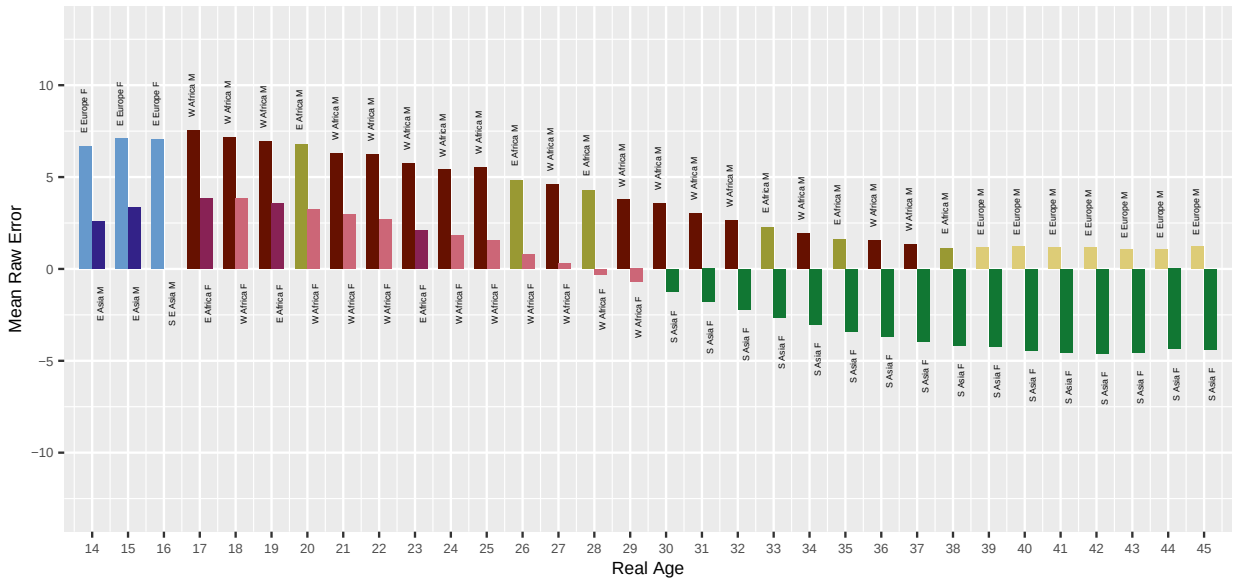

Fig. 31. *For algorithm dermalog-002 applied to Border photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

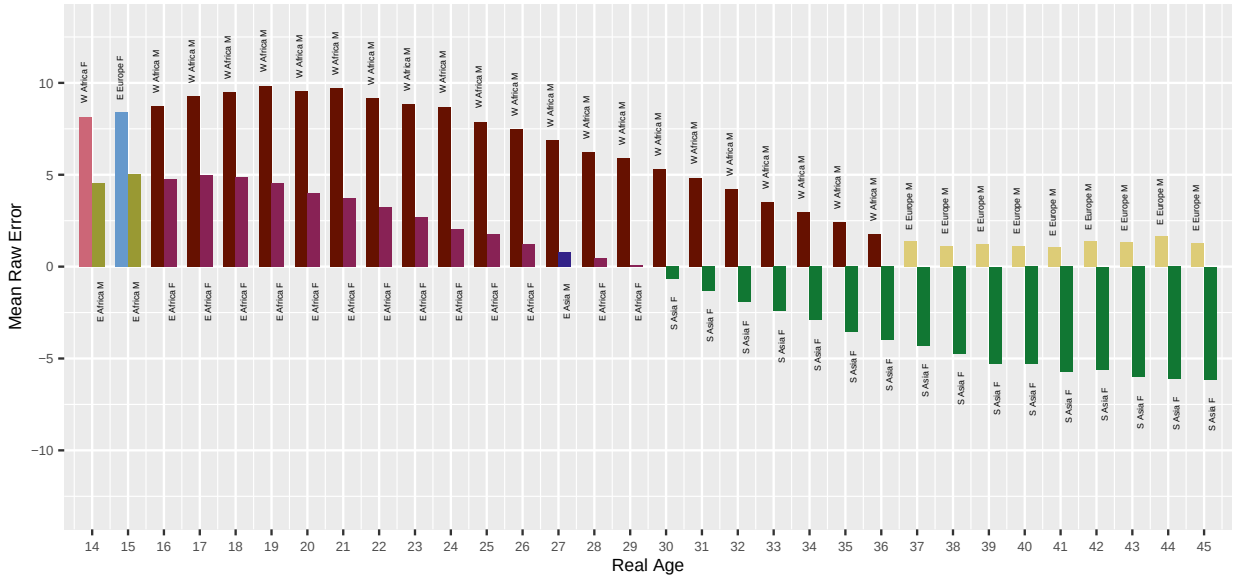

Fig. 32. *For algorithm hzailu-001 applied to Application photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

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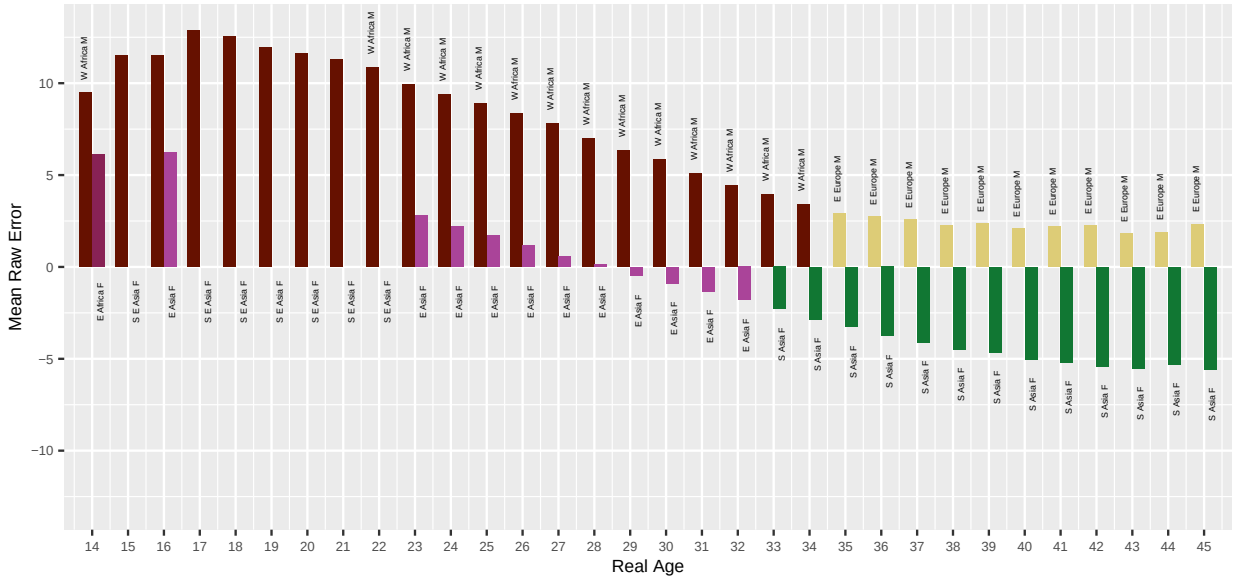

Fig. 33. *For algorithm hzailu-001 applied to Border photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

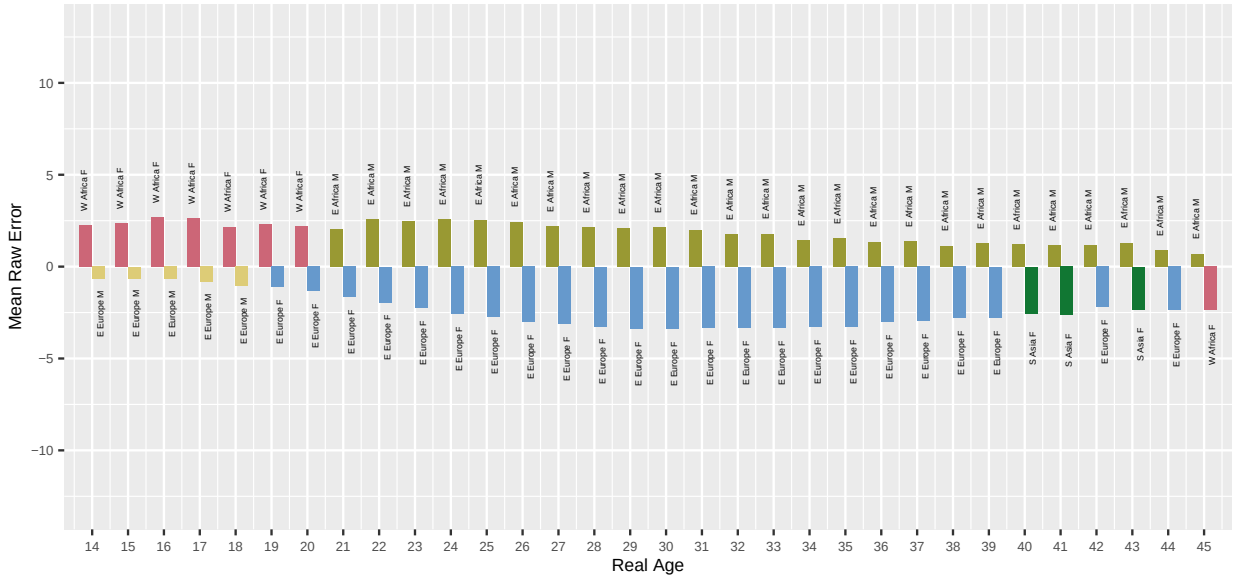

Fig. 34. *For algorithm idemia-001 applied to Application photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

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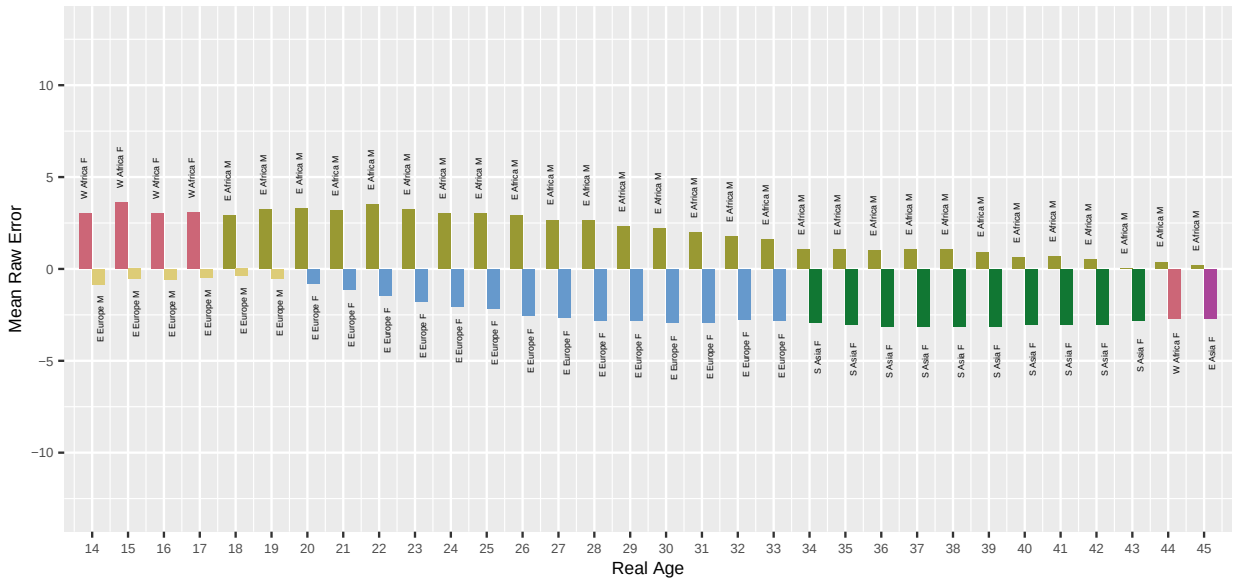

Fig. 35. *For algorithm idemia-001 applied to Border photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

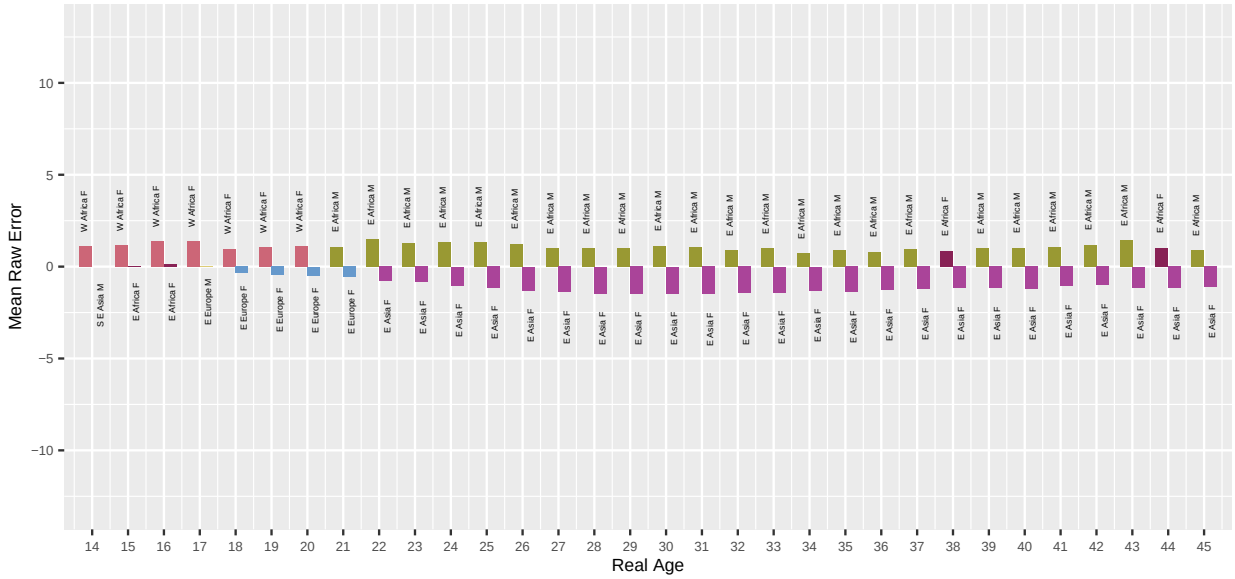

Fig. 36. *For algorithm idemia-002 applied to Application photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

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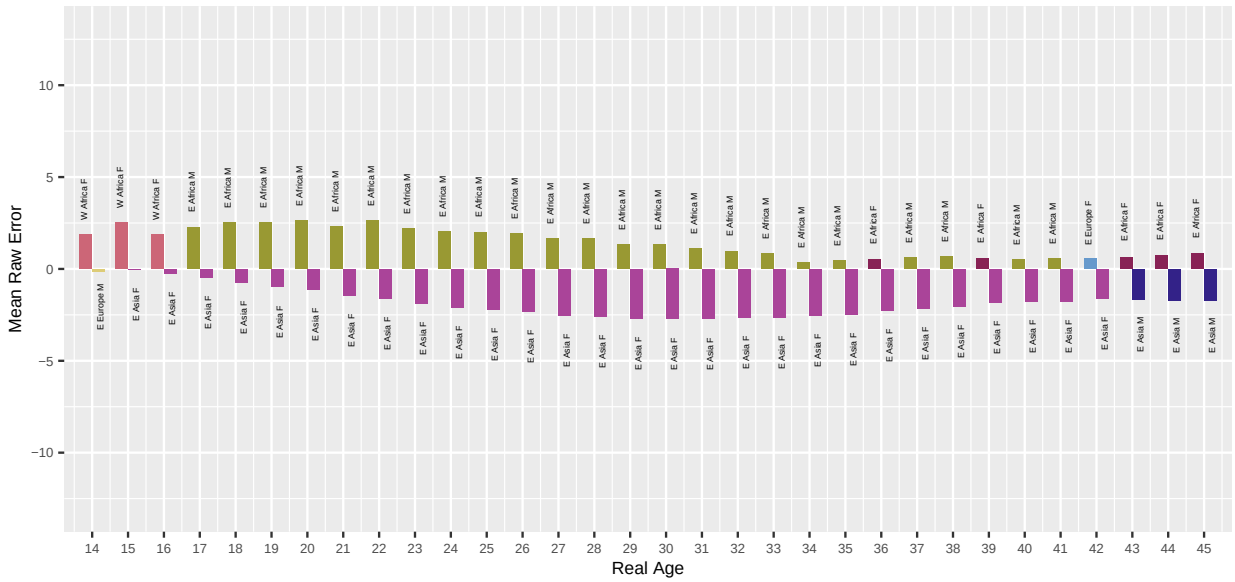

Fig. 37. *For algorithm idemia-002 applied to Border photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

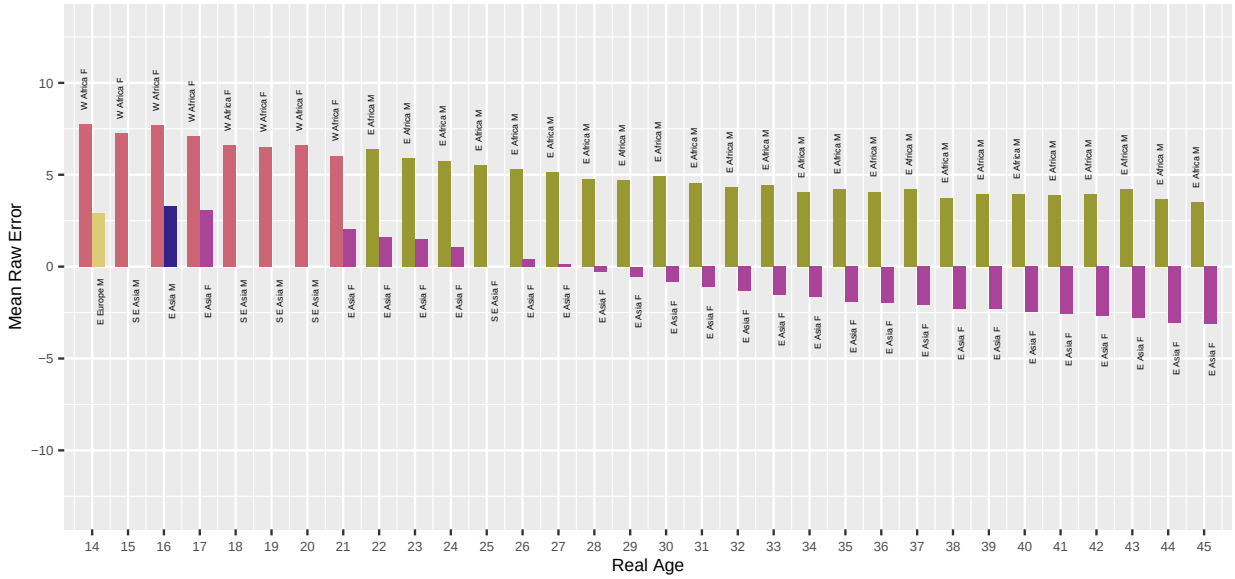

Fig. 38. *For algorithm inbut-000 applied to Application photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

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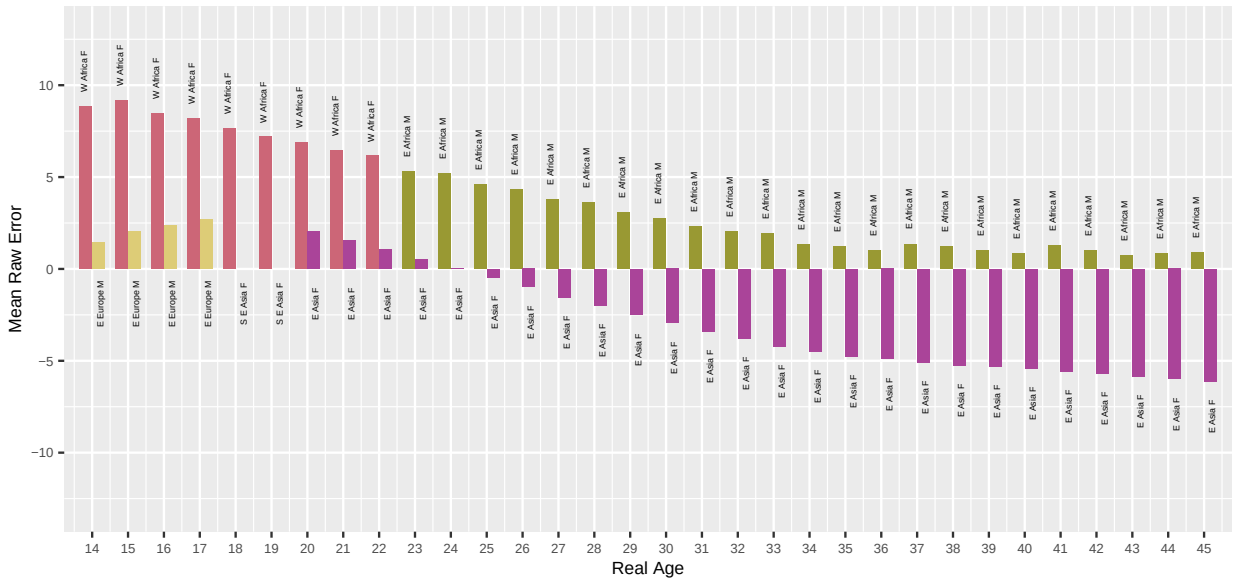

Fig. 39. *For algorithm inbut-000 applied to Border photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

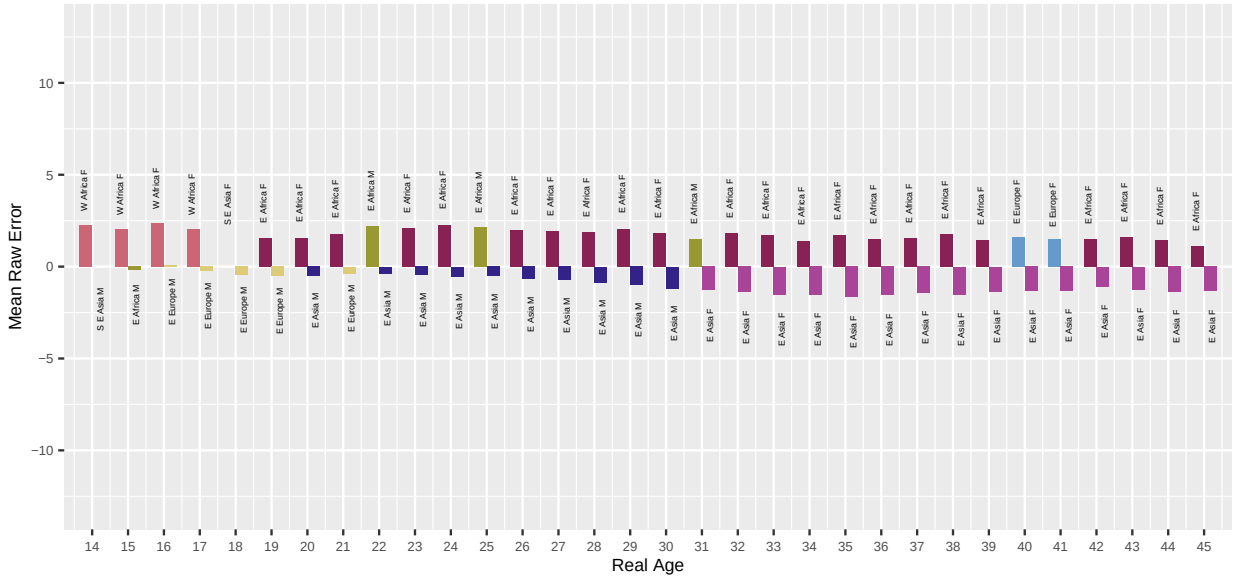

Fig. 40. *For algorithm incode-000 applied to Application photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

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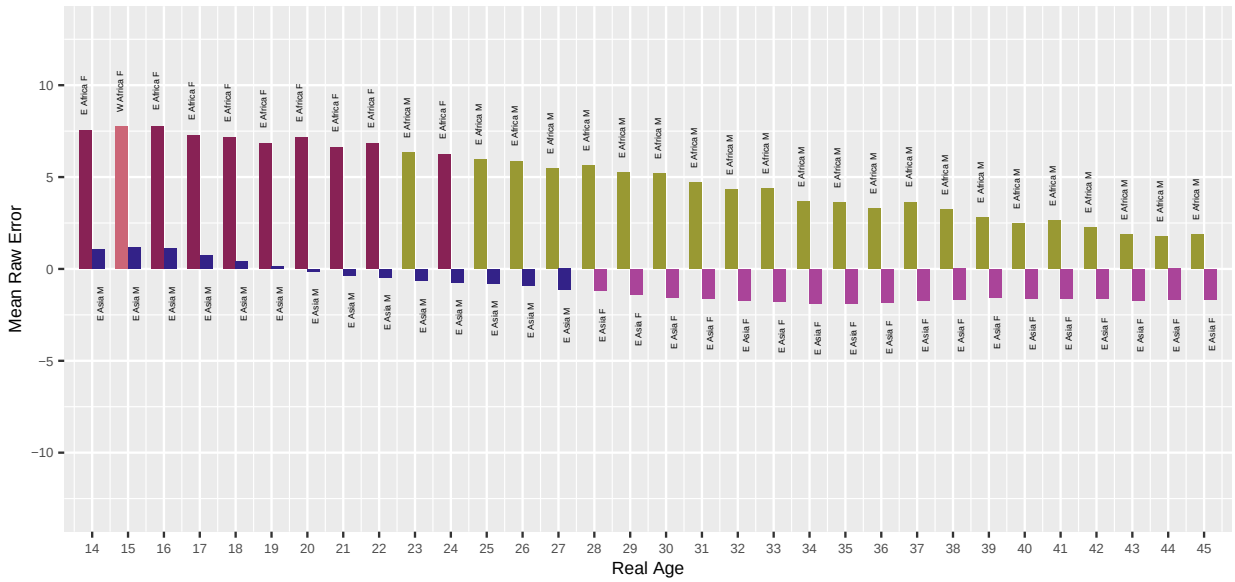

Fig. 41. *For algorithm incode-000 applied to Border photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

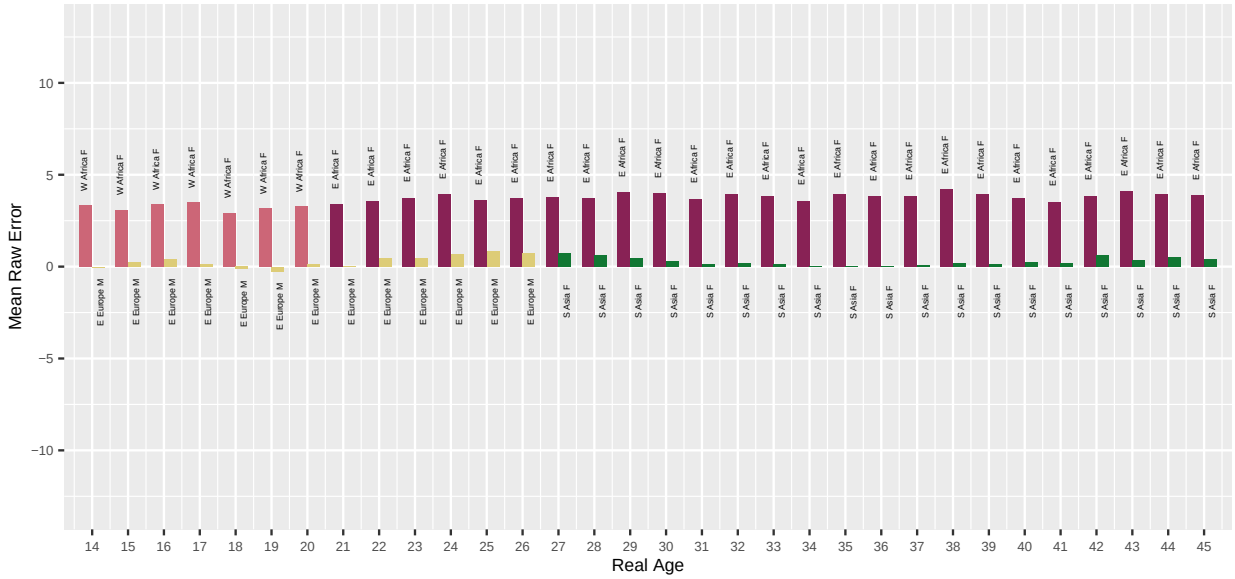

Fig. 42. *For algorithm incode-001 applied to Application photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

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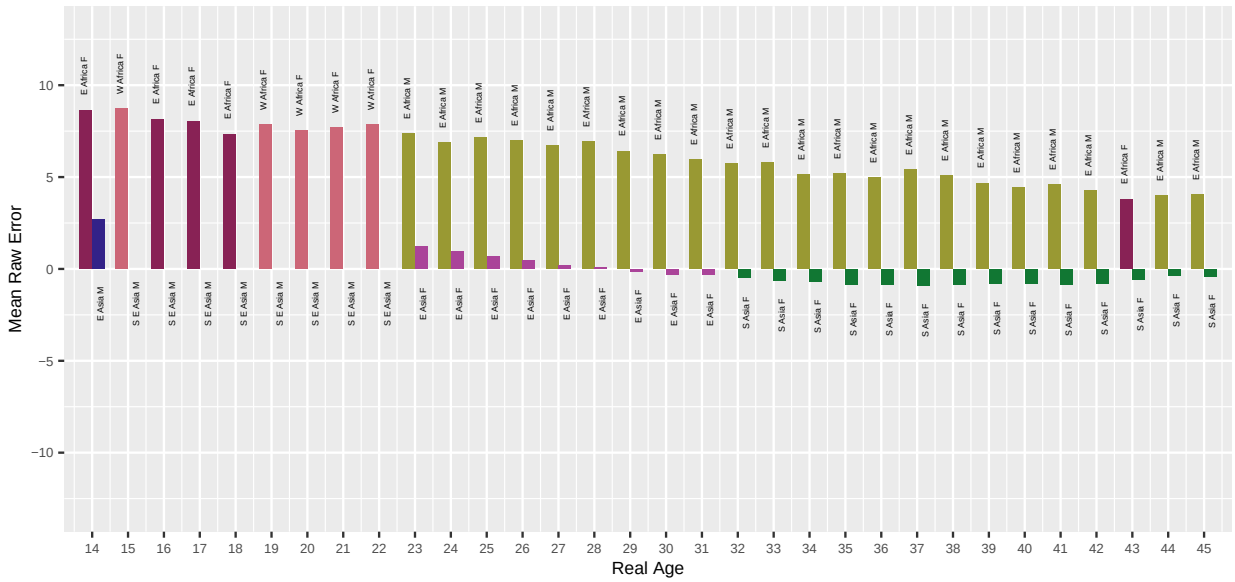

Fig. 43. *For algorithm incode-001 applied to Border photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

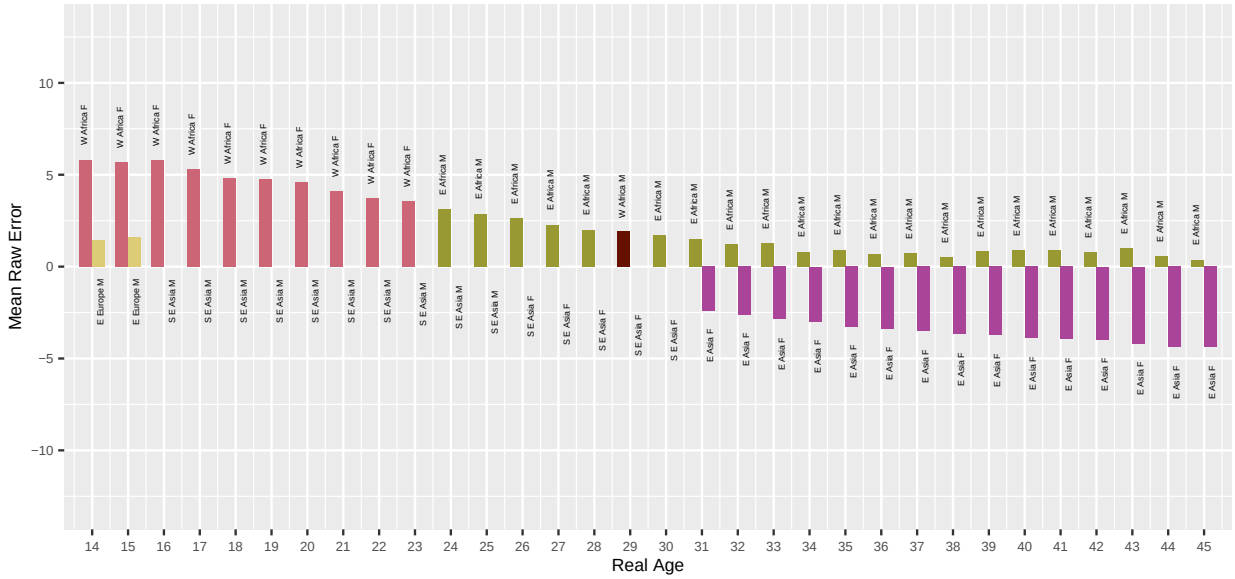

Fig. 44. *For algorithm innovatrics-000 applied to Application photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

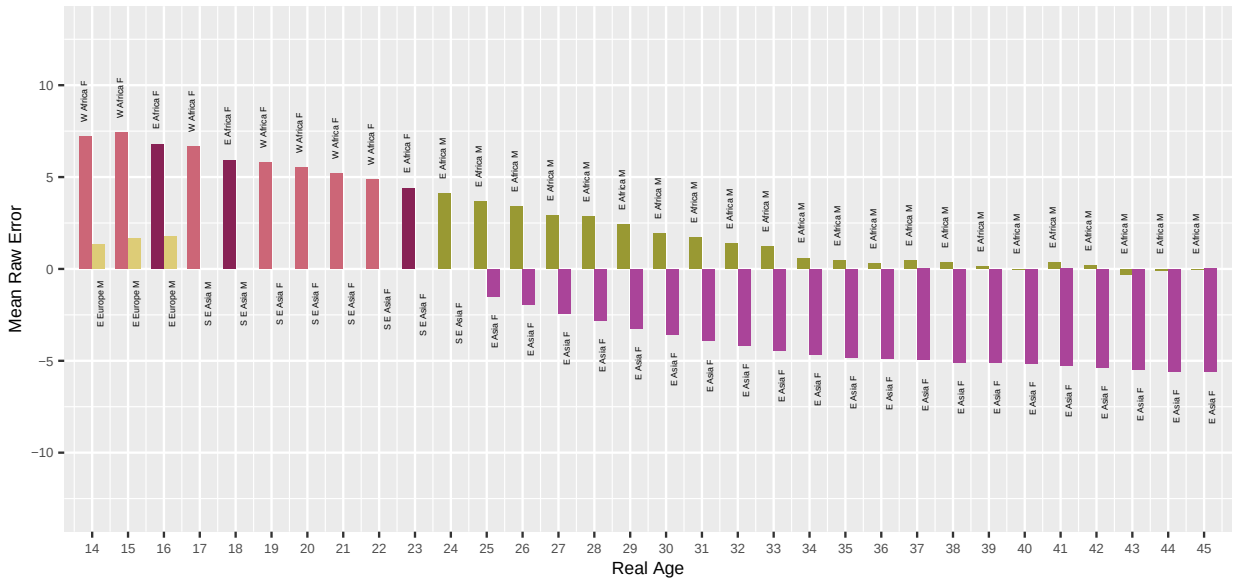

Fig. 45. *For algorithm innovatrics-000 applied to Border photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

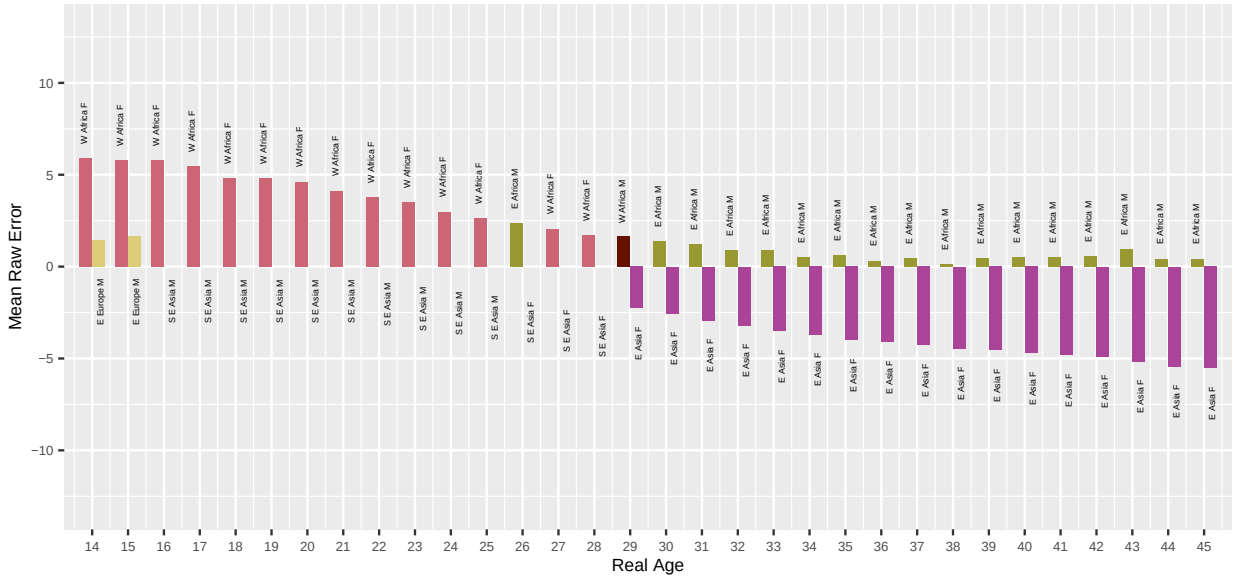

Fig. 46. *For algorithm innovatrics-001 applied to Application photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

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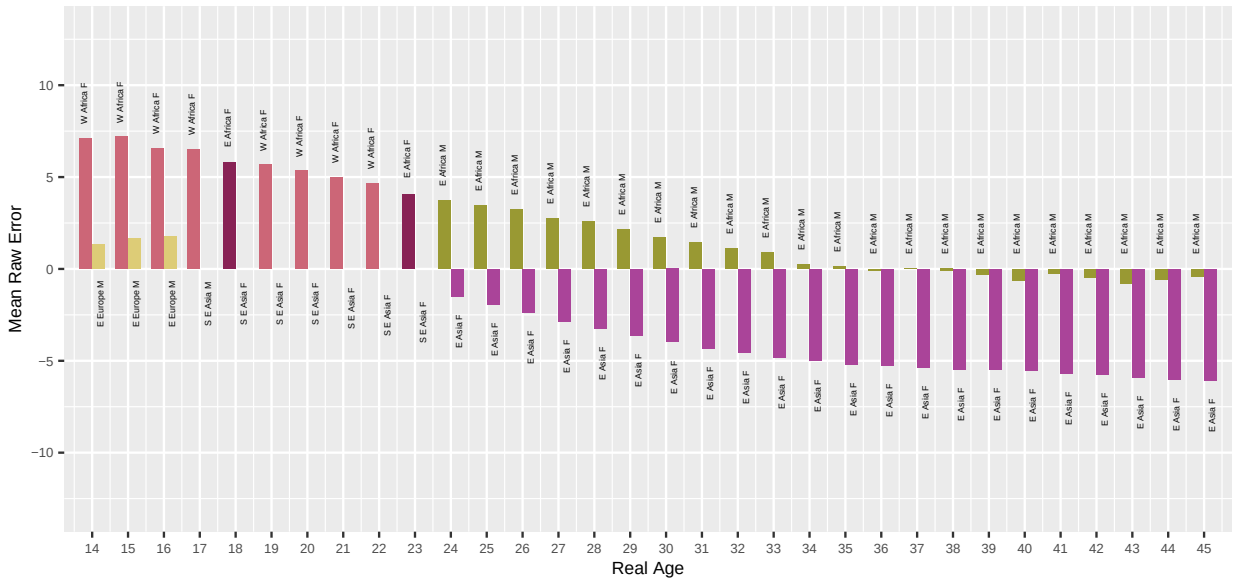

Fig. 47. *For algorithm innovatrics-001 applied to Border photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

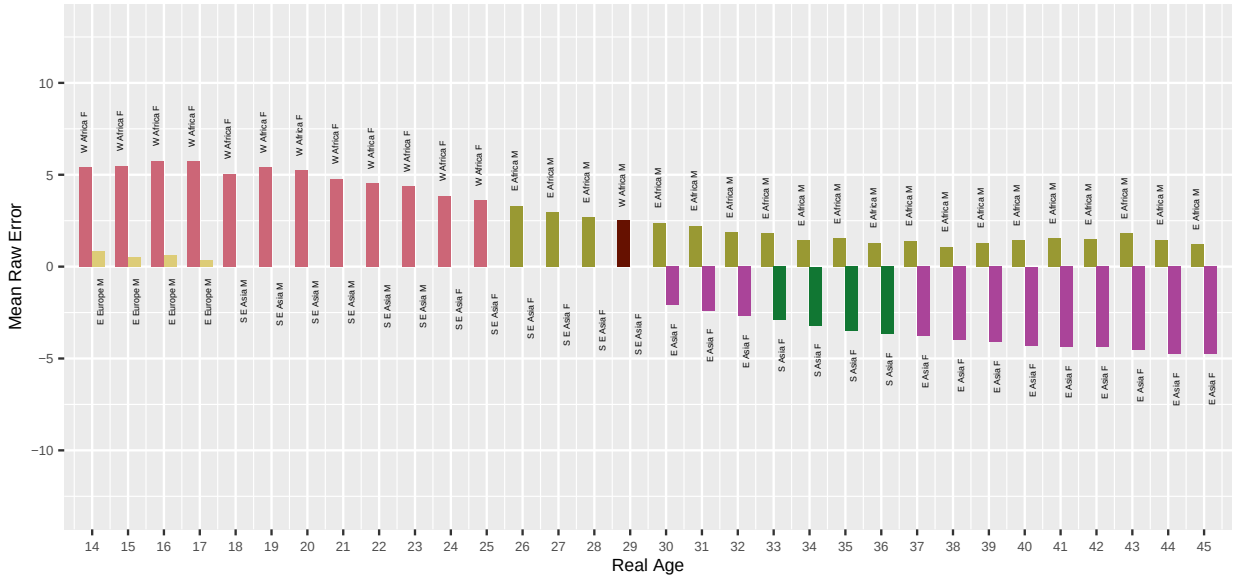

Fig. 48. *For algorithm innovatrics-002 applied to Application photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

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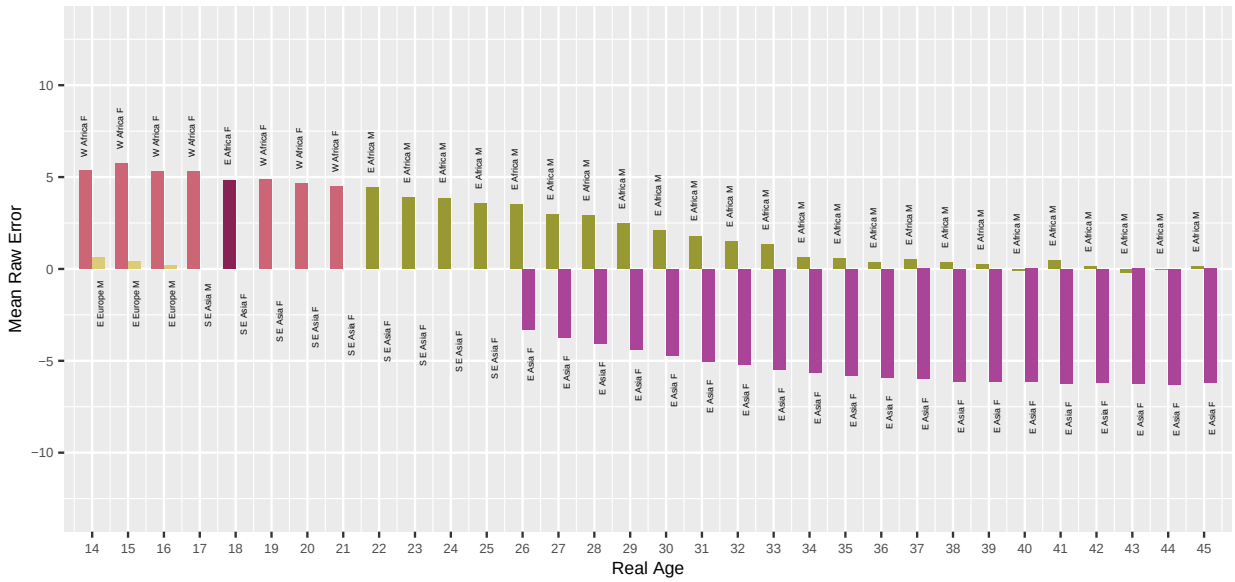

Fig. 49. *For algorithm innovatrics-002 applied to Border photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

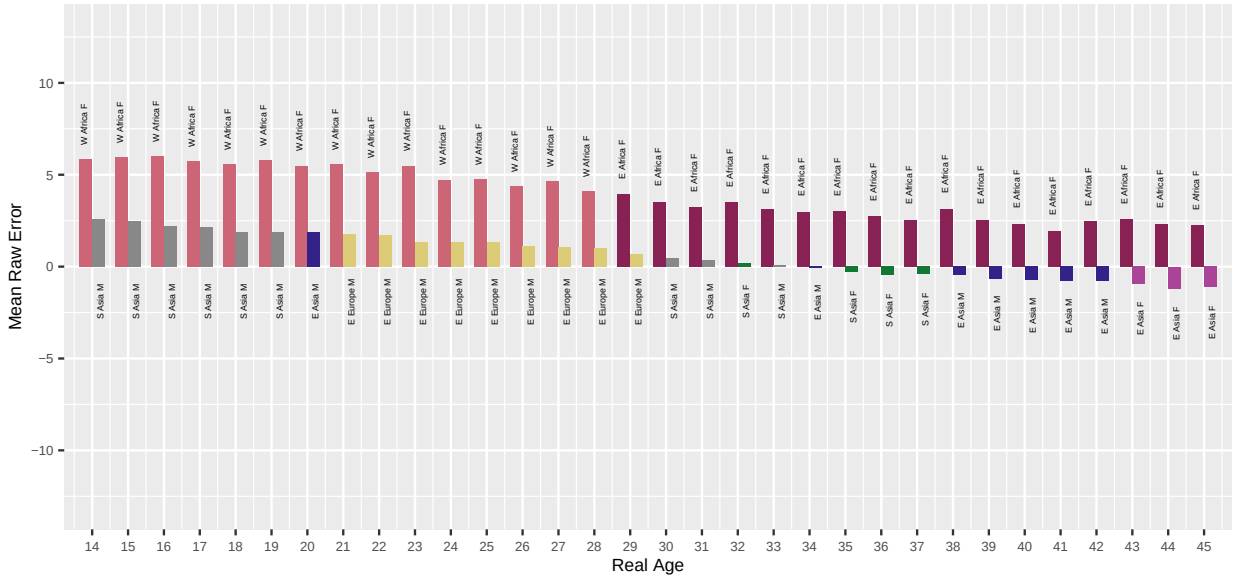

Fig. 50. *For algorithm jumio-000 applied to Application photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

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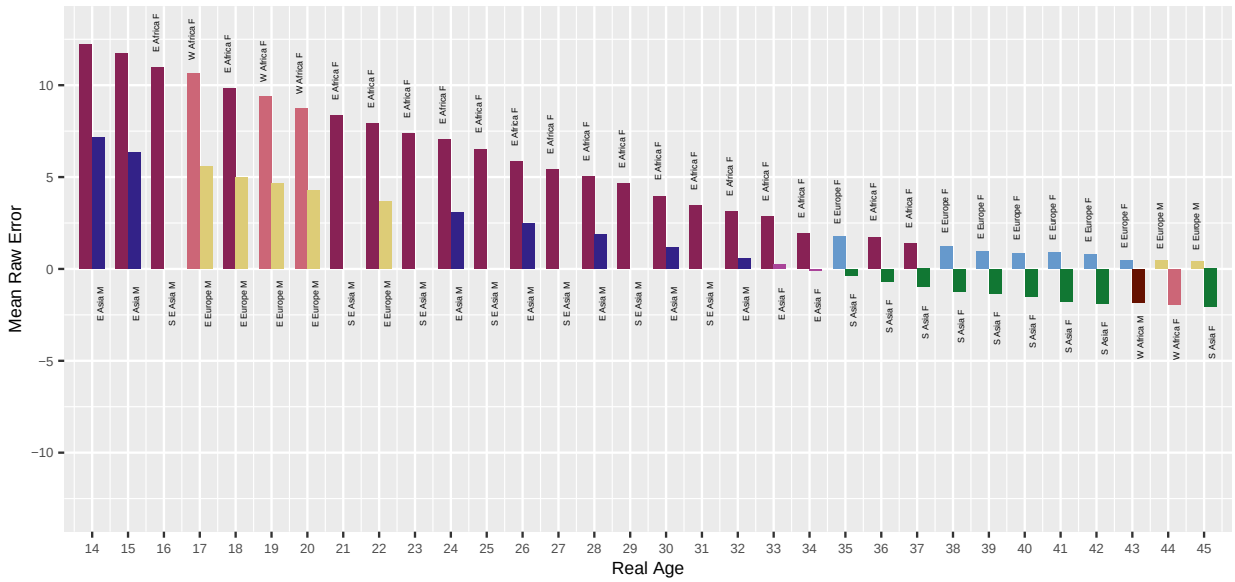

Fig. 51. *For algorithm jumio-000 applied to Border photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

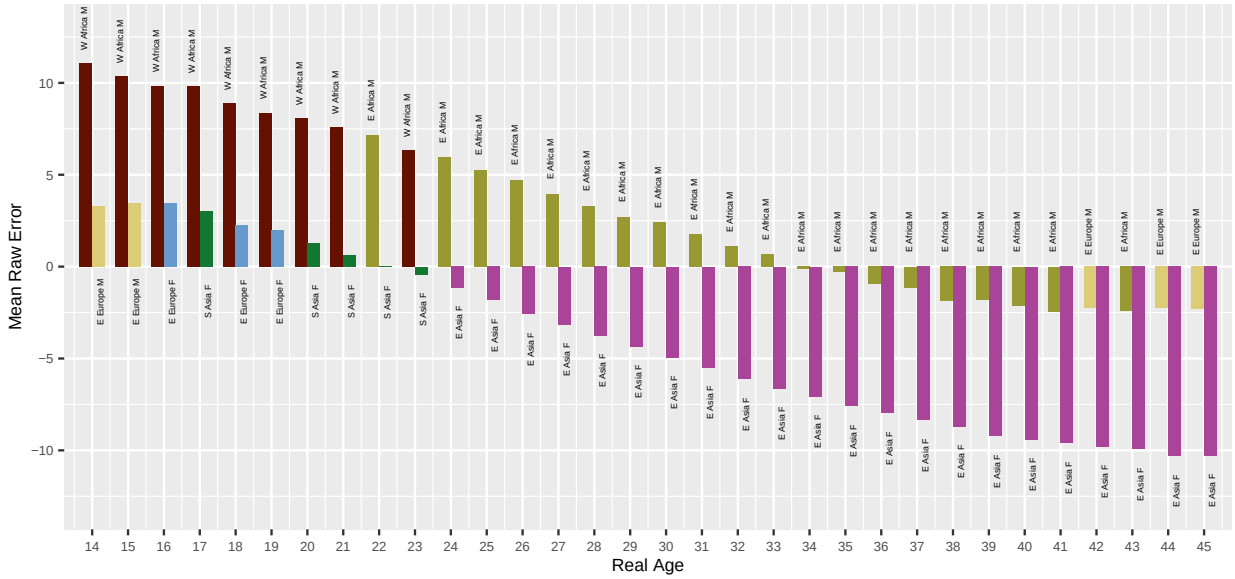

Fig. 52. *For algorithm neurotechnology-000 applied to Application photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

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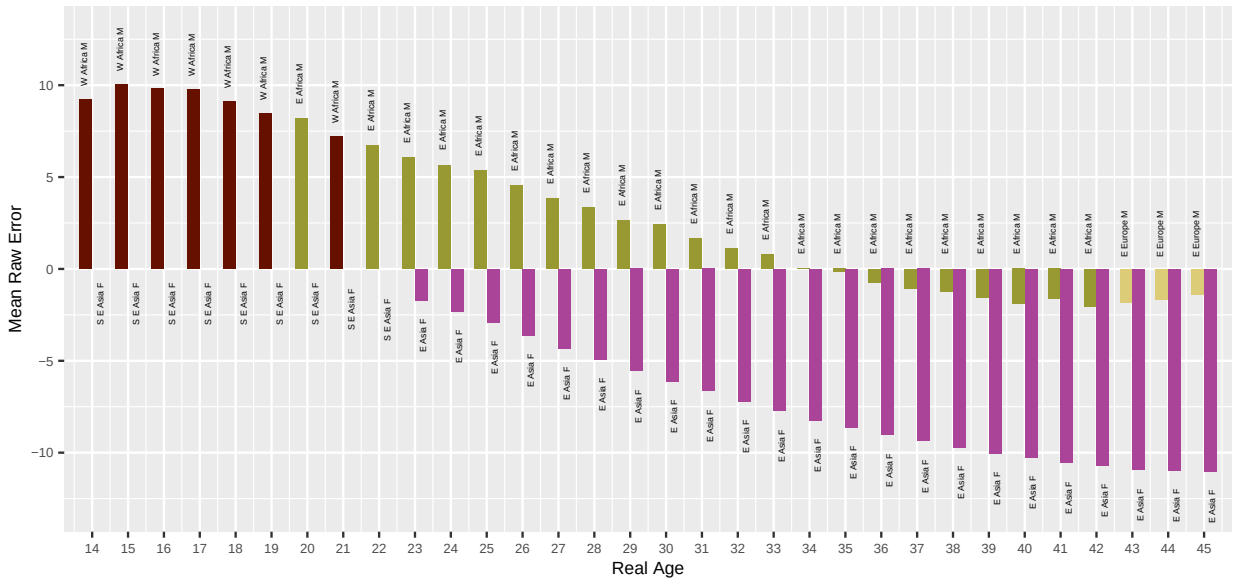

Fig. 53. *For algorithm neurotechnology-000 applied to Border photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

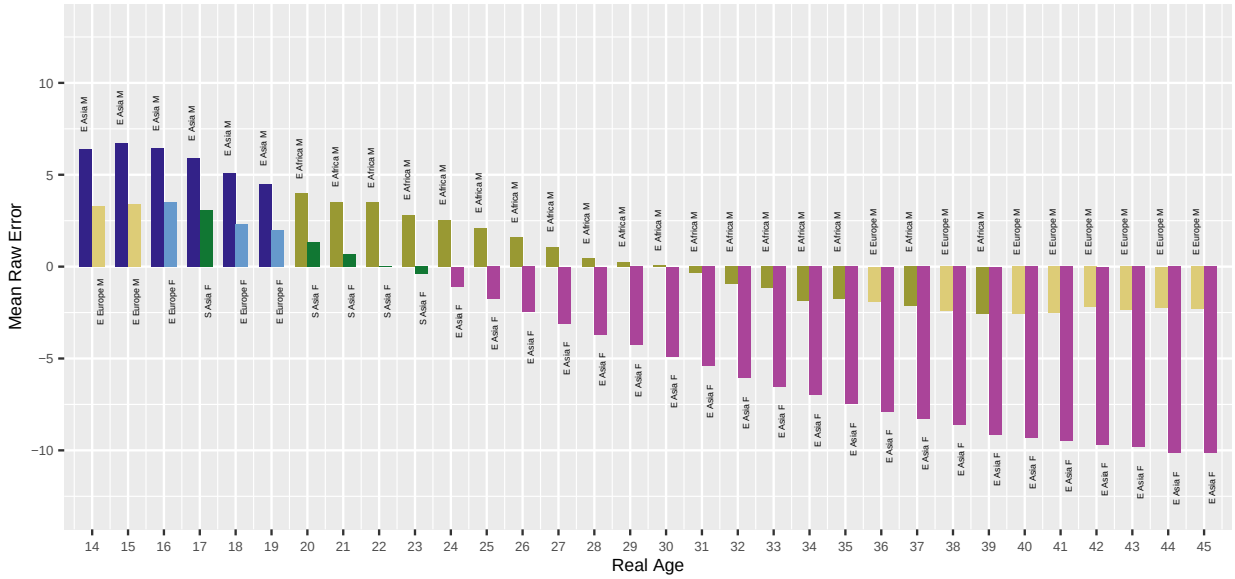

Fig. 54. *For algorithm neurotechnology-001 applied to Application photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

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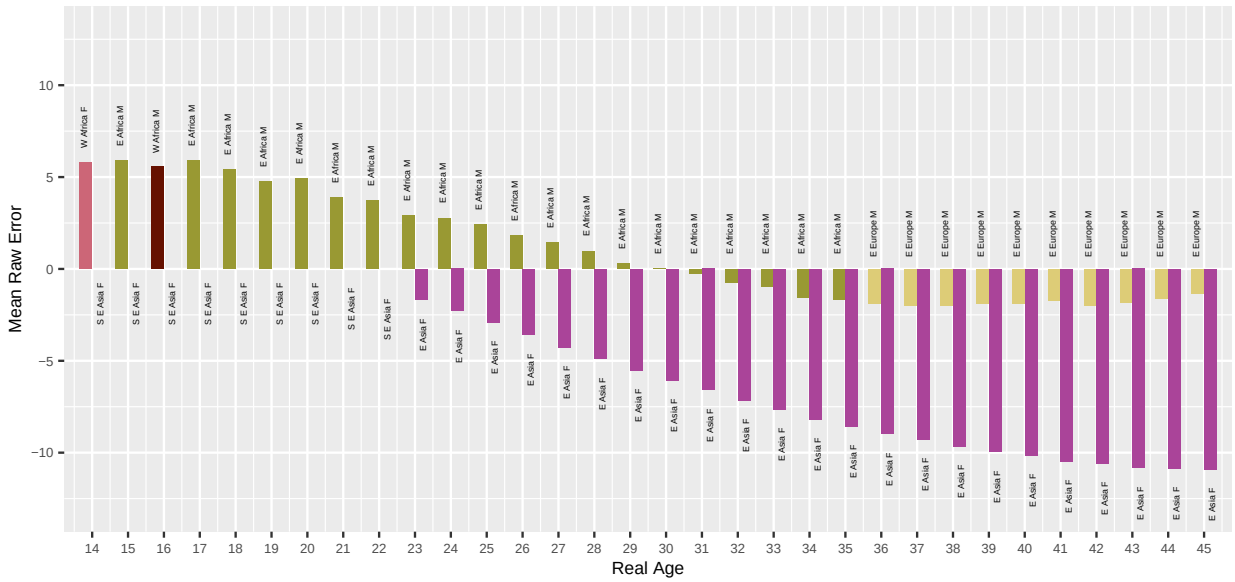

Fig. 55. *For algorithm neurotechnology-001 applied to Border photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

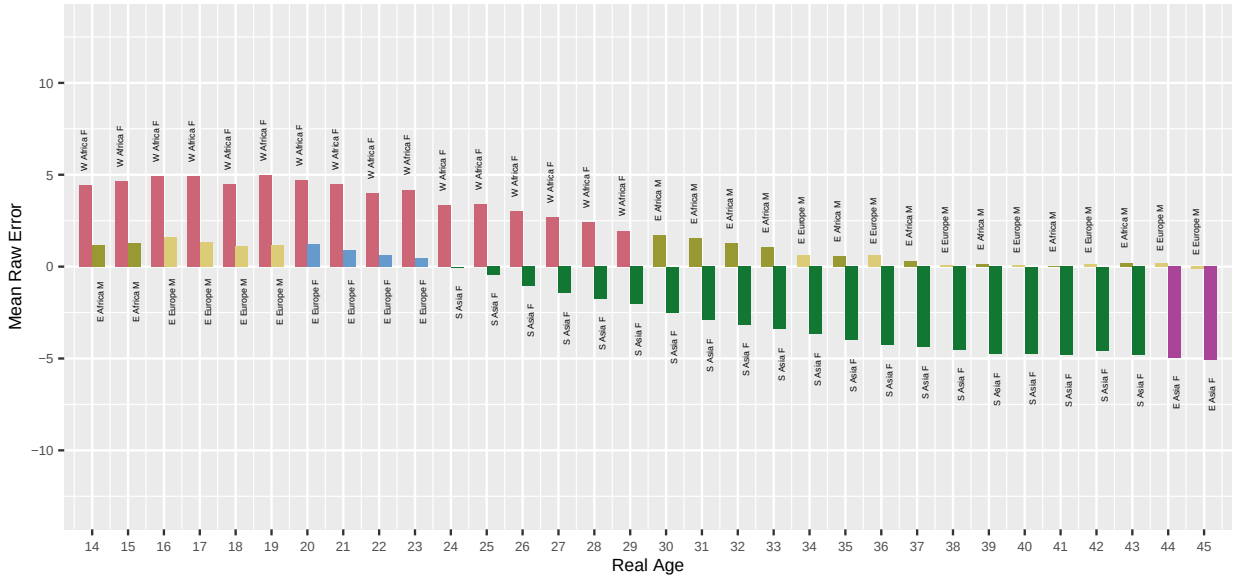

Fig. 56. *For algorithm nominder-000 applied to Application photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

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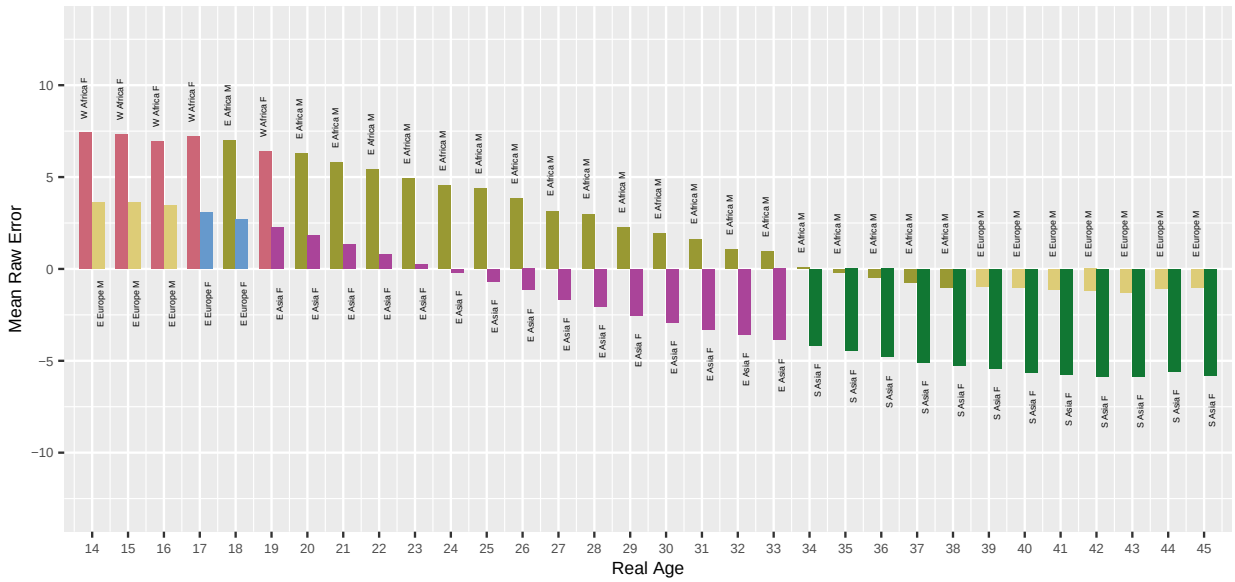

Fig. 57. *For algorithm nominder-000 applied to Border photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

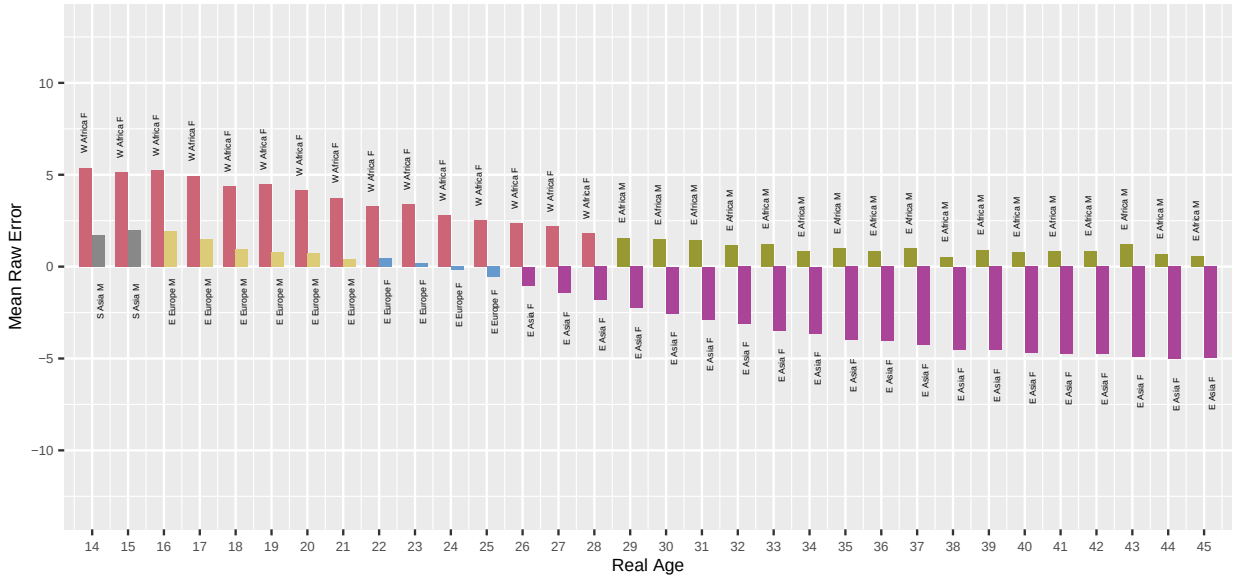

Fig. 58. *For algorithm nominder-001 applied to Application photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

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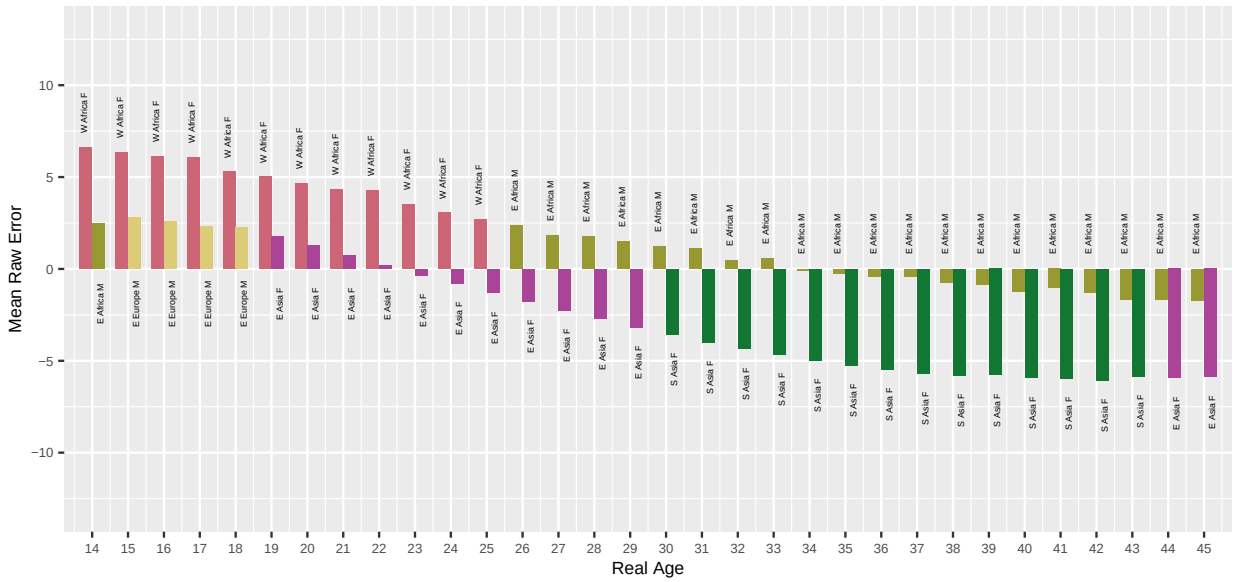

Fig. 59. *For algorithm nominder-001 applied to Border photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

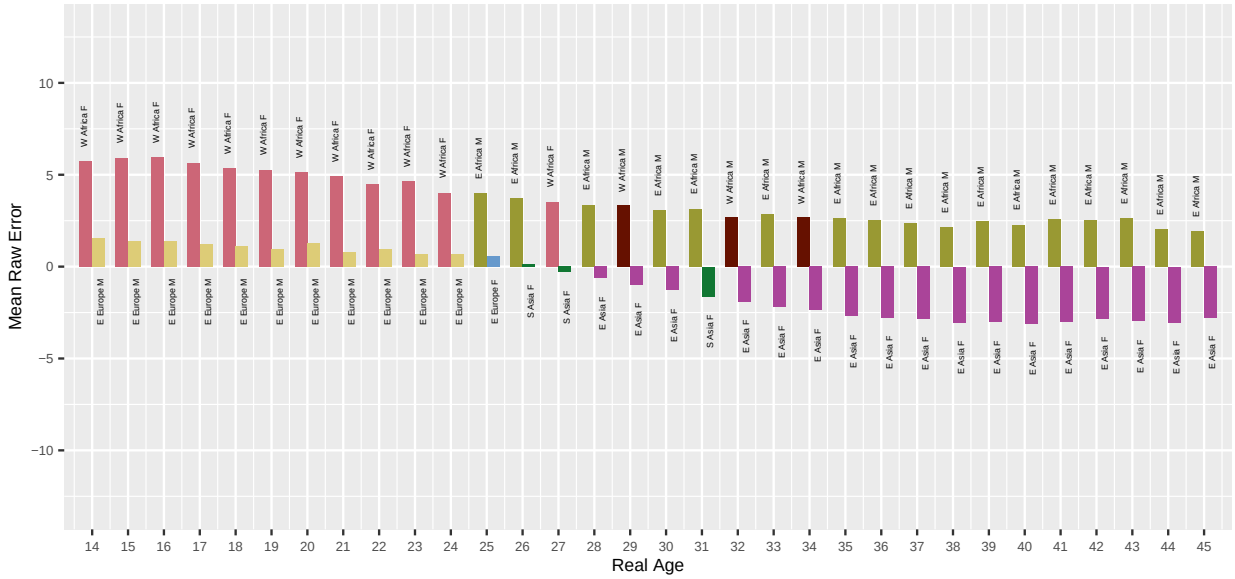

Fig. 60. *For algorithm ondato-000 applied to Application photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

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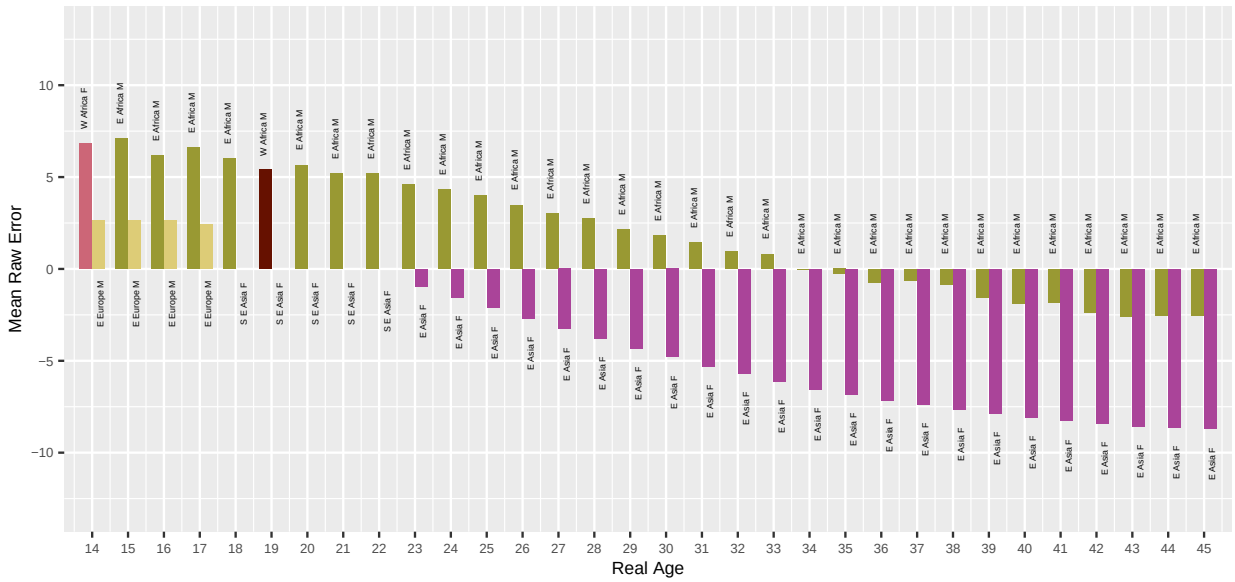

Fig. 61. *For algorithm ondato-000 applied to Border photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

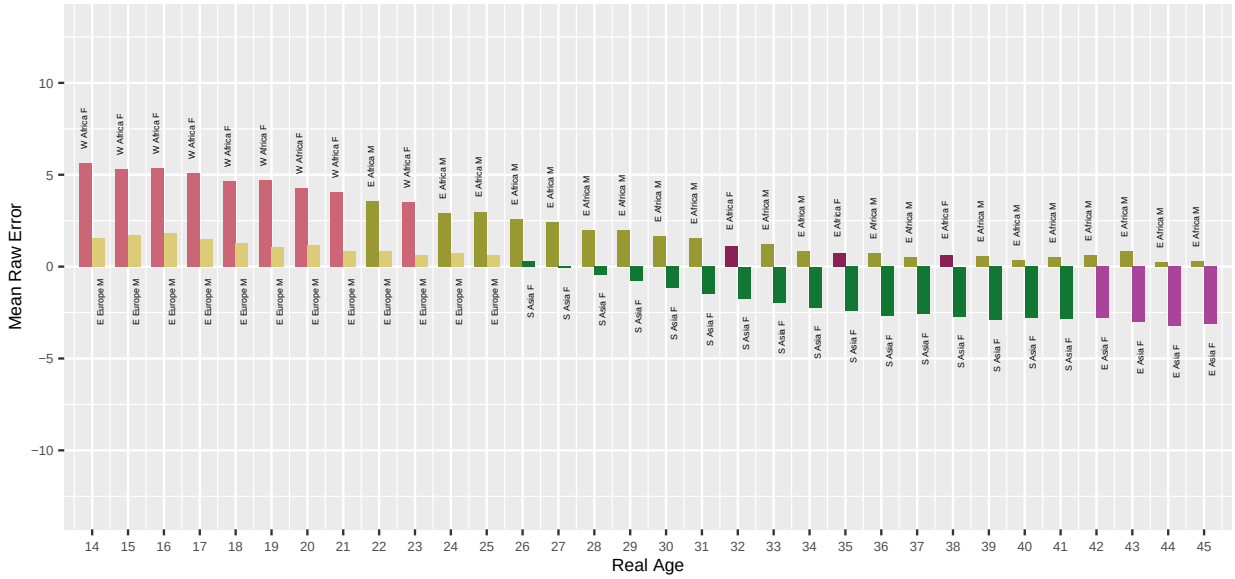

Fig. 62. *For algorithm ondato-001 applied to Application photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

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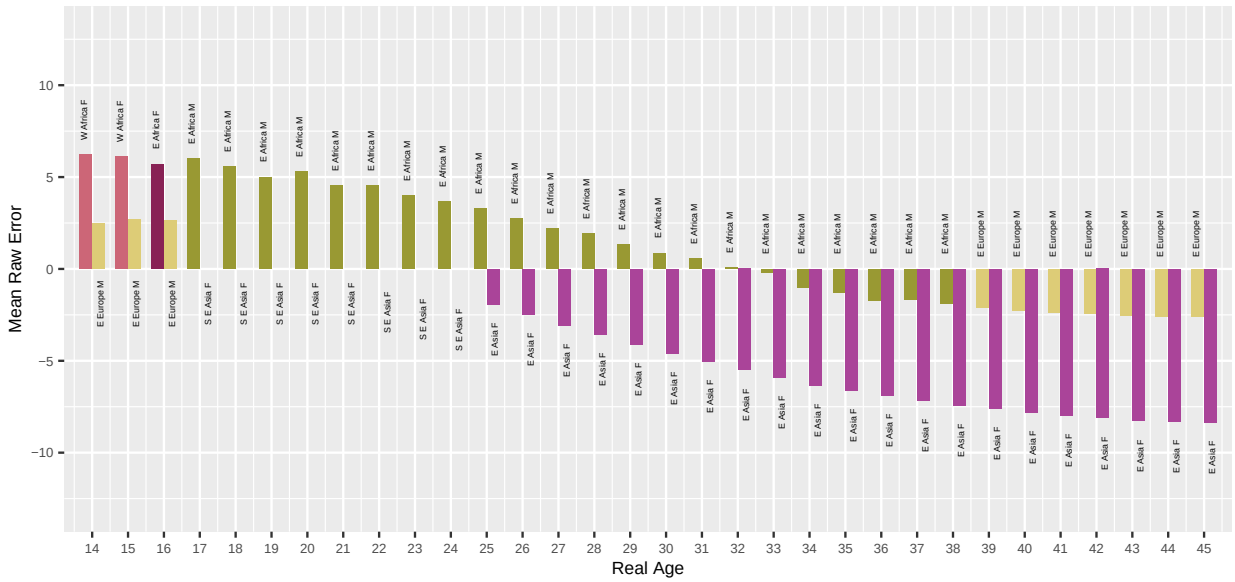

Fig. 63. *For algorithm ondato-001 applied to Border photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

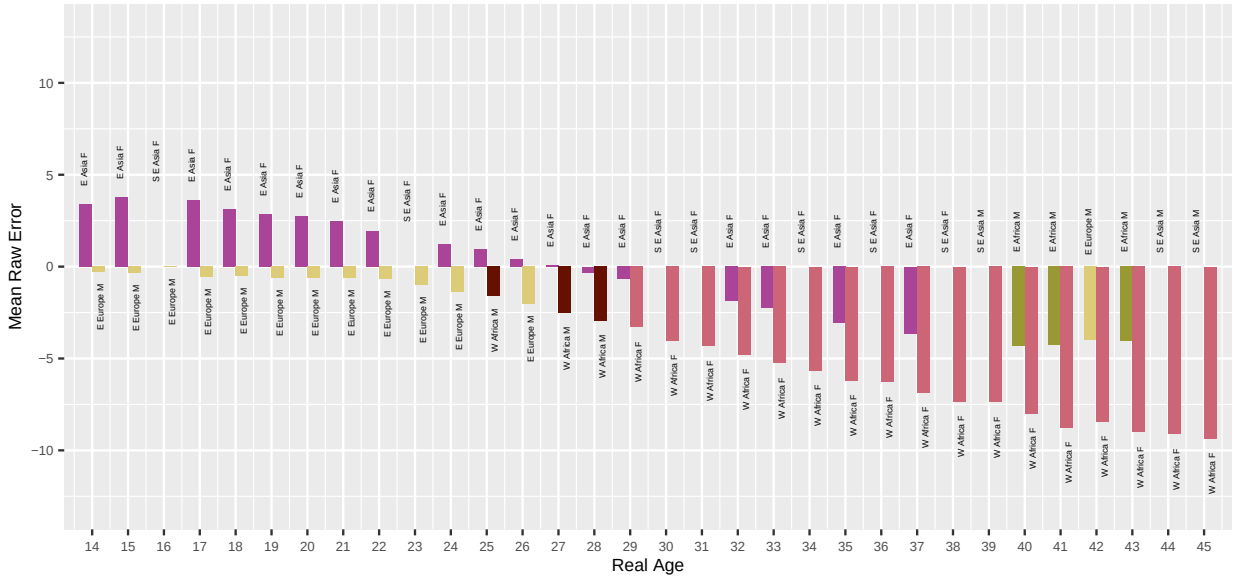

Fig. 64. *For algorithm privately-000 applied to Application photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

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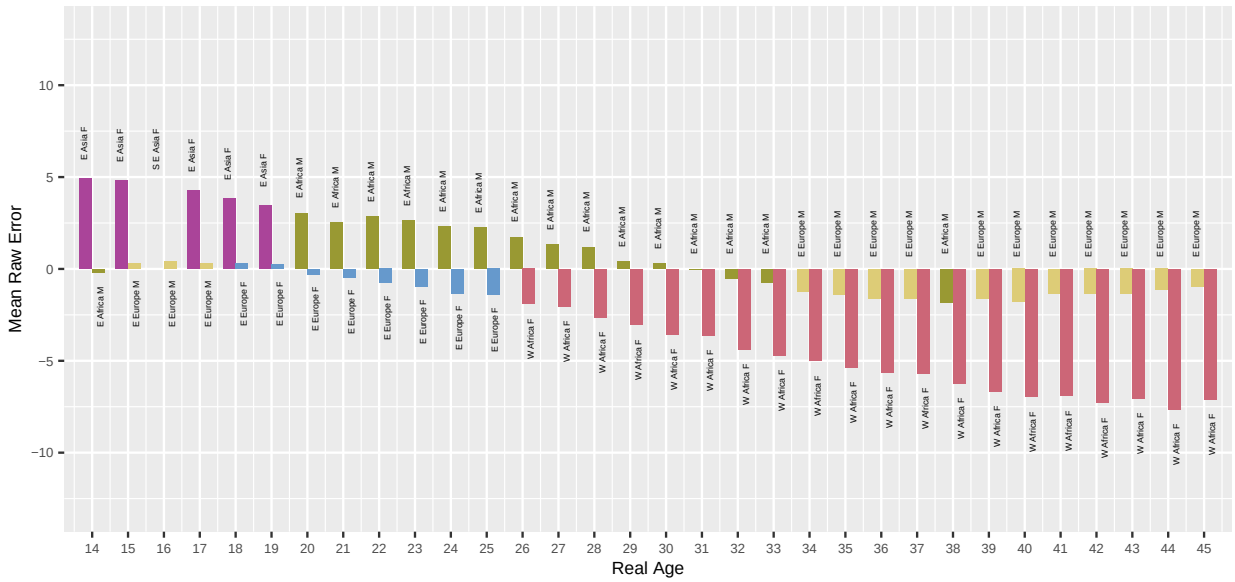

Fig. 65. *For algorithm privately-000 applied to Border photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

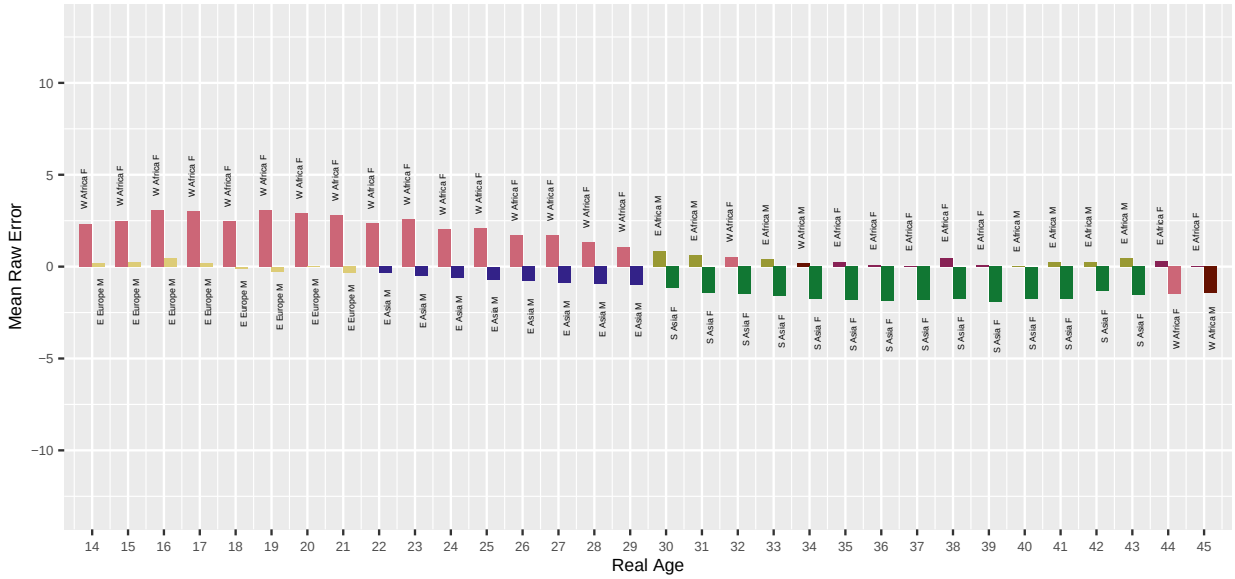

Fig. 66. *For algorithm regula-000 applied to Application photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

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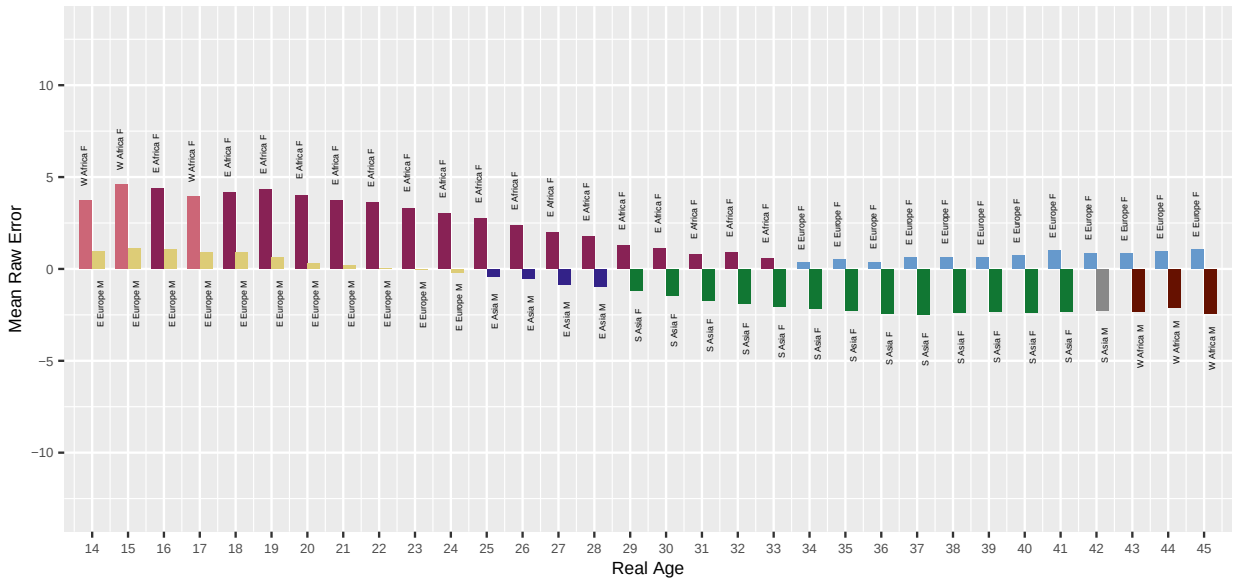

Fig. 67. *For algorithm regula-000 applied to Border photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

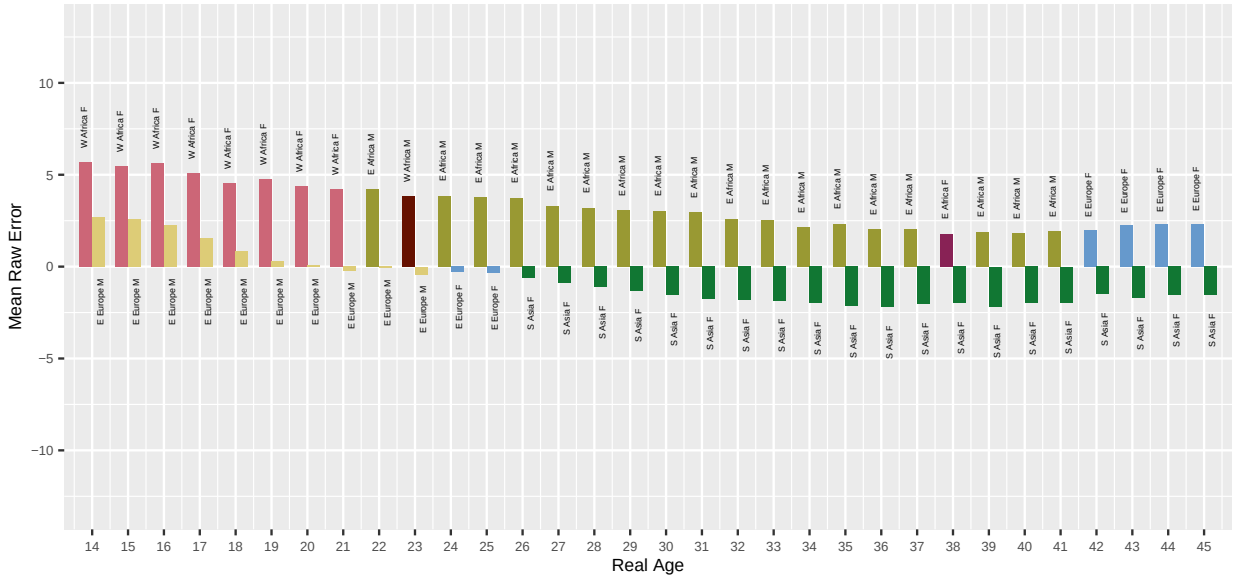

Fig. 68. *For algorithm roc-000 applied to Application photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

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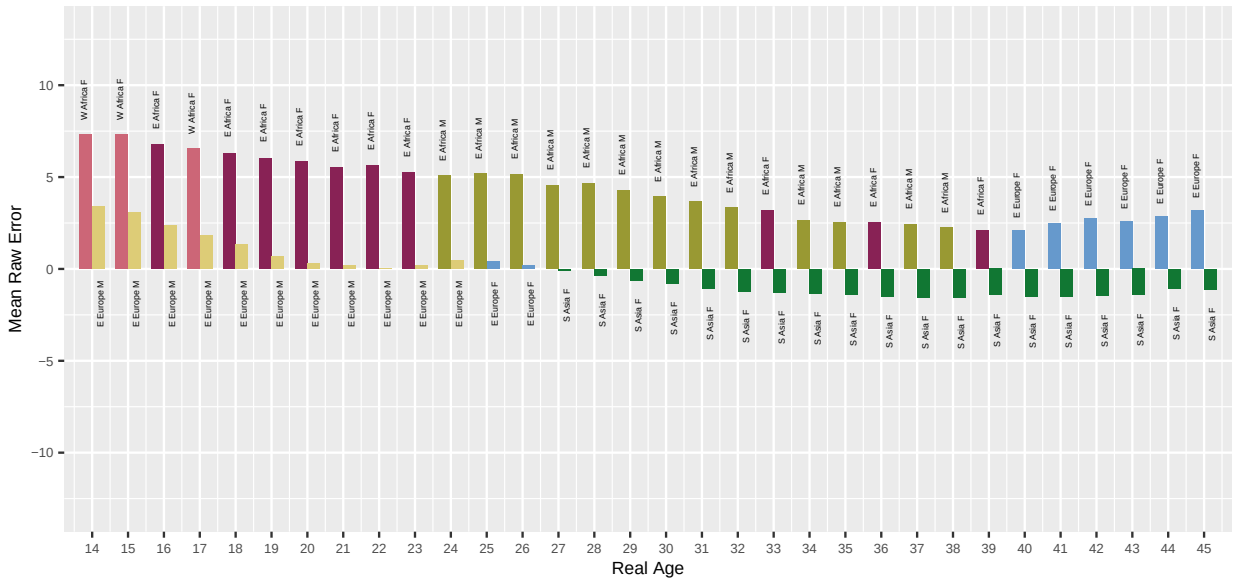

Fig. 69. *For algorithm roc-000 applied to Border photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

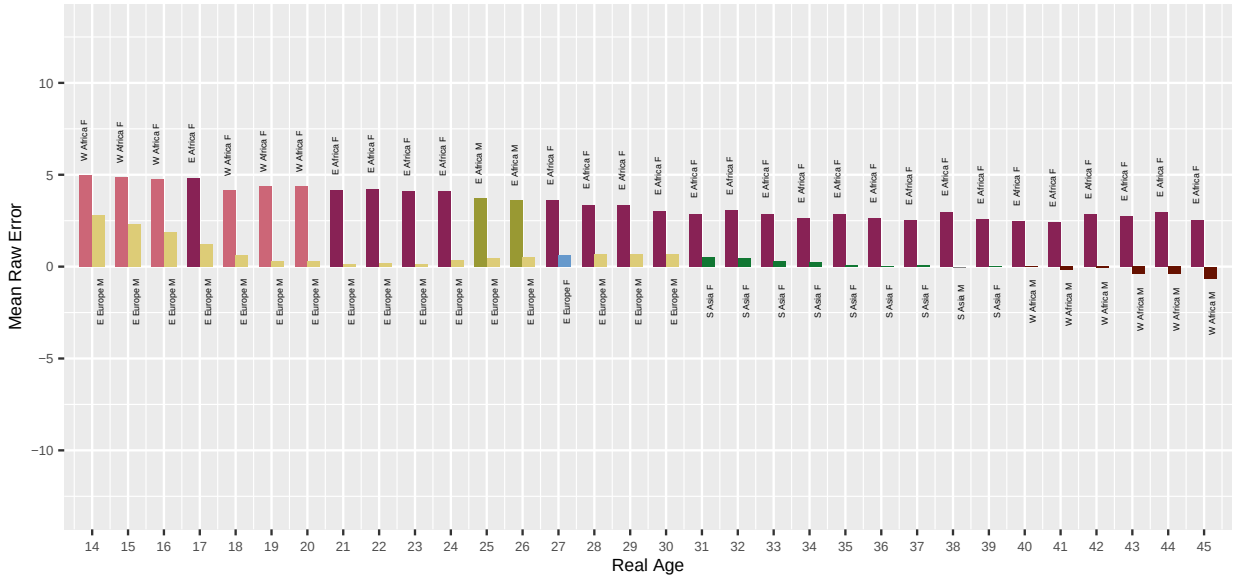

Fig. 70. *For algorithm roc-001 applied to Application photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

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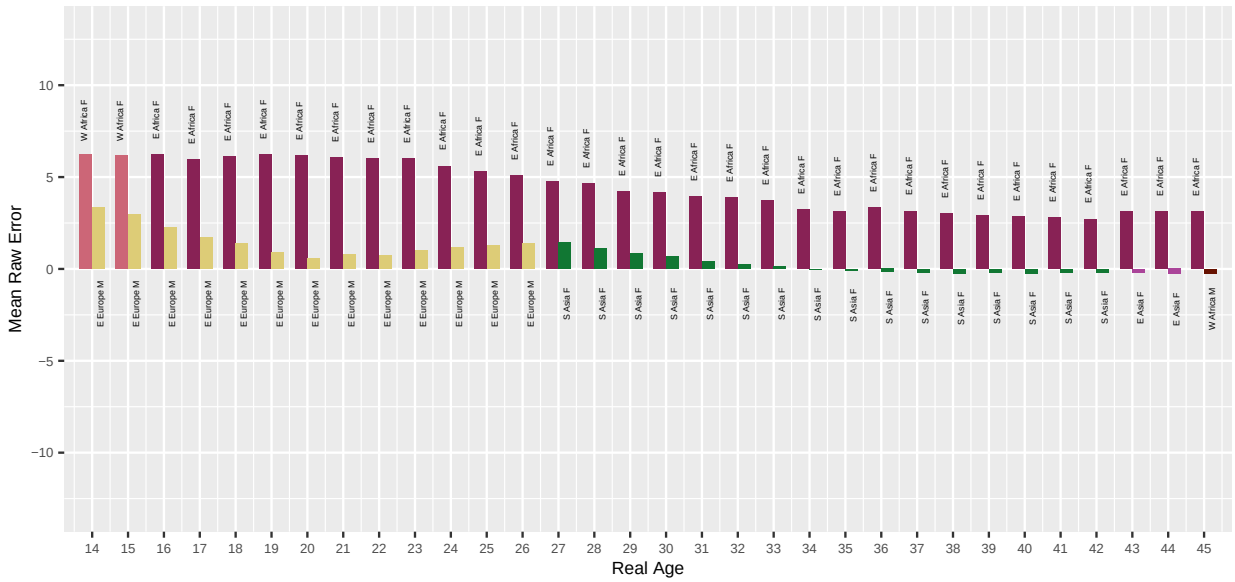

Fig. 71. *For algorithm roc-001 applied to Border photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

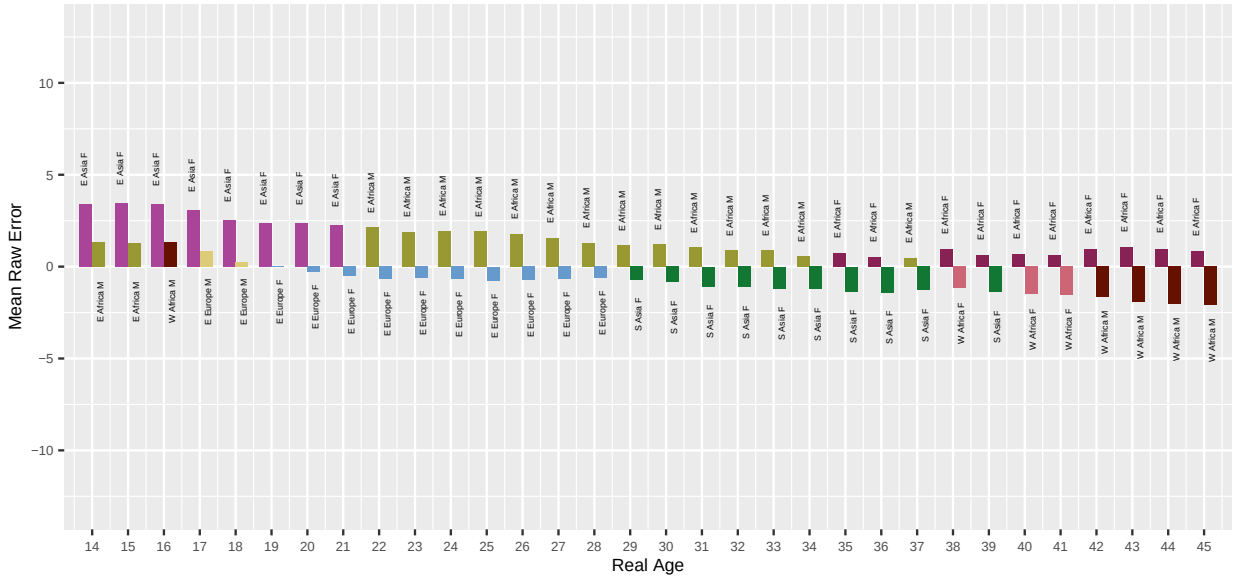

Fig. 72. *For algorithm roc-002 applied to Application photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

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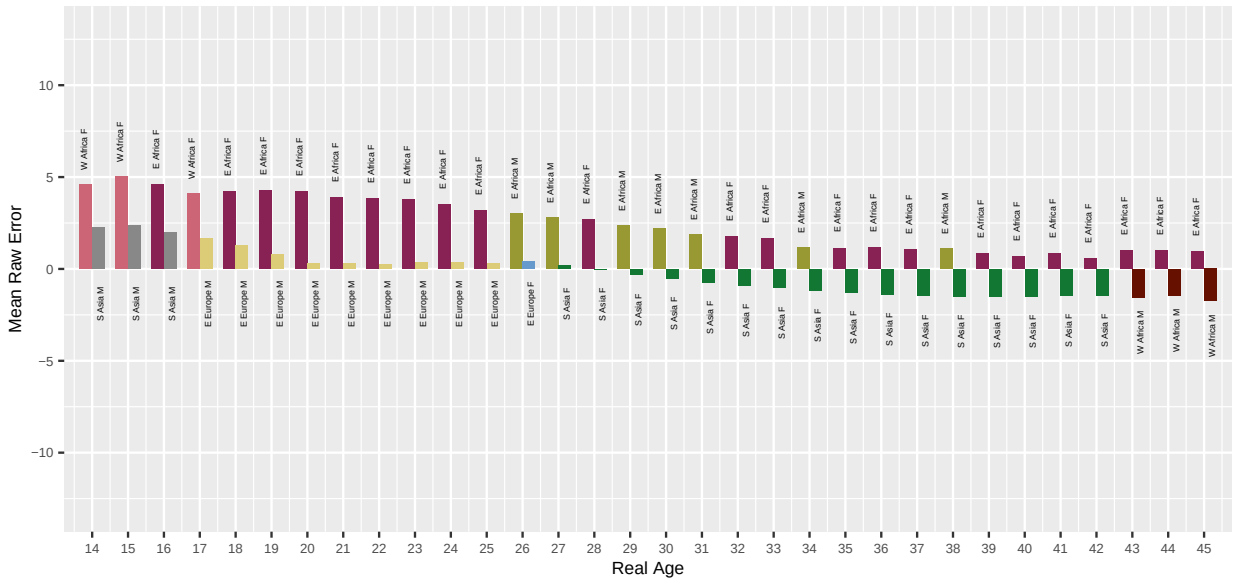

Fig. 73. *For algorithm roc-002 applied to Border photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

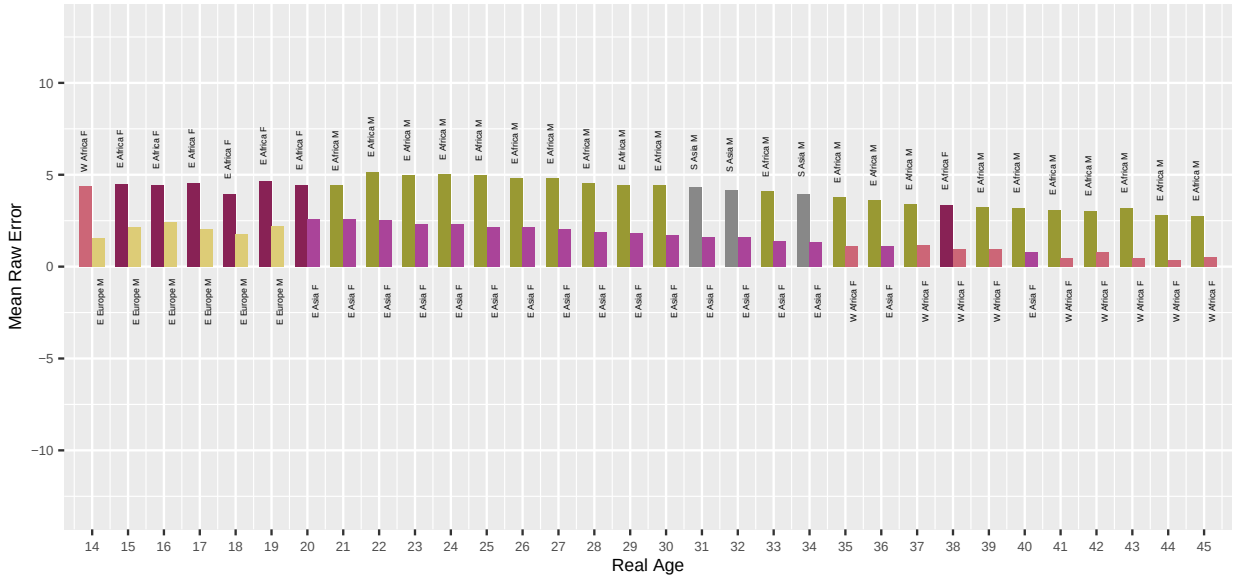

Fig. 74. *For algorithm shufti-000 applied to Application photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

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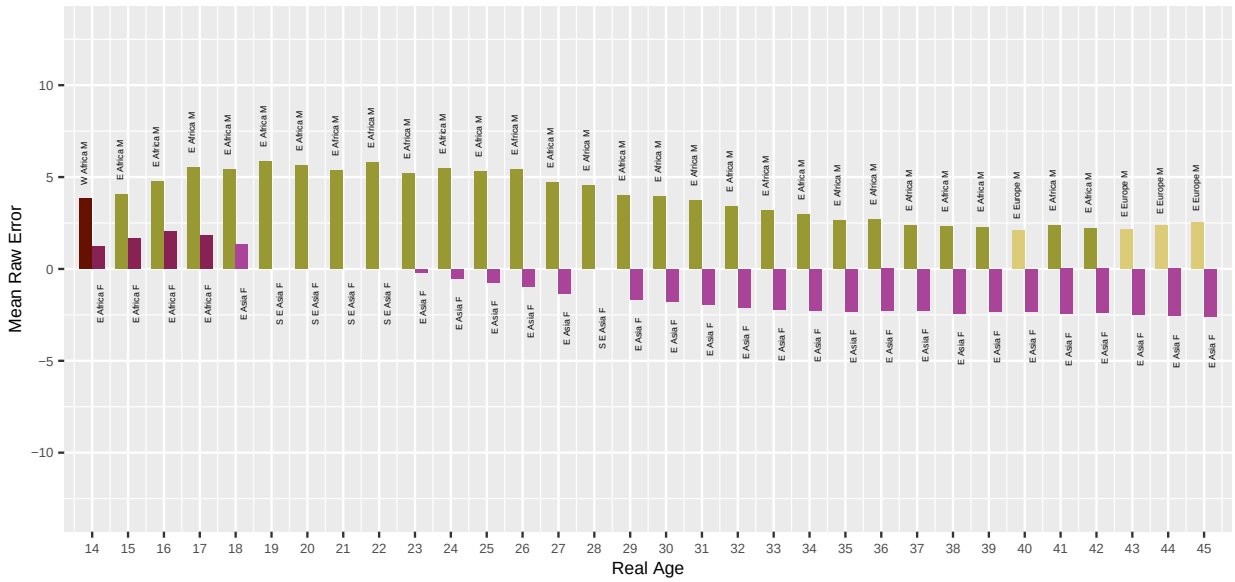

Fig. 75. *For algorithm shufti-000 applied to Border photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

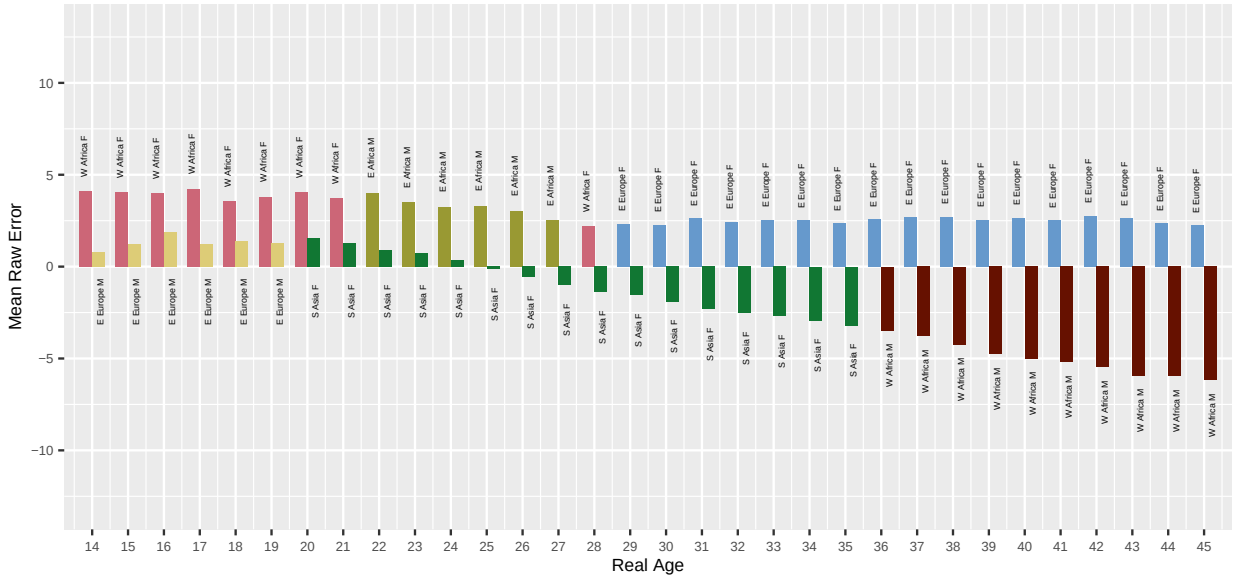

Fig. 76. *For algorithm unissey-001 applied to Application photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

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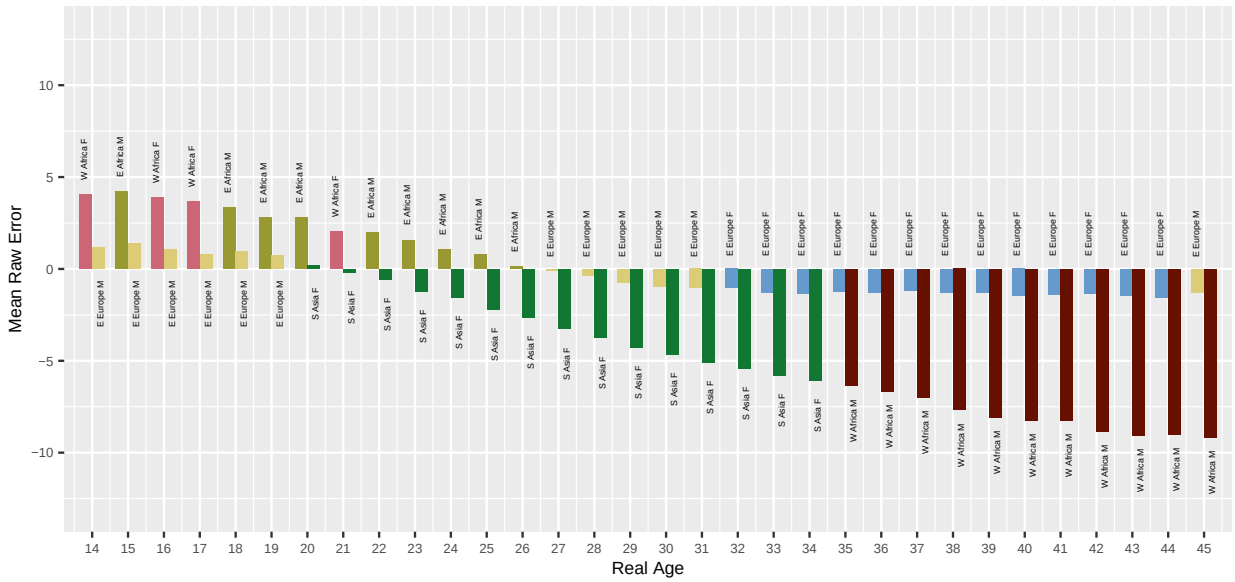

Fig. 77. *For algorithm unissey-001 applied to Border photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

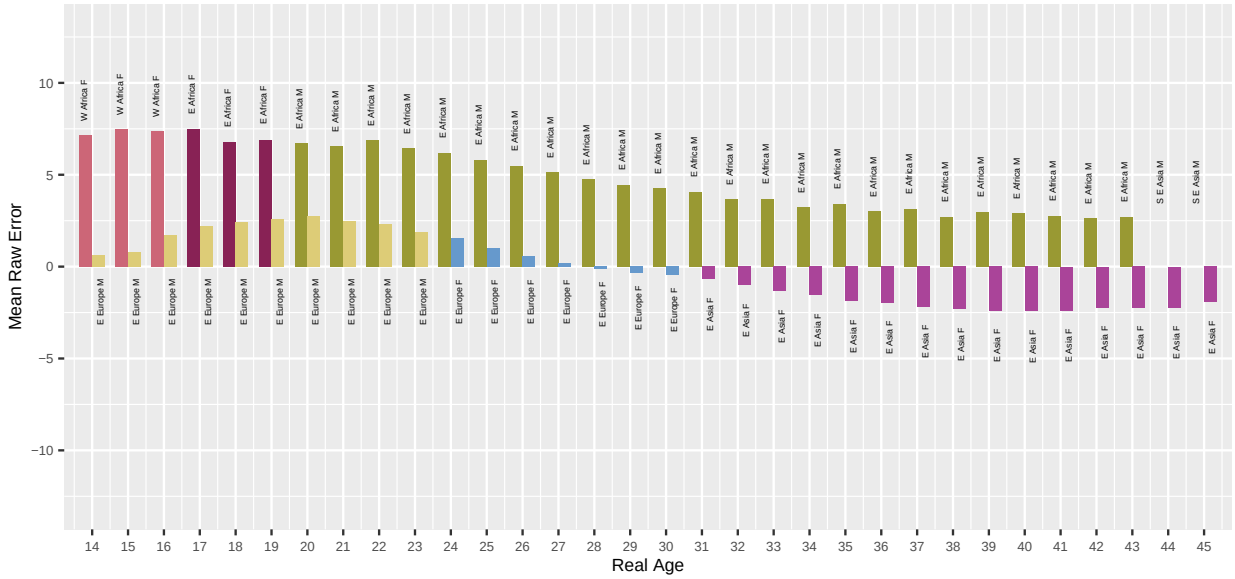

Fig. 78. *For algorithm viante-000 applied to Application photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

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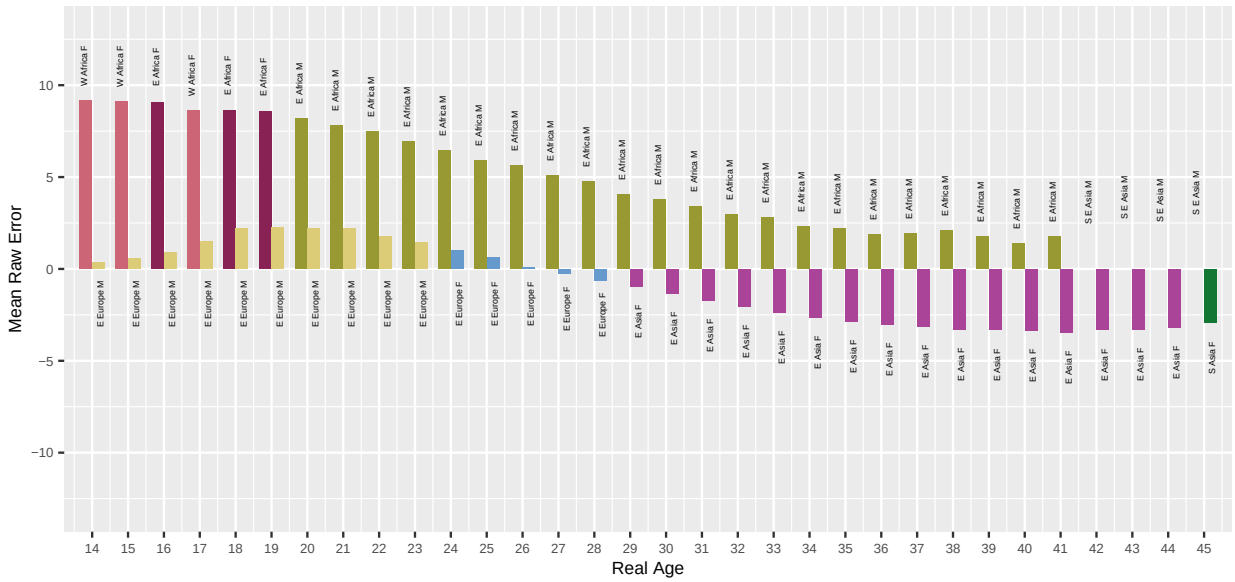

Fig. 79. *For algorithm viante-000 applied to Border photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

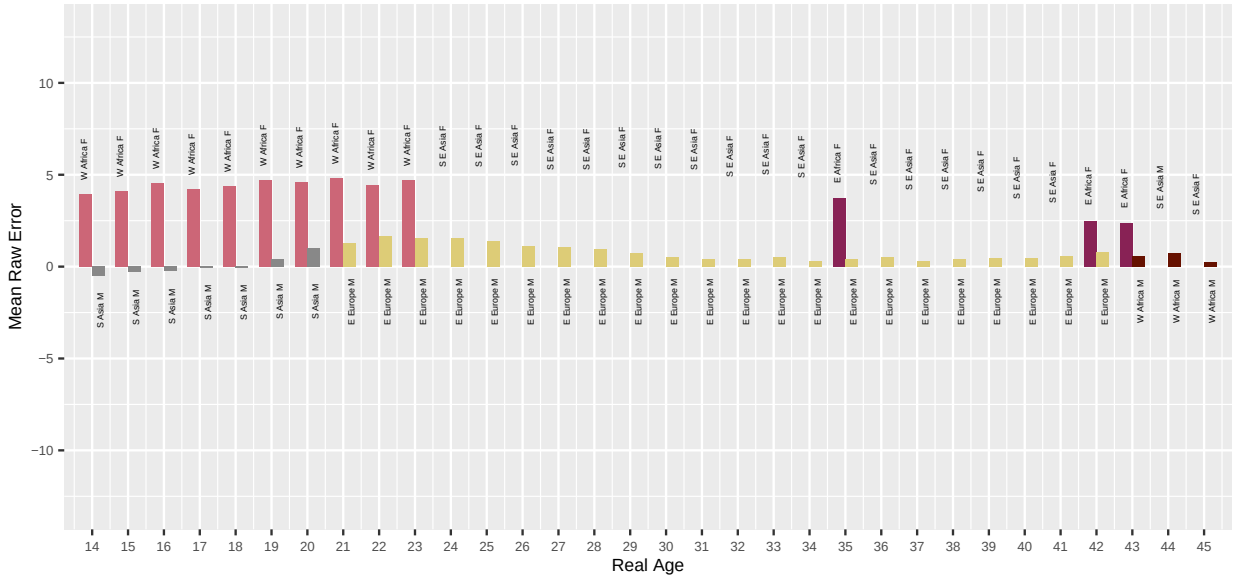

Fig. 80. *For algorithm yoti-001 applied to Application photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

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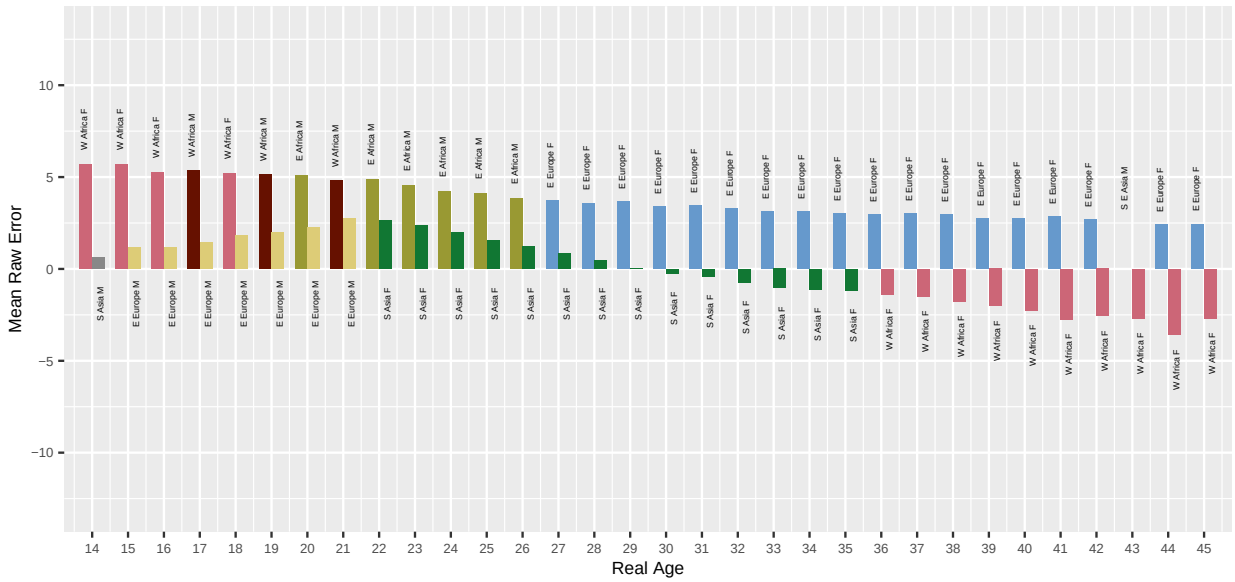

Fig. 81. *For algorithm yoti-001 applied to Border photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

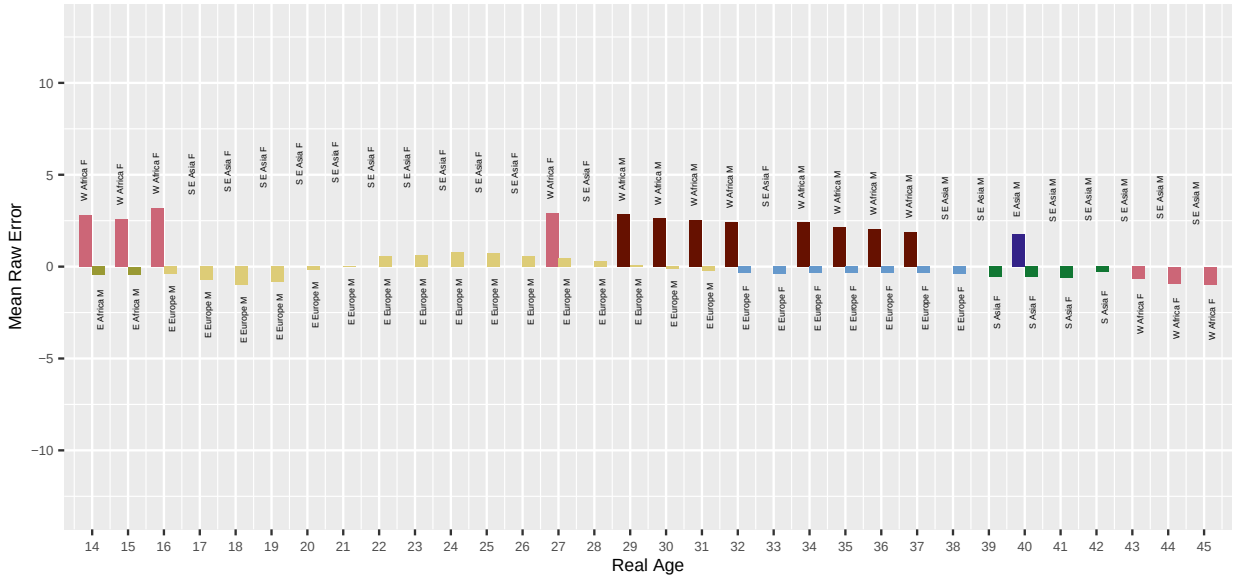

Fig. 82. *For algorithm yoti-002 applied to Application photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

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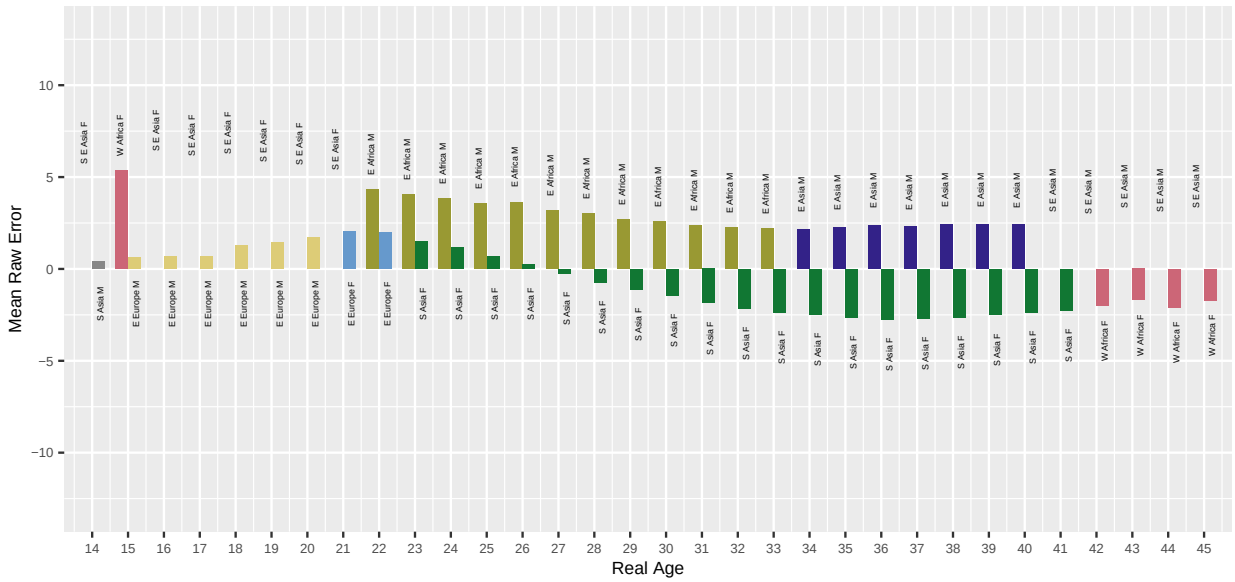

Fig. 83. *For algorithm yoti-002 applied to Border photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

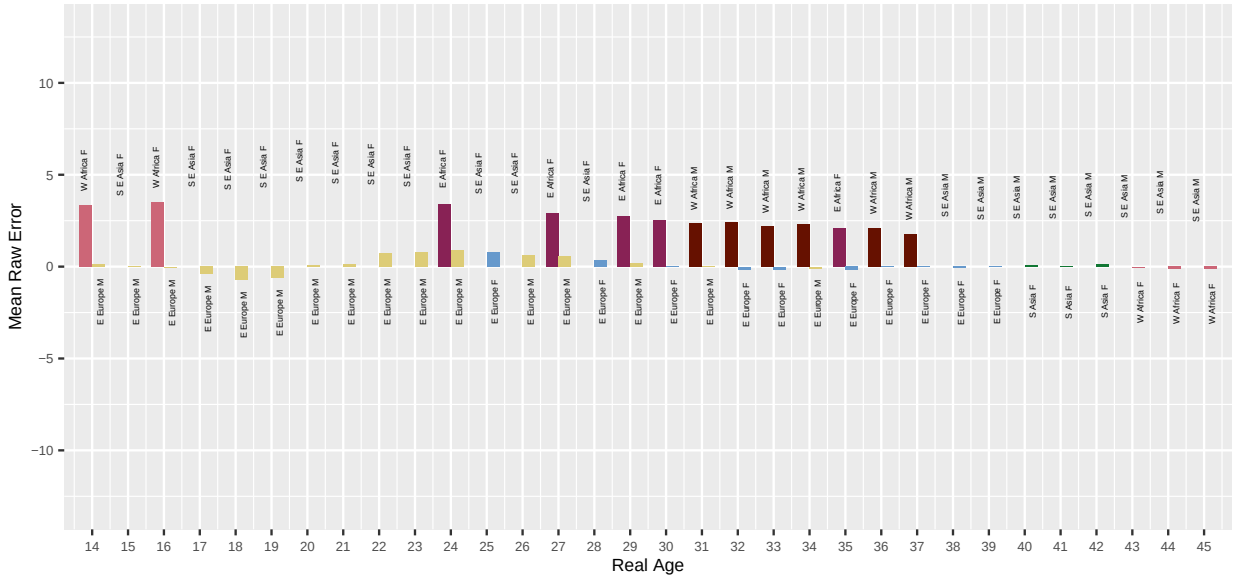

Fig. 84. *For algorithm yoti-003 applied to Application photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

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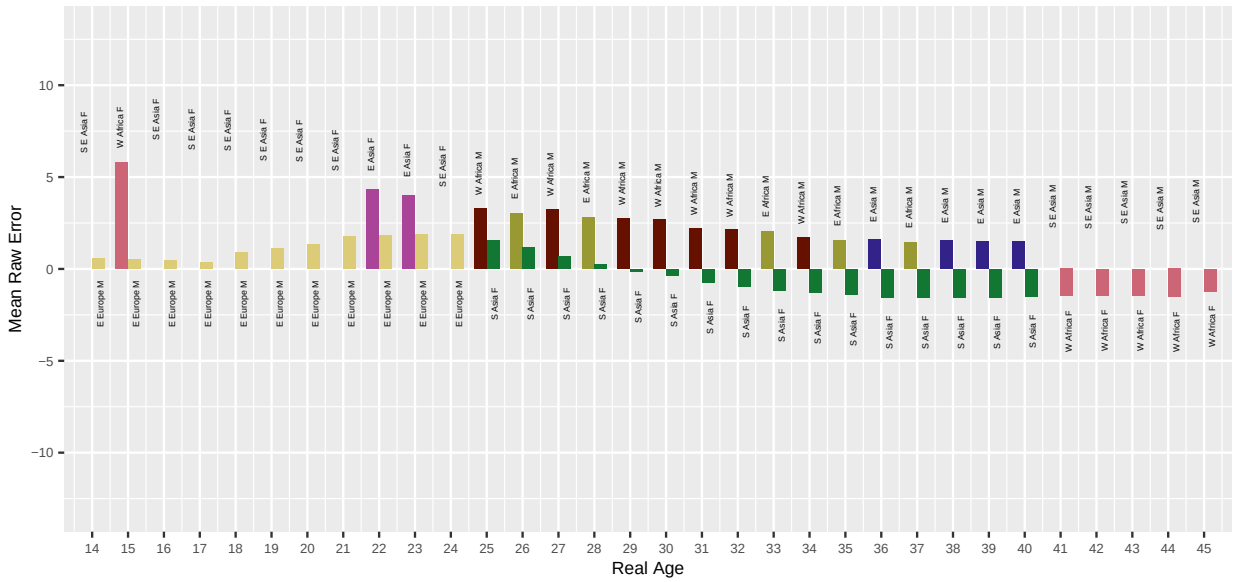

Fig. 85. *For algorithm yoti-003 applied to Border photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

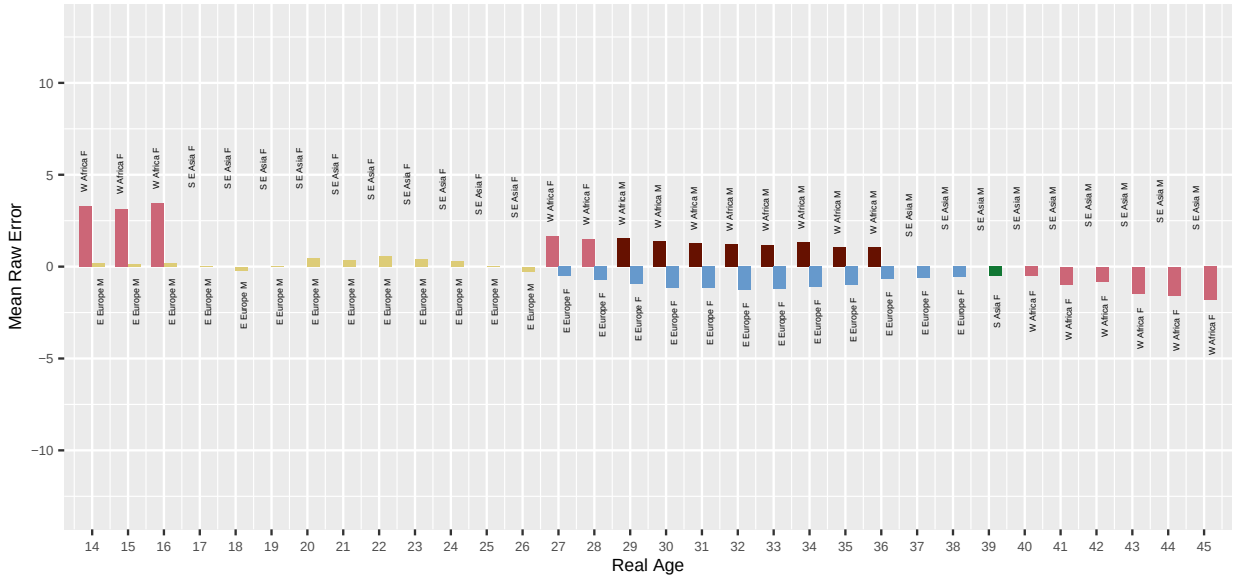

Fig. 86. *For algorithm yoti-004 applied to Application photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

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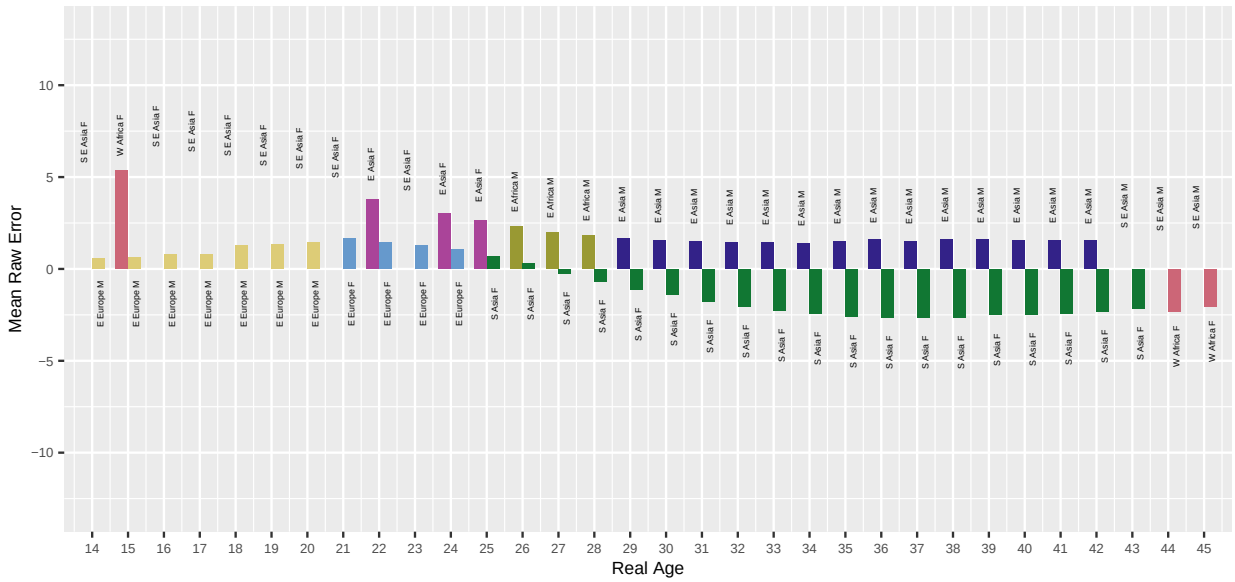

Fig. 87. *For algorithm yoti-004 applied to Border photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

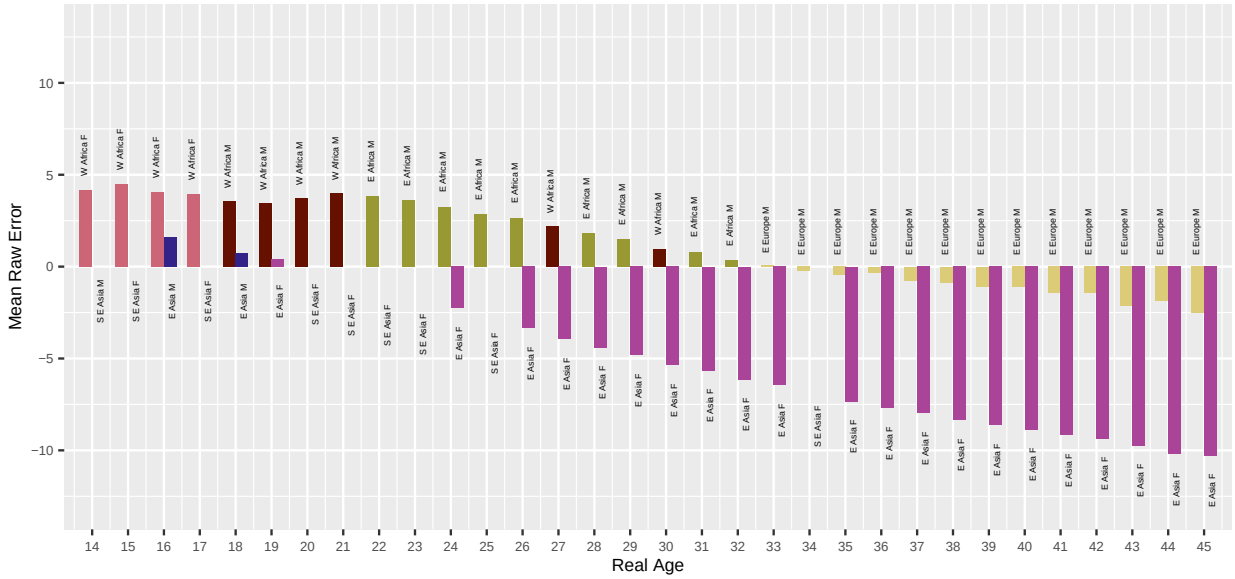

Fig. 88. *For algorithm youverse-000 applied to Application photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

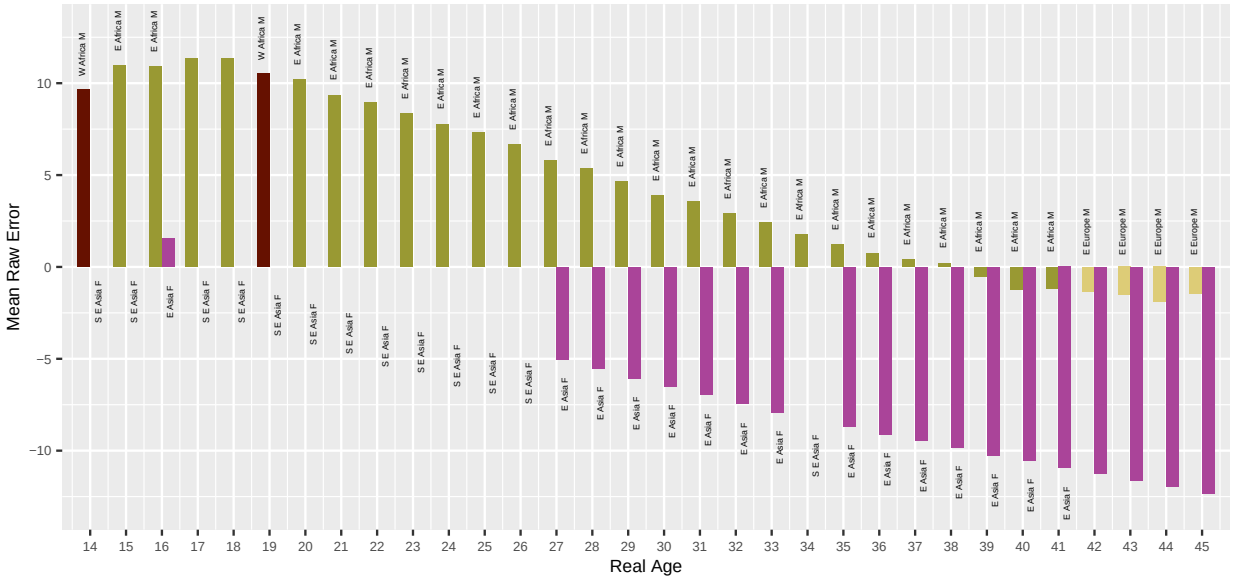

Fig. 89. *For algorithm youverse-000 applied to Border photos, the bar chart shows which demographic groups have the highest and lowest mean age estimation error, by age. Values closer to zero are better. Positive values are overestimate and negative values are underestimate.*

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5.5. Children

Table 19. *AE error statistics in children age 0 to 17. Acc(1) is the proportion of age estimates within 1 years (higher value is better), MAE is mean absolute error (lower value is better), and FTP is the proportion of images the algorithm failed to process (lower is better). Dataset is the Mexican visa sample.*

		cognitec-000			**cvut-001**			**cvut-002**			**cvut-003**			**cyberlink-000**			**cyberlink-001**		
Age	Num. Images	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP
0	133387	0.688	0.87	0	0.868	0.58	0	0.915	0.53	0	0.975	0.41	0.001	0.039	5.54	0	0.160	3.45	0
1	94475	0.598	0.98	0	0.610	0.95	0	0.767	0.78	0	0.788	0.70	0.001	0.086	4.36	0	0.181	2.80	0
2	82596	0.516	1.11	0	0.543	1.18	0	0.438	1.13	0	0.505	1.04	0.001	0.073	4.78	0	0.109	3.68	0
3	82473	0.484	1.19	0	0.499	1.41	0	0.595	1.16	0	0.585	1.08	0.001	0.096	5.08	0	0.079	4.22	0
4	84055	0.503	1.16	0	0.397	1.62	0	0.437	1.32	0	0.509	1.17	0.001	0.149	5.25	0	0.069	4.51	0
5	92521	0.523	1.14	0	0.335	1.71	0	0.474	1.45	0	0.510	1.29	0.001	0.154	5.53	0	0.066	4.67	0
6	91639	0.521	1.18	0	0.416	1.78	0	0.423	1.71	0	0.473	1.46	0.001	0.112	5.96	0	0.057	4.85	0
7	89993	0.478	1.30	0	0.382	2.01	0	0.259	2.14	0	0.335	1.78	0.001	0.071	6.54	0	0.043	5.10	0
8	89428	0.471	1.34	0	0.252	2.26	0	0.170	2.38	0	0.245	1.94	0.001	0.061	6.46	0	0.050	5.03	0
9	89644	0.480	1.35	0	0.300	2.36	0	0.215	2.43	0	0.302	1.92	0.001	0.037	6.18	0	0.056	4.87	0
10	98337	0.475	1.40	0	0.212	2.38	0	0.156	2.43	0	0.292	1.91	0.001	0.020	5.80	0	0.050	4.70	0
11	97415	0.439	1.53	0	0.233	2.41	0	0.207	2.48	0	0.309	2.02	0.001	0.016	5.42	0	0.041	4.54	0
12	94326	0.390	1.74	0	0.258	2.53	0	0.220	2.60	0	0.328	2.24	0.001	0.028	5.11	0	0.035	4.41	0
13	94047	0.331	2.01	0	0.202	2.86	0	0.172	2.75	0	0.260	2.65	0.001	0.022	4.95	0	0.030	4.38	0
14	96915	0.296	2.23	0	0.240	3.34	0	0.092	2.85	0	0.186	3.11	0.001	0.011	4.84	0	0.033	4.34	0
15	97599	0.280	2.38	0	0.209	3.94	0	0.293	2.99	0	0.254	3.60	0.001	0.021	4.78	0	0.037	4.29	0
16	96388	0.273	2.47	0	0.133	4.36	0	0.270	3.27	0	0.238	4.11	0.001	0.040	4.63	0	0.054	4.13	0
17	99462	0.268	2.48	0	0.139	4.53	0	0.176	3.46	0	0.145	4.50	0.001	0.064	4.43	0	0.077	3.89	0

Table 20. *AE error statistics in children age 0 to 17. Acc(1) is the proportion of age estimates within 1 years (higher value is better), MAE is mean absolute error (lower value is better), and FTP is the proportion of images the algorithm failed to process (lower is better). Dataset is the Mexican visa sample.*

		daon-000			**daon-001**			**dermalog-001**			**dermalog-002**			**hzailu-001**			**idemia-001**		
Age	Num. Images	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP
0	133387	0.004	4.70	0	0.008	3.49	0	0.183	2.05	0.001	0.047	3.00	0.001	0.397	1.85	0	0.759	1.00	0
1	94475	0.070	3.94	0	0.047	2.94	0	0.298	1.84	0.000	0.085	2.97	0.000	0.294	2.17	0	0.437	1.35	0
2	82596	0.106	3.75	0	0.089	2.78	0	0.400	1.89	0.000	0.123	2.97	0.000	0.215	2.68	0	0.366	1.49	0
3	82473	0.113	3.53	0	0.149	2.52	0	0.395	2.12	0.000	0.175	2.80	0.000	0.183	3.08	0	0.419	1.35	0
4	84055	0.132	3.19	0	0.220	2.17	0	0.353	2.37	0.000	0.223	2.62	0.000	0.176	3.30	0	0.549	1.09	0
5	92521	0.165	2.85	0	0.289	1.88	0	0.266	2.64	0.000	0.268	2.49	0.000	0.174	3.42	0	0.639	0.94	0
6	91639	0.183	2.68	0	0.326	1.72	0	0.174	2.98	0.000	0.273	2.59	0.000	0.164	3.74	0	0.635	0.94	0
7	89993	0.166	2.69	0	0.333	1.62	0	0.108	3.34	0.000	0.243	2.91	0.000	0.126	4.36	0	0.556	1.06	0
8	89428	0.191	2.46	0	0.410	1.41	0	0.116	3.27	0.000	0.255	2.94	0.000	0.130	4.56	0	0.482	1.22	0

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Table 20. *AE error statistics in children age 0 to 17. Acc(1) is the proportion of age estimates within 1 years (higher value is better), MAE is mean absolute error (lower value is better), and FTP is the proportion of images the algorithm failed to process (lower is better). Dataset is the Mexican visa sample. (continued)*

		daon-000			**daon-001**			**dermalog-001**			**dermalog-002**			**hzailu-001**			**idemia-001**		
Age	Num. Images	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP
9	89644	0.239	2.25	0	0.505	1.25	0	0.123	3.10	0.000	0.280	2.96	0.000	0.138	4.77	0	0.430	1.36	0
10	98337	0.305	2.11	0	0.550	1.21	0	0.168	2.84	0.000	0.298	3.00	0.000	0.147	5.04	0	0.392	1.50	0
11	97415	0.361	2.21	0	0.509	1.41	0	0.233	2.65	0.000	0.292	3.09	0.000	0.144	5.59	0	0.377	1.61	0
12	94326	0.350	2.66	0	0.411	1.86	0	0.290	2.60	0.000	0.259	3.28	0.000	0.122	6.44	0	0.369	1.72	0
13	94047	0.273	3.48	0	0.276	2.65	0	0.324	2.87	0.000	0.209	3.66	0.000	0.088	7.61	0	0.354	1.87	0
14	96915	0.177	4.35	0	0.189	3.50	0	0.274	3.43	0.000	0.164	4.10	0.000	0.055	8.66	0	0.331	2.06	0
15	97599	0.108	5.01	0	0.136	4.20	0	0.208	4.06	0.000	0.128	4.45	0.000	0.034	9.38	0	0.302	2.28	0
16	96388	0.084	5.27	0	0.104	4.58	0	0.158	4.50	0.000	0.111	4.60	0.000	0.022	9.59	0	0.274	2.46	0
17	99462	0.078	5.26	0	0.091	4.69	0	0.122	4.69	0.000	0.113	4.58	0.000	0.017	9.45	0	0.263	2.52	0

Table 21. *AE error statistics in children age 0 to 17. Acc(1) is the proportion of age estimates within 1 years (higher value is better), MAE is mean absolute error (lower value is better), and FTP is the proportion of images the algorithm failed to process (lower is better). Dataset is the Mexican visa sample.*

		idemia-002			**inbut-000**			**incode-000**			**incode-001**			**innovatrics-000**			**innovatrics-001**		
Age	Num. Images	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP
0	133387	0.572	1.27	0	0.974	0.38	0	0.983	0.34	0	0.983	0.32	0.001	0.920	0.74	0	0.989	0.36	0
1	94475	0.379	1.59	0	0.700	0.85	0	0.895	0.63	0	0.905	0.57	0.000	0.713	0.79	0	0.823	0.61	0
2	82596	0.289	1.83	0	0.381	1.41	0	0.614	0.92	0	0.735	0.77	0.000	0.415	1.31	0	0.522	1.12	0
3	82473	0.280	1.78	0	0.300	1.55	0	0.538	1.10	0	0.762	0.75	0.000	0.324	1.48	0	0.382	1.34	0
4	84055	0.359	1.56	0	0.353	1.45	0	0.492	1.24	0	0.720	0.83	0.000	0.357	1.41	0	0.425	1.29	0
5	92521	0.461	1.34	0	0.470	1.35	0	0.478	1.34	0	0.576	1.07	0.000	0.451	1.32	0	0.501	1.24	0
6	91639	0.526	1.23	0	0.487	1.41	0	0.489	1.36	0	0.497	1.27	0.000	0.483	1.36	0	0.492	1.35	0
7	89993	0.527	1.22	0	0.415	1.71	0	0.508	1.27	0	0.484	1.38	0.000	0.404	1.62	0	0.402	1.64	0
8	89428	0.477	1.30	0	0.342	2.13	0	0.449	1.42	0	0.413	1.77	0.000	0.329	1.86	0	0.317	1.91	0
9	89644	0.440	1.34	0	0.280	2.68	0	0.406	1.56	0	0.348	2.29	0.000	0.290	2.03	0	0.276	2.09	0
10	98337	0.455	1.33	0	0.225	3.54	0	0.373	1.71	0	0.296	2.84	0.000	0.268	2.19	0	0.262	2.26	0
11	97415	0.471	1.36	0	0.182	4.94	0	0.351	1.87	0	0.251	3.36	0.000	0.250	2.45	0	0.241	2.55	0
12	94326	0.462	1.46	0	0.129	6.83	0	0.399	2.03	0	0.218	3.73	0.000	0.210	2.79	0	0.189	2.93	0
13	94047	0.425	1.71	0	0.073	8.89	0	0.345	2.31	0	0.146	3.90	0.000	0.151	3.16	0	0.124	3.32	0
14	96915	0.358	2.07	0	0.032	10.41	0	0.220	2.58	0	0.068	3.81	0.000	0.102	3.42	0	0.077	3.56	0
15	97599	0.301	2.47	0	0.014	11.34	0	0.171	2.71	0	0.031	3.52	0.000	0.082	3.54	0	0.059	3.65	0
16	96388	0.255	2.80	0	0.011	11.74	0	0.207	2.73	0	0.019	3.18	0.000	0.084	3.55	0	0.067	3.59	0
17	99462	0.227	2.98	0	0.014	11.74	0	0.303	2.69	0	0.141	2.87	0.000	0.112	3.48	0	0.104	3.44	0

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Table 22. *AE error statistics in children age 0 to 17. Acc(1) is the proportion of age estimates within 1 years (higher value is better), MAE is mean absolute error (lower value is better), and FTP is the proportion of images the algorithm failed to process (lower is better). Dataset is the Mexican visa sample.*

		innovatrics-002			**jumio-000**			**neuro-000**			**neuro-001**			**nominder-000**			**nominder-001**		
Age	Num. Images	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP
0	133387	0.963	0.41	0	0.000	18.43	0.018	0.469	1.23	0	0.429	1.87	0	0.906	0.68	0	0.915	0.66	0
1	94475	0.759	0.74	0	0.000	15.25	0.009	0.582	1.11	0	0.508	1.82	0	0.644	1.07	0	0.661	1.04	0
2	82596	0.512	1.18	0	0.000	13.27	0.011	0.559	1.25	0	0.498	1.80	0	0.321	1.80	0	0.294	1.87	0
3	82473	0.345	1.48	0	0.001	10.99	0.011	0.467	1.50	0	0.425	1.95	0	0.221	1.90	0	0.195	1.89	0
4	84055	0.340	1.48	0	0.006	9.37	0.015	0.412	1.64	0	0.376	2.09	0	0.268	1.75	0	0.272	1.57	0
5	92521	0.420	1.41	0	0.020	8.06	0.021	0.389	1.76	0	0.352	2.22	0	0.496	1.74	0	0.616	1.38	0
6	91639	0.444	1.49	0	0.044	7.29	0.028	0.365	1.96	0	0.325	2.49	0	0.408	2.12	0	0.533	1.65	0
7	89993	0.360	1.77	0	0.077	6.84	0.038	0.329	2.39	0	0.293	3.00	0	0.202	2.69	0	0.294	2.08	0
8	89428	0.281	1.98	0	0.095	6.83	0.032	0.302	2.83	0	0.269	3.42	0	0.149	2.91	0	0.248	2.46	0
9	89644	0.252	2.05	0	0.100	7.00	0.028	0.261	3.25	0	0.232	3.79	0	0.128	2.94	0	0.220	2.72	0
10	98337	0.256	2.02	0	0.085	7.10	0.030	0.206	3.68	0	0.183	4.15	0	0.117	2.91	0	0.195	2.96	0
11	97415	0.260	2.01	0	0.063	7.04	0.032	0.165	4.16	0	0.142	4.56	0	0.122	2.84	0	0.180	3.22	0
12	94326	0.235	1.99	0	0.043	6.68	0.038	0.122	4.68	0	0.105	4.99	0	0.137	2.78	0	0.164	3.54	0
13	94047	0.226	1.96	0	0.032	6.13	0.041	0.084	5.17	0	0.071	5.37	0	0.182	2.82	0	0.145	3.92	0
14	96915	0.321	1.91	0	0.024	5.62	0.041	0.051	5.34	0	0.044	5.46	0	0.233	2.91	0	0.114	4.17	0
15	97599	0.425	1.95	0	0.022	5.24	0.039	0.035	5.29	0	0.030	5.36	0	0.236	3.11	0	0.079	4.31	0
16	96388	0.445	2.10	0	0.026	4.94	0.035	0.035	4.96	0	0.031	5.01	0	0.217	3.28	0	0.066	4.28	0
17	99462	0.368	2.35	0	0.072	4.62	0.033	0.047	4.46	0	0.043	4.50	0	0.207	3.36	0	0.084	4.12	0

Table 23. *AE error statistics in children age 0 to 17. Acc(1) is the proportion of age estimates within 1 years (higher value is better), MAE is mean absolute error (lower value is better), and FTP is the proportion of images the algorithm failed to process (lower is better). Dataset is the Mexican visa sample.*

		ondato-000			**ondato-001**			**privately-000**			**regula-000**			**roc-000**			**roc-001**		
Age	Num. Images	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP
0	133387	0.328	2.29	0	0.281	1.66	0	0.352	1.40	0	0.413	1.28	0	0.270	2.28	0	0.000	7.75	0
1	94475	0.439	1.68	0	0.275	1.76	0	0.497	1.30	0	0.934	0.46	0	0.326	1.80	0	0.000	7.52	0
2	82596	0.340	2.13	0	0.193	2.04	0	0.421	1.81	0	0.862	0.56	0	0.335	1.78	0	0.000	7.17	0
3	82473	0.281	2.52	0	0.216	2.18	0	0.265	2.25	0	0.796	0.66	0	0.342	1.75	0	0.000	6.87	0
4	84055	0.251	2.77	0	0.272	2.22	0	0.155	2.28	0	0.776	0.68	0	0.370	1.64	0	0.001	6.58	0
5	92521	0.234	2.94	0	0.279	2.34	0	0.183	2.05	0	0.737	0.74	0	0.396	1.59	0	0.001	6.32	0
6	91639	0.198	3.25	0	0.245	2.53	0	0.319	1.74	0	0.670	0.85	0	0.412	1.60	0	0.001	5.92	0
7	89993	0.157	3.65	0	0.204	2.82	0	0.449	1.52	0	0.622	0.91	0	0.416	1.66	0	0.002	5.22	0
8	89428	0.138	3.88	0	0.192	3.01	0	0.483	1.48	0	0.593	0.97	0	0.375	1.88	0	0.002	5.04	0
9	89644	0.126	4.00	0	0.193	3.14	0	0.486	1.52	0	0.595	1.00	0	0.312	2.19	0	0.002	4.81	0
10	98337	0.119	3.99	0	0.190	3.23	0	0.452	1.64	0	0.575	1.06	0	0.243	2.64	0	0.003	4.59	0

Table 23. *AE error statistics in children age 0 to 17. Acc(1) is the proportion of age estimates within 1 years (higher value is better), MAE is mean absolute error (lower value is better), and FTP is the proportion of images the algorithm failed to process (lower is better). Dataset is the Mexican visa sample. (continued)*

		ondato-000			**ondato-001**			**privately-000**			**regula-000**			**roc-000**			**roc-001**		
Age	Num. Images	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP
11	97415	0.110	3.97	0	0.170	3.40	0	0.394	1.84	0	0.514	1.23	0	0.185	3.18	0	0.004	4.39	0
12	94326	0.096	3.85	0	0.140	3.55	0	0.369	2.00	0	0.437	1.46	0	0.124	3.76	0	0.005	4.18	0
13	94047	0.082	3.70	0	0.108	3.63	0	0.380	2.18	0	0.370	1.73	0	0.072	4.18	0	0.007	4.00	0
14	96915	0.085	3.50	0	0.089	3.60	0	0.368	2.41	0	0.314	1.98	0	0.037	4.20	0	0.009	3.81	0
15	97599	0.118	3.36	0	0.096	3.52	0	0.272	2.76	0	0.291	2.13	0	0.019	4.00	0	0.016	3.63	0
16	96388	0.173	3.25	0	0.120	3.44	0	0.194	3.05	0	0.289	2.21	0	0.023	3.65	0	0.044	3.47	0
17	99462	0.217	3.16	0	0.160	3.32	0	0.180	3.16	0	0.323	2.20	0	0.104	3.29	0	0.129	3.35	0

Table 24. *AE error statistics in children age 0 to 17. Acc(1) is the proportion of age estimates within 1 years (higher value is better), MAE is mean absolute error (lower value is better), and FTP is the proportion of images the algorithm failed to process (lower is better). Dataset is the Mexican visa sample.*

		roc-002			**shufti-000**			**unissey-001**			**viante-000**			**yoti-001**			**yoti-002**		
Age	Num. Images	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP
0	133387	0.859	0.61	0	0.013	3.01	0.001	0.962	0.60	0	0.687	0.82	0	0.418	1.39	0.012	0.690	1.11	0
1	94475	0.872	0.56	0	0.014	3.06	0.000	0.229	1.31	0	0.461	1.16	0	0.396	1.46	0.005	0.759	0.96	0
2	82596	0.780	0.69	0	0.019	3.17	0.000	0.414	1.32	0	0.445	1.38	0	0.303	1.73	0.004	0.509	1.26	0
3	82473	0.696	0.83	0	0.044	3.11	0.000	0.577	1.24	0	0.248	1.66	0	0.249	1.82	0.003	0.392	1.45	0
4	84055	0.649	0.91	0	0.109	2.88	0.000	0.477	1.36	0	0.247	1.65	0	0.289	1.67	0.003	0.382	1.41	0
5	92521	0.610	1.00	0	0.218	2.60	0.000	0.502	1.60	0	0.352	1.68	0	0.367	1.51	0.002	0.477	1.28	0
6	91639	0.577	1.08	0	0.331	2.49	0.000	0.332	2.02	0	0.365	1.93	0	0.475	1.34	0.002	0.545	1.22	0
7	89993	0.563	1.10	0	0.343	2.61	0.000	0.214	2.49	0	0.252	2.43	0	0.529	1.30	0.001	0.520	1.34	0
8	89428	0.507	1.22	0	0.323	2.76	0.000	0.251	2.71	0	0.161	2.57	0	0.490	1.42	0.000	0.463	1.47	0
9	89644	0.477	1.30	0	0.270	2.94	0.000	0.226	2.81	0	0.106	2.35	0	0.447	1.55	0.000	0.437	1.49	0
10	98337	0.439	1.43	0	0.217	3.04	0.000	0.162	2.80	0	0.083	1.97	0	0.415	1.68	0.000	0.442	1.49	0
11	97415	0.394	1.60	0	0.166	3.19	0.000	0.107	2.79	0	0.266	1.62	0	0.391	1.80	0.000	0.450	1.49	0
12	94326	0.340	1.78	0	0.127	3.26	0.000	0.261	2.81	0	0.453	1.70	0	0.340	1.97	0.000	0.434	1.56	0
13	94047	0.279	1.92	0	0.105	3.28	0.000	0.198	3.07	0	0.493	2.57	0	0.298	2.17	0.000	0.386	1.69	0
14	96915	0.256	1.93	0	0.114	3.22	0.000	0.222	3.36	0	0.294	3.99	0	0.299	2.35	0.000	0.349	1.82	0
15	97599	0.290	1.82	0	0.115	3.11	0.000	0.200	3.67	0	0.164	5.38	0	0.294	2.61	0.000	0.359	1.94	0
16	96388	0.386	1.65	0	0.165	3.00	0.000	0.152	3.86	0	0.100	6.19	0	0.292	2.85	0.000	0.389	2.06	0
17	99462	0.478	1.53	0	0.283	2.85	0.000	0.166	3.85	0	0.052	6.54	0	0.287	3.06	0.000	0.382	2.22	0

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Table 25. *AE error statistics in children age 0 to 17. Acc(1) is the proportion of age estimates within 1 years (higher value is better), MAE is mean absolute error (lower value is better), and FTP is the proportion of images the algorithm failed to process (lower is better). Dataset is the Mexican visa sample.*

		yoti-003			**yoti-004**			**youverse-000**		
Age	Num. Images	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP
0	133387	0.859	1.42	0	0.812	1.14	0	0.211	3.31	0.026
1	94475	0.729	1.27	0	0.633	1.09	0	0.131	3.88	0.006
2	82596	0.473	1.45	0	0.488	1.23	0	0.085	4.64	0.003
3	82473	0.345	1.56	0	0.445	1.28	0	0.063	5.04	0.003
4	84055	0.372	1.42	0	0.493	1.18	0	0.054	5.31	0.002
5	92521	0.495	1.22	0	0.566	1.08	0	0.050	5.47	0.002
6	91639	0.577	1.14	0	0.584	1.09	0	0.041	5.75	0.001
7	89993	0.546	1.28	0	0.522	1.26	0	0.030	6.18	0.001
8	89428	0.480	1.44	0	0.458	1.41	0	0.024	6.27	0.001
9	89644	0.429	1.55	0	0.420	1.49	0	0.022	6.13	0.000
10	98337	0.377	1.65	0	0.402	1.56	0	0.021	5.86	0.000
11	97415	0.333	1.73	0	0.385	1.65	0	0.017	5.53	0.000
12	94326	0.322	1.78	0	0.351	1.77	0	0.012	5.13	0.000
13	94047	0.359	1.77	0	0.331	1.90	0	0.011	4.69	0.000
14	96915	0.401	1.76	0	0.335	1.99	0	0.013	4.32	0.000
15	97599	0.422	1.85	0	0.347	2.11	0	0.034	3.99	0.000
16	96388	0.415	2.02	0	0.334	2.27	0	0.114	3.67	0.000
17	99462	0.377	2.23	0	0.308	2.39	0	0.207	3.39	0.000

Table 25 shows MAE and two other performance statistics for a large dataset of *Visa* images of children. The most accurate algorithm, Incode-000, is markedly more accurate than others on babies and infants. It estimates the age of children less than 1 year old with MAE 0.34, i.e. about four months. This rises almost monotonically through 17 years. All other algorithms exhibit a similar trend.

5.6. Image Quality

Clearly age estimation accuracy will depend on the quality of the images. If the image is out of focus, or underexposed, or has some other properties that sufficiently depart from standardized portrait format, then either the age estimation algorithms will elect to not process the image, or it will emit a degraded age estimate.

We do not have the resources to conduct an exhaustive exploration of the effect of quality variables (resolution, exposure, blur, etc.) on AE error. Instead, we note that *Border* images give generally degraded age estimation metrics, relative to *Application* images. As described in section 3, the *Border* images are collected under time constraints using inexpensive webcams, with mild departures from frontal head orientation.

Given collection condition 1 (*Border*), person i of age a_{i1} and estimated age e_{i1} the age estimation error is $\varepsilon_{i1} = e_{i1} - a_{i1}$. Likewise for the second (*Application*) photo of the same person $\varepsilon_{i2} = e_{i2} - a_{i2}$. We use only those people aged 14 to 36, for which the photos are collected within two years of each other $|a_{i1} - a_{i2}| \leq 2$. Figure 94 shows the distribution of the change in age estimation error between two collection conditions, $\varepsilon_{i1} - \varepsilon_{i2}$. Positive values indicate larger error in *Border* images. Pairwise analysis gives more powerful insight than simply comparing the two error distributions. The figure breaks out this change by sex and region-of-birth. The figure includes two summary statistics: First is median change in error, D; second is the proportion of images with a decrease in error, F. For example, for dermalog-001 operating on E. African women, 24% of persons have a better age estimate using *Border* images than *Application* images, but the median change in error is 3.9 years.

The ideal form of this plot is for the violins to be wide and not tall, showing little change in AE error between imaging conditions. Neurotechnology-000, roc-000 and yoti-001 give generally smaller changes in error. We note most algorithms give worse age estimates on *Border* images, with the exception of unissey-001 which has generally lower error.

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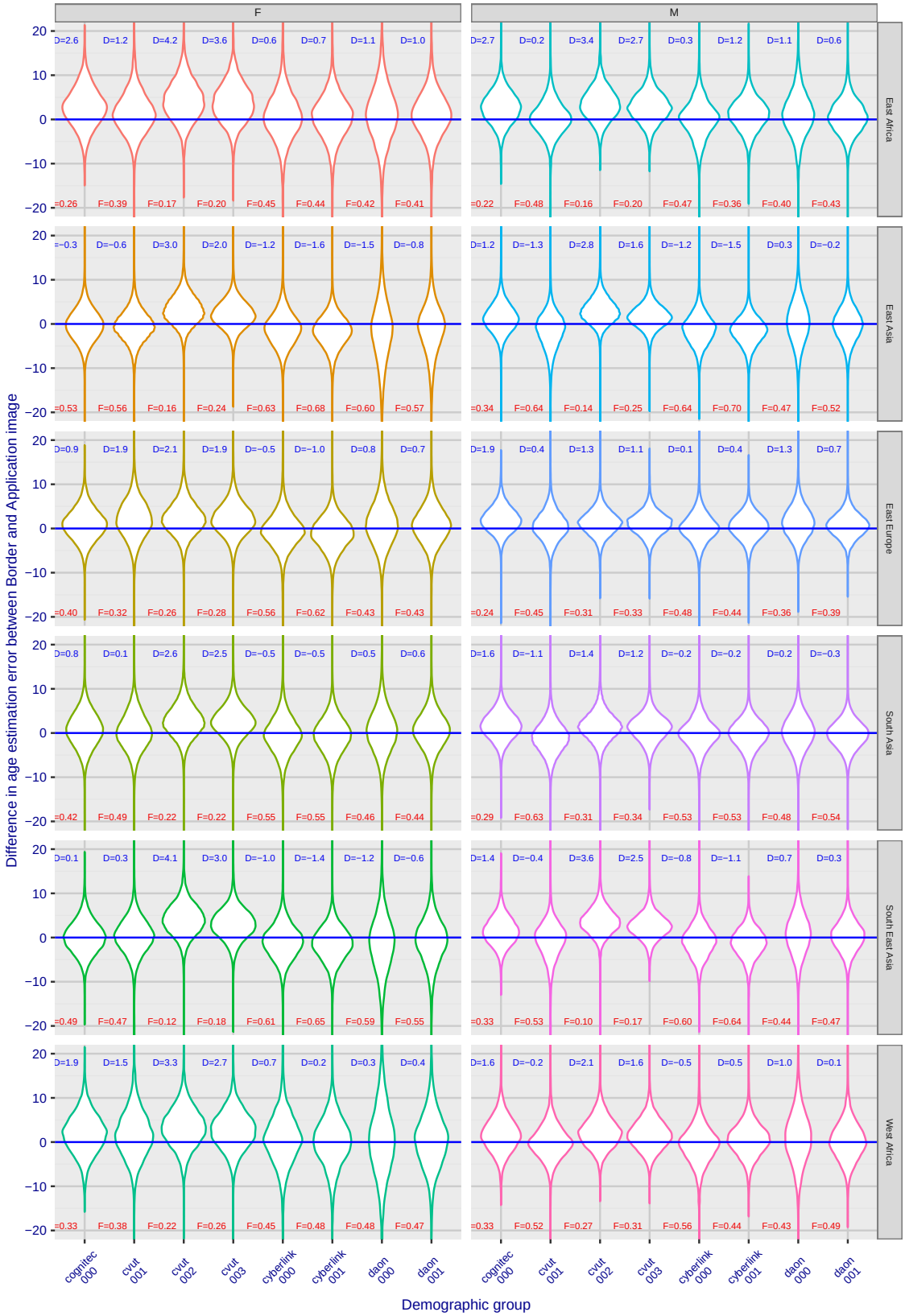

Fig. 90. *Distribution of the pairwise age estimation error difference for Border and Application images. Positive values indicate larger error on Border images.*

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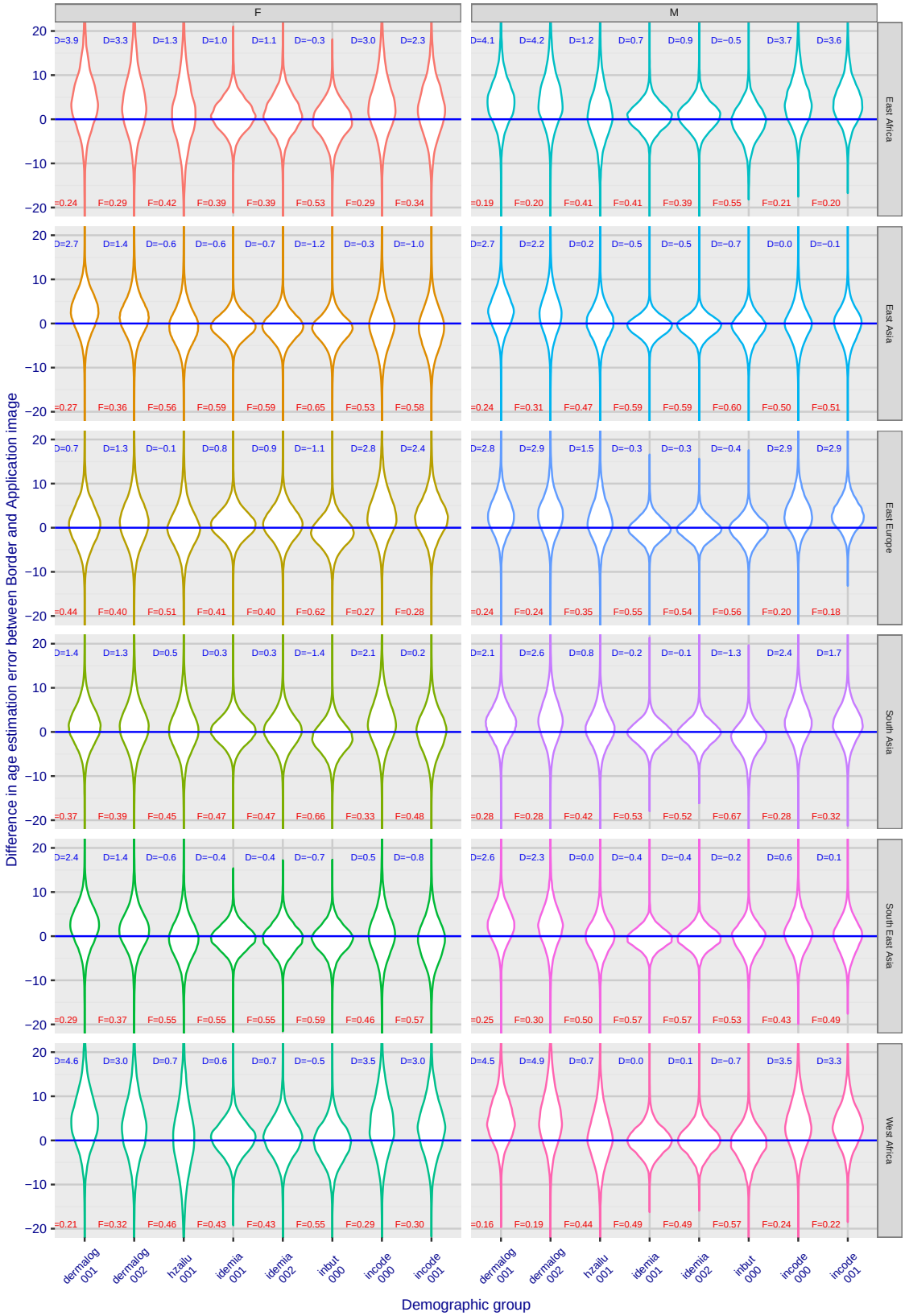

Fig. 91. *Distribution of the pairwise age estimation error difference for Border and Application images. Positive values indicate larger error on Border images.*

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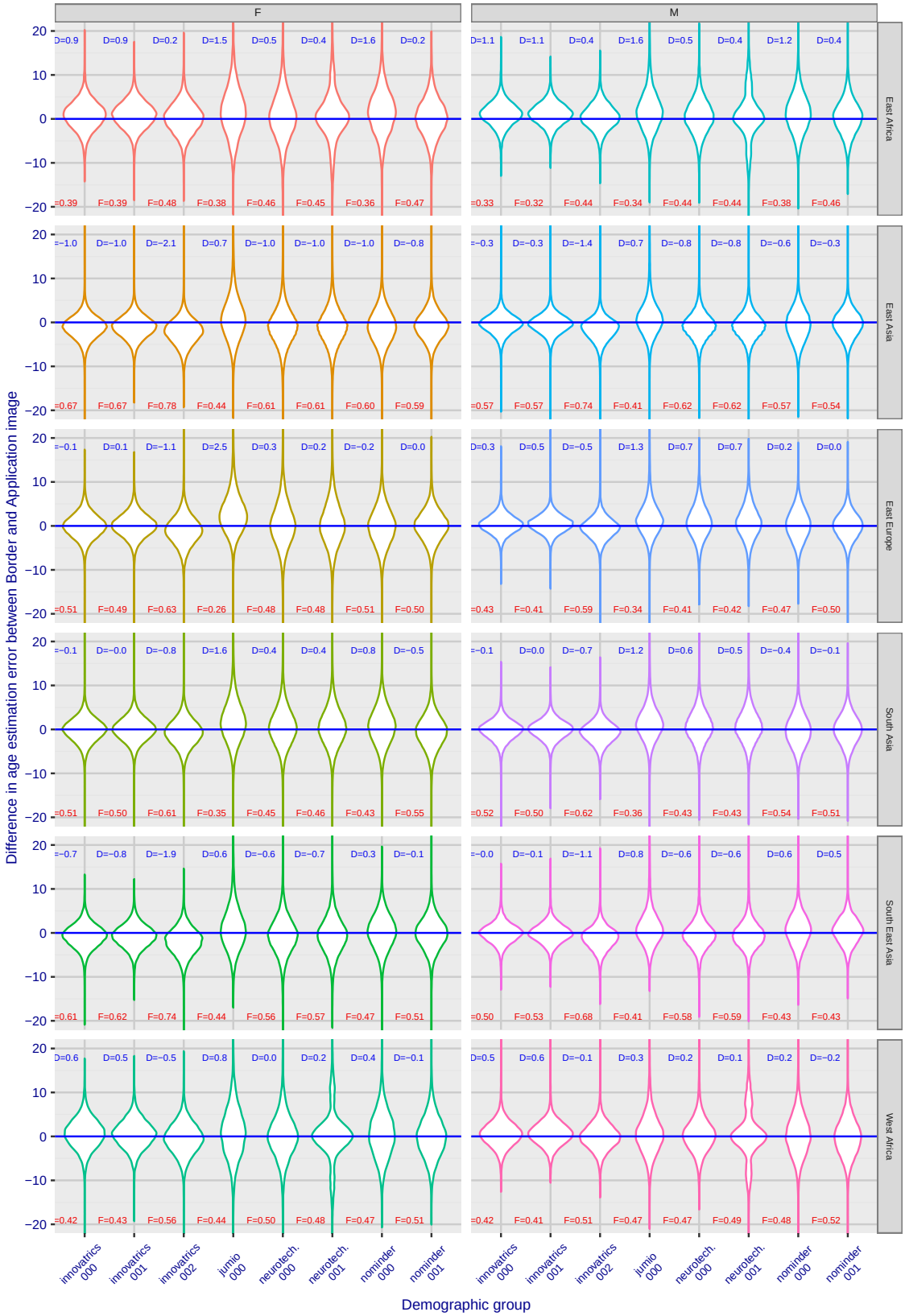

Fig. 92. *Distribution of the pairwise age estimation error difference for Border and Application images. Positive values indicate larger error on Border images.*

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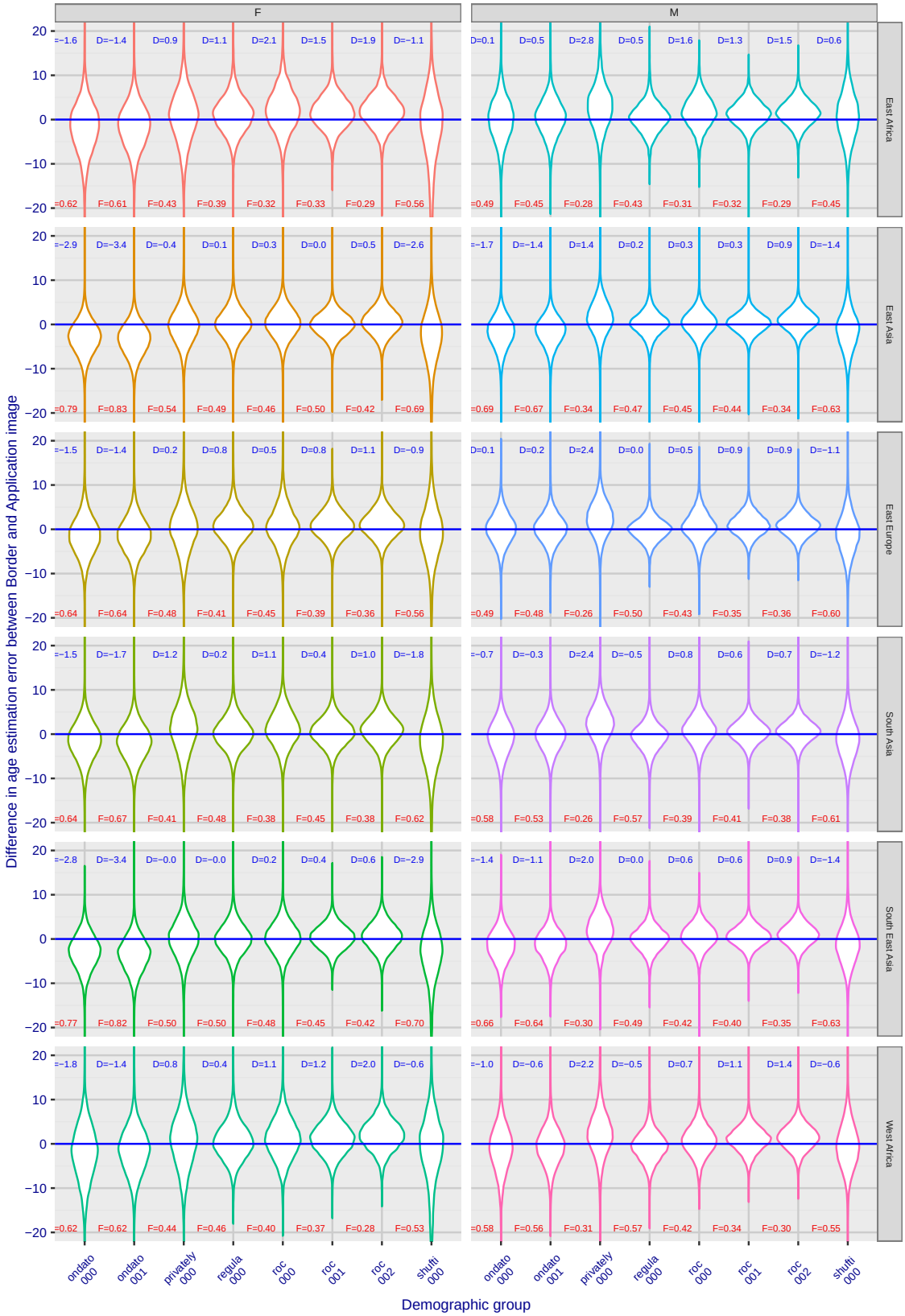

Fig. 93. *Distribution of the pairwise age estimation error difference for Border and Application images. Positive values indicate larger error on Border images.*

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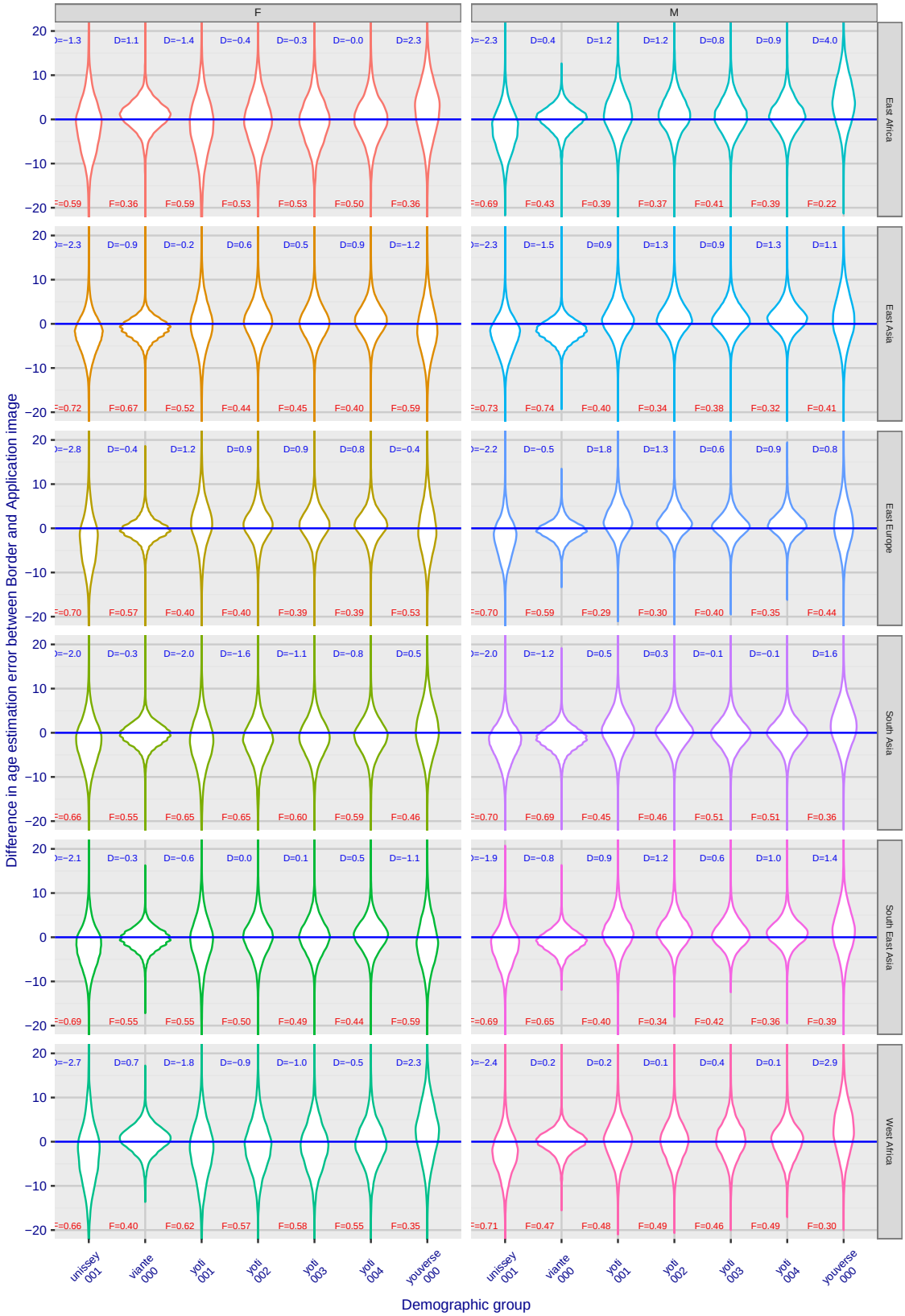

Fig. 94. *Distribution of the pairwise age estimation error difference for Border and Application images. Positive values indicate larger error on Border images.*

5.6.1. Effect of Eyeglasses

Figure 99 shows age estimation error results for subjects photographed with and without glasses. The photographs are a subset of the border images described in section 3.4. The population consists of 9181 subjects for whom we have paired photos - one with glasses and one without taken within three months years of each other. There are 16677 pairs. All subjects are between 14 and 36 years old.

Ground truth for presence of eyeglasses is established automatically using a Specific Image Defect Detection (SIDD) algorithm to determine the presence of glasses, setting a threshold of 0.5 on the quality component. The SIDD algorithm is chosen based on both accuracy and speed. More information regarding SIDD algorithms' performance can be found in the FATE SIDD report which is a regularly updated verion of NIST Interagency Report 8485.

Error bars are computed by bootstrapping the calculation of mean error 1000 times and taking the interval that gives 95% coverage of the mean. Note that the error bars are not a measure of the deviation of the actual error values.

The figure shows that dermalog_001 and incode_000 overestimate age of both men and women more with glasses than without. Yoti_001 does the same but only in women. The roc_000 algorithm overestimates age of both sexes without glasses more than with glasses. In contrast, neurotechnology_000 and unissey_001 have large mean age estimate error for underestimate the age of subjects wearing glasses.

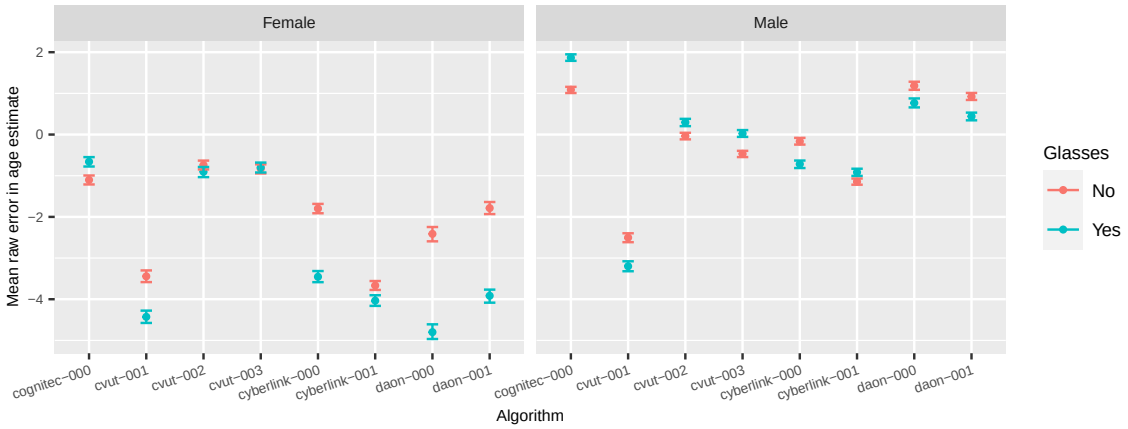

Fig. 95. *Mean raw age estimation error for border crossing subjects for whom we have images with and without eyeglasses.*

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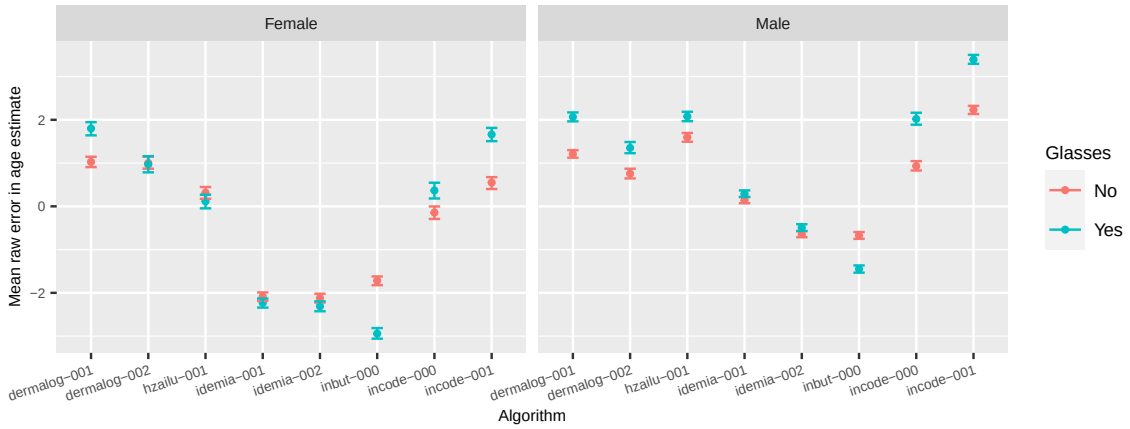

Fig. 96. *Mean raw age estimation error for border crossing subjects for whom we have images with and without eyeglasses.*

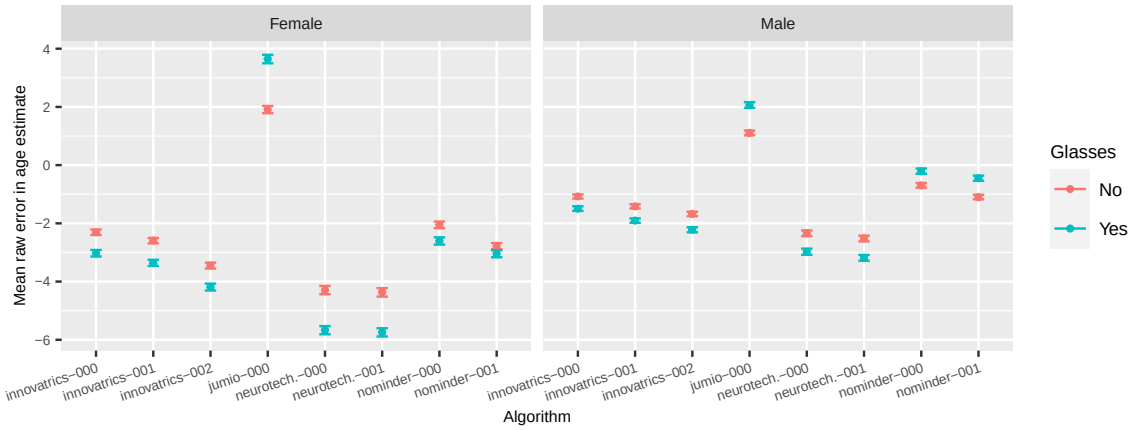

Fig. 97. *Mean raw age estimation error for border crossing subjects for whom we have images with and without eyeglasses.*

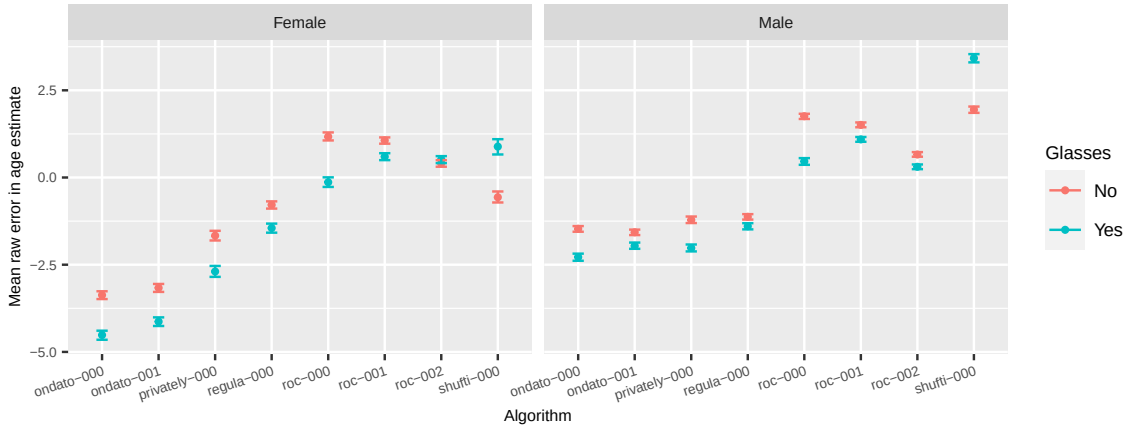

Fig. 98. *Mean raw age estimation error for border crossing subjects for whom we have images with and without eyeglasses.*

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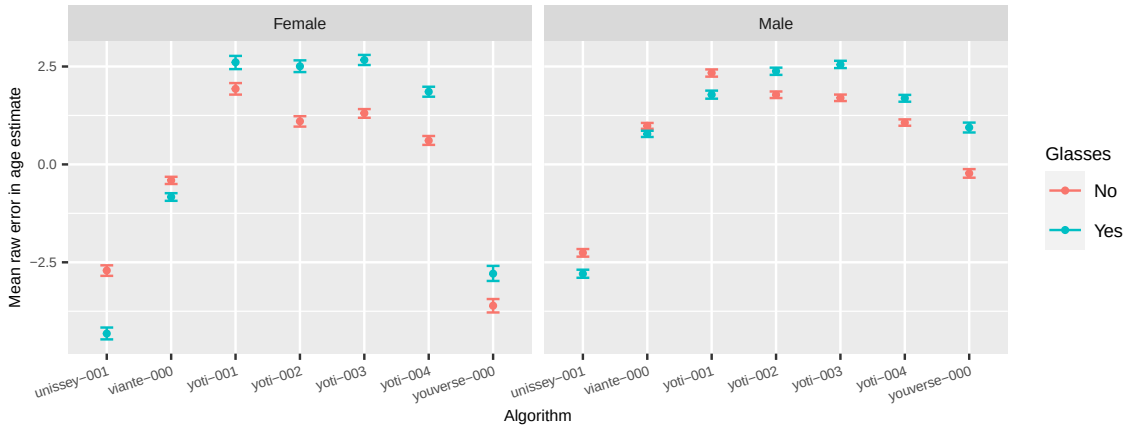

Fig. 99. *Mean raw age estimation error for border crossing subjects for whom we have images with and without eyeglasses.*

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In Figure 104, the difference-in-error with and without glasses is calculated for the same images as in the previous plot, pairwise by subject. The error bars are computed by calculating mean difference-in-error 1000 times and taking the interval that gives 95% coverage of the mean. The results are consistent with those in the previous figure.

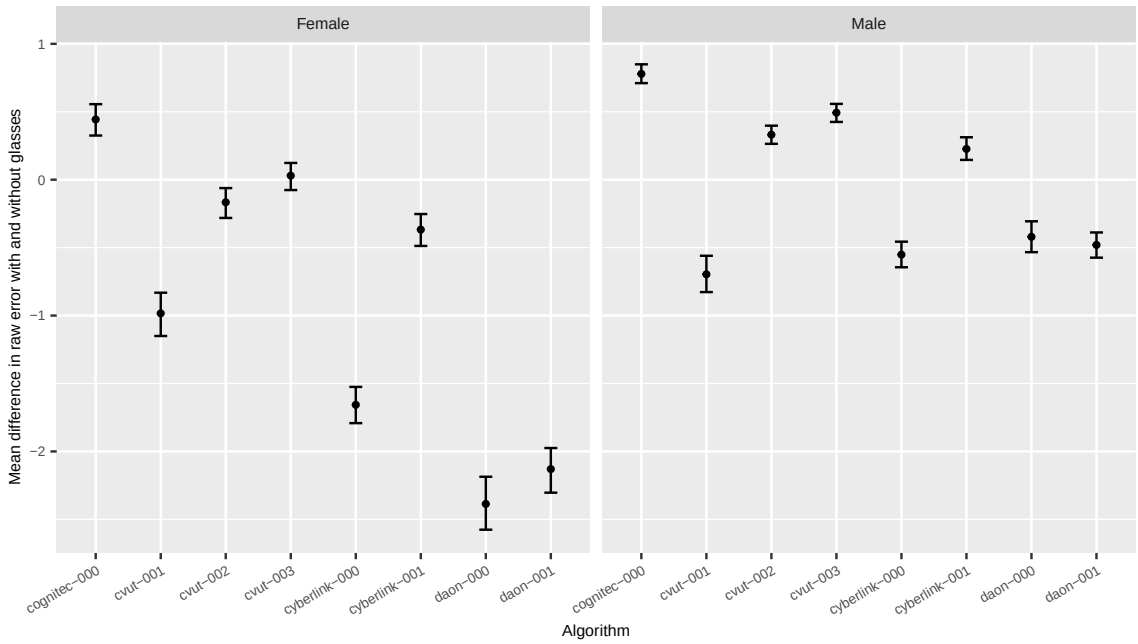

Fig. 100. *Difference in age estimation error for border crossing subjects with and without eyeglasses.*

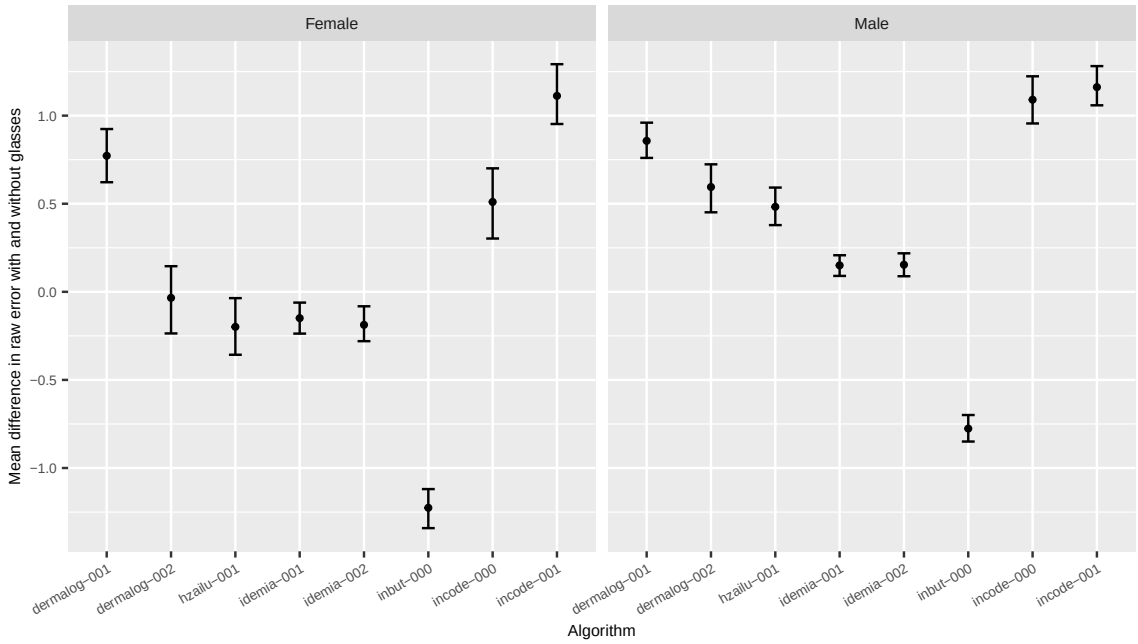

Fig. 101. *Difference in age estimation error for border crossing subjects with and without eyeglasses.*

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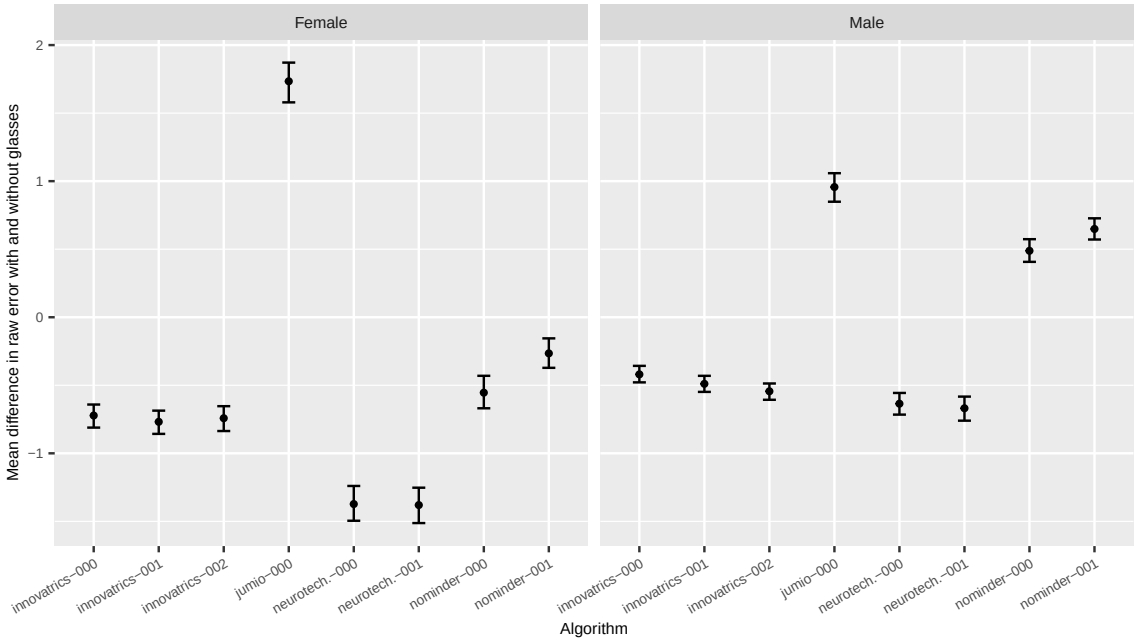

Fig. 102. *Difference in age estimation error for border crossing subjects with and without eyeglasses.*

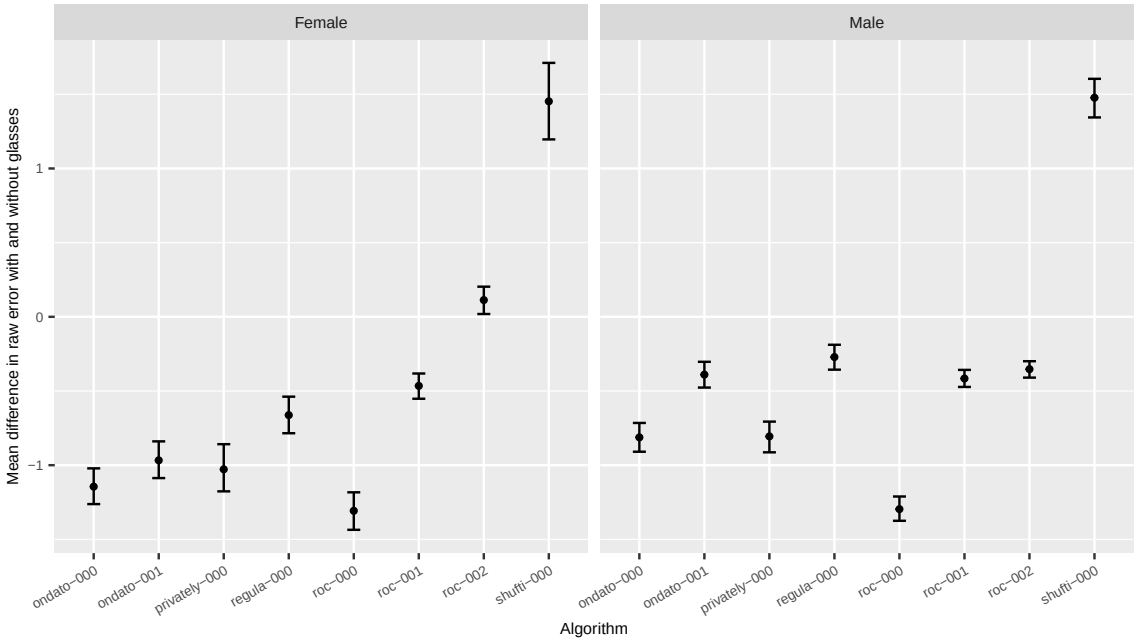

Fig. 103. *Difference in age estimation error for border crossing subjects with and without eyeglasses.*

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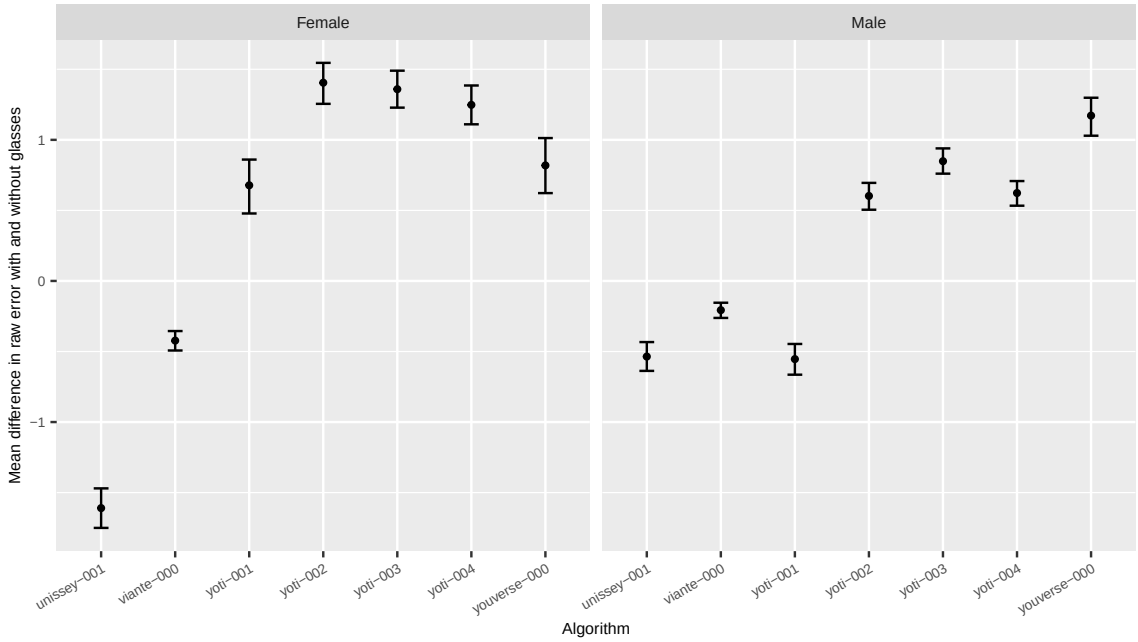

Fig. 104. *Difference in age estimation error for border crossing subjects with and without eyeglasses.*

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5.7. Age Estimation given a prior image of known age

The API includes two age estimation functions: The first returns a continuous-valued age estimate from a single image; the second returns an age estimate also but is additionallly provided with a prior image and a known age for that image.

Figure 106 shows MAE computed over a subset of the Application image dataset. This subset consists of 209,450 images of individuals aged between 15 and 50. Each query image is paired with a prior image of the same person and their known age, and then processed through both age estimation function calls. Accuracy gains are evident when the points fall below the $y = x$ line e.g. for algoritms from Dermalog, Innovatrics, Jumio, Neurotechnology and Yoti. Most other algorithms give identical age estimates - which would be consistent with ignoring the known-age photo.

While this analysis serves as an existence proof that some implementations can produce better accuracy given a prior photo and age, this result is academic because most operational use-cases proceed without storage or presentation of prior images and known ages. There are instances where it could be meaningful. For example, if Alice submits a photo for a passport at time T, then re-submits a photo at time T + 10 years for passport renewal, then an age estimation algoritm could be used to check the new photo has age around 10 years larger than the old one. This would be effective at preventing people from "recycling" old photos.

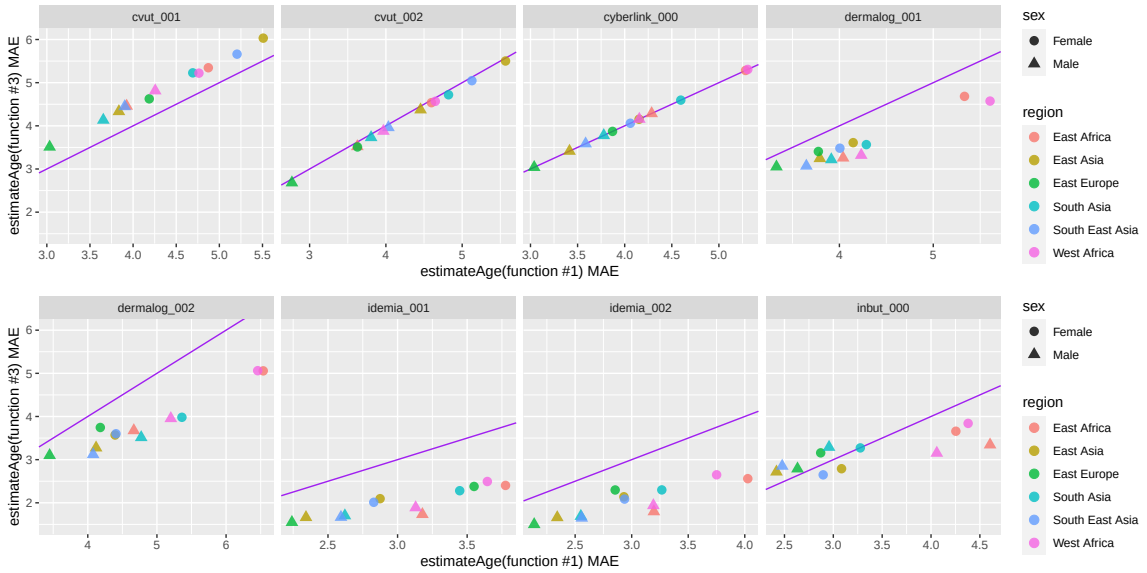

Fig. 105. *In this figure, some algorithms show an improved MAE when given a prior image of known age to the second age estimate function. The x-axis represents the MAE for the first age estimation function, which returns the age estimate of a single image. In contrast, the y-axis represents the MAE for the second age estimation function, which returns the age estimate of an image when both the prior image and the known age of the same individuali were provided.*

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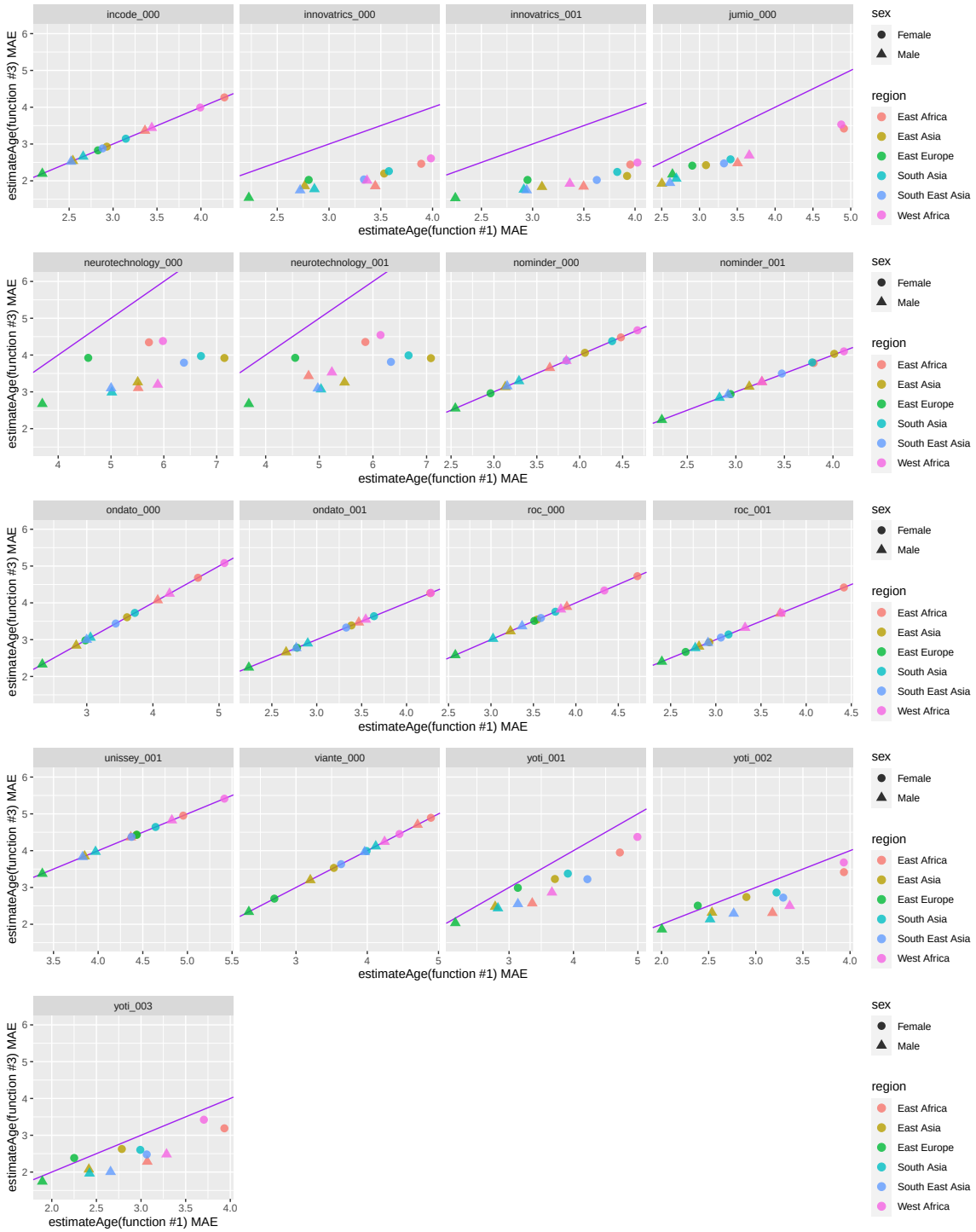

Fig. 106. *In this figure, some algorithms show an improved MAE when given a prior image of known age to the second age estimate function. The x-axis represents the MAE for the first age estimation function, which returns the age estimate of a single image. In contrast, the y-axis represents the MAE for the second age estimation function, which returns the age estimate of an image when both the prior image and the known age of the same individuali were provided.*

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Appendix A. Detailed Algorithm Results

Appendix A.1. Age Estimation Performance by Age

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Table 26. *For visa images AE error statistics by age, 0 to 90. Acc(3) is proportion of age estimates within 3 years (higher value is better), MAE is mean absolute error (MAE, lower is better), and the failure to process proportion (FTP, lower is better).*

		cognitec-000			**cvut-001**			**cvut-002**			**cvut-003**			**cyberlink-000**			**cyberlink-001**		
Age	Num. Images	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP
0	133387	0.99	0.87	0	1.00	0.58	0	1.00	0.53	0	1.00	0.41	0.001	0.41	5.54	0	0.66	3.45	0
1	94475	0.99	0.98	0	0.99	0.95	0	1.00	0.78	0	1.00	0.70	0.001	0.47	4.36	0	0.64	2.80	0
2	82596	0.98	1.11	0	0.95	1.18	0	0.98	1.13	0	0.99	1.04	0.001	0.44	4.78	0	0.43	3.68	0
3	82473	0.97	1.19	0	0.87	1.41	0	0.96	1.16	0	0.97	1.08	0.001	0.41	5.08	0	0.35	4.22	0
4	84055	0.97	1.16	0	0.88	1.62	0	0.93	1.32	0	0.96	1.17	0.001	0.39	5.25	0	0.30	4.51	0
5	92521	0.97	1.14	0	0.86	1.71	0	0.89	1.45	0	0.92	1.29	0.001	0.34	5.53	0	0.27	4.67	0
6	91639	0.96	1.18	0	0.79	1.78	0	0.80	1.71	0	0.87	1.46	0.001	0.30	5.96	0	0.25	4.85	0
7	89993	0.93	1.30	0	0.80	2.01	0	0.77	2.14	0	0.85	1.78	0.001	0.18	6.54	0	0.21	5.10	0
8	89428	0.92	1.34	0	0.67	2.26	0	0.65	2.38	0	0.81	1.94	0.001	0.13	6.46	0	0.21	5.03	0
9	89644	0.92	1.35	0	0.70	2.36	0	0.70	2.43	0	0.83	1.92	0.001	0.11	6.18	0	0.21	4.87	0
10	98337	0.90	1.40	0	0.71	2.38	0	0.72	2.43	0	0.84	1.91	0.001	0.13	5.80	0	0.20	4.70	0
11	97415	0.88	1.53	0	0.69	2.41	0	0.68	2.48	0	0.79	2.02	0.001	0.13	5.42	0	0.21	4.54	0
12	94326	0.84	1.74	0	0.72	2.53	0	0.55	2.60	0	0.72	2.24	0.001	0.10	5.11	0	0.23	4.41	0
13	94047	0.78	2.01	0	0.69	2.86	0	0.72	2.75	0	0.71	2.65	0.001	0.14	4.95	0	0.26	4.38	0
14	96915	0.73	2.23	0	0.56	3.34	0	0.67	2.85	0	0.65	3.11	0.001	0.23	4.84	0	0.27	4.34	0
15	97599	0.70	2.38	0	0.49	3.94	0	0.58	2.99	0	0.53	3.60	0.001	0.26	4.78	0	0.28	4.29	0
16	96388	0.67	2.47	0	0.40	4.36	0	0.50	3.27	0	0.41	4.11	0.001	0.28	4.63	0	0.32	4.13	0
17	99462	0.67	2.48	0	0.38	4.53	0	0.46	3.46	0	0.35	4.50	0.001	0.29	4.43	0	0.39	3.89	0
18	98765	0.68	2.48	0	0.39	4.61	0	0.45	3.59	0	0.31	4.88	0.001	0.33	4.30	0	0.44	3.72	0
19	105717	0.68	2.48	0	0.40	4.60	0	0.47	3.54	0	0.30	4.93	0.001	0.38	4.15	0	0.49	3.53	0
20	118643	0.68	2.49	0	0.40	4.52	0	0.49	3.43	0	0.30	4.80	0.001	0.46	3.98	0	0.53	3.37	0
21	124060	0.68	2.50	0	0.42	4.47	0	0.57	3.31	0	0.33	4.65	0.001	0.49	3.82	0	0.55	3.26	0
22	128864	0.67	2.55	0	0.45	4.43	0	0.58	3.25	0	0.36	4.51	0.001	0.47	3.69	0	0.56	3.18	0
23	133507	0.65	2.63	0	0.43	4.41	0	0.55	3.25	0	0.36	4.36	0.001	0.44	3.60	0	0.56	3.16	0
24	138094	0.64	2.73	0	0.42	4.38	0	0.54	3.29	0	0.38	4.18	0.001	0.45	3.55	0	0.56	3.13	0
25	139920	0.61	2.86	0	0.40	4.38	0	0.54	3.43	0	0.41	4.07	0.001	0.53	3.51	0	0.55	3.13	0
26	141741	0.58	2.96	0	0.41	4.40	0	0.54	3.52	0	0.45	3.93	0.001	0.57	3.40	0	0.55	3.12	0
27	138491	0.56	3.08	0	0.44	4.38	0	0.51	3.57	0	0.48	3.81	0.001	0.54	3.29	0	0.56	3.12	0
28	133633	0.54	3.16	0	0.46	4.32	0	0.48	3.63	0	0.50	3.76	0.001	0.52	3.29	0	0.56	3.13	0
29	129054	0.53	3.22	0	0.45	4.28	0	0.48	3.71	0	0.51	3.76	0.001	0.53	3.38	0	0.56	3.15	0
30	123437	0.53	3.25	0	0.41	4.25	0	0.46	3.78	0	0.49	3.80	0.001	0.54	3.48	0	0.56	3.19	0
31	118174	0.53	3.26	0	0.43	4.22	0	0.44	3.80	0	0.47	3.87	0.001	0.51	3.55	0	0.56	3.22	0
32	113131	0.53	3.26	0	0.48	4.20	0	0.45	3.81	0	0.47	3.95	0.001	0.49	3.61	0	0.55	3.31	0
33	109146	0.54	3.23	0	0.54	4.10	0	0.45	3.76	0	0.45	4.00	0.001	0.53	3.67	0	0.53	3.38	0
34	105908	0.55	3.21	0	0.51	3.97	0	0.48	3.69	0	0.43	4.05	0.001	0.55	3.78	0	0.51	3.48	0
35	103149	0.56	3.13	0	0.49	3.84	0	0.48	3.60	0	0.40	4.04	0.001	0.52	3.89	0	0.51	3.55	0
36	99901	0.56	3.10	0	0.55	3.90	0	0.52	3.53	0	0.40	4.01	0.001	0.47	4.08	0	0.50	3.63	0

Table 26. *For visa images AE error statistics by age, 0 to 90. Acc(3) is proportion of age estimates within 3 years (higher value is better), MAE is mean absolute error (MAE, lower is better), and the failure to process proportion (FTP, lower is better). (continued)*

		cognitec-000			**cvut-001**			**cvut-002**			**cvut-003**			**cyberlink-000**			**cyberlink-001**		
Age	Num. Images	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP
37	97516	0.58	3.05	0	0.57	4.01	0	0.53	3.45	0	0.41	3.92	0.001	0.43	4.33	0	0.49	3.67	0
38	93939	0.58	3.03	0	0.49	4.09	0	0.52	3.41	0	0.42	3.79	0.001	0.39	4.55	0	0.48	3.73	0
39	91461	0.59	2.98	0	0.44	4.10	0	0.54	3.34	0	0.46	3.60	0.001	0.33	4.71	0	0.47	3.80	0
40	94056	0.58	2.98	0	0.47	4.14	0	0.54	3.33	0	0.51	3.42	0.001	0.31	4.78	0	0.46	3.87	0
41	90173	0.59	2.96	0	0.49	4.27	0	0.55	3.29	0	0.55	3.24	0.001	0.33	4.77	0	0.45	3.92	0
42	86423	0.59	2.97	0	0.46	4.30	0	0.53	3.24	0	0.59	3.08	0.001	0.39	4.71	0	0.43	3.93	0
43	83252	0.59	2.98	0	0.43	4.37	0	0.54	3.24	0	0.59	2.98	0.001	0.43	4.66	0	0.43	3.93	0
44	80602	0.59	2.99	0	0.45	4.47	0	0.55	3.21	0	0.60	2.94	0.001	0.44	4.61	0	0.43	3.87	0
45	77502	0.58	3.01	0	0.42	4.44	0	0.55	3.19	0	0.60	2.96	0.001	0.43	4.56	0	0.45	3.79	0
46	74182	0.58	3.02	0	0.44	4.50	0	0.55	3.15	0	0.58	2.97	0.001	0.40	4.57	0	0.48	3.66	0
47	70698	0.57	3.02	0	0.50	4.47	0	0.58	3.10	0	0.57	2.97	0.001	0.37	4.57	0	0.51	3.51	0
48	67856	0.57	3.02	0	0.50	4.46	0	0.58	3.06	0	0.58	2.95	0.001	0.35	4.53	0	0.54	3.35	0
49	65674	0.58	3.04	0	0.50	4.47	0	0.59	3.06	0	0.60	2.97	0.001	0.36	4.43	0	0.56	3.24	0
50	64896	0.58	3.03	0	0.49	4.58	0	0.58	3.06	0	0.60	2.95	0.001	0.38	4.23	0	0.58	3.13	0
51	63410	0.58	3.04	0	0.49	4.84	0	0.57	3.14	0	0.58	2.99	0.001	0.42	4.01	0	0.60	3.08	0
52	60991	0.57	3.07	0	0.41	5.12	0	0.56	3.23	0	0.57	3.08	0.001	0.48	3.83	0	0.60	3.05	0
53	59550	0.57	3.08	0	0.31	5.42	0	0.52	3.34	0	0.56	3.20	0.001	0.55	3.71	0	0.60	3.04	0
54	56895	0.57	3.09	0	0.29	5.54	0	0.52	3.42	0	0.54	3.30	0.001	0.56	3.67	0	0.59	3.07	0
55	55297	0.56	3.14	0	0.27	5.87	0	0.50	3.49	0	0.51	3.36	0.001	0.53	3.69	0	0.58	3.15	0
56	52574	0.56	3.16	0	0.30	6.09	0	0.51	3.55	0	0.51	3.39	0.001	0.52	3.76	0	0.56	3.25	0
57	49823	0.55	3.22	0	0.28	6.31	0	0.49	3.64	0	0.51	3.44	0.001	0.47	3.91	0	0.52	3.46	0
58	48570	0.54	3.29	0	0.25	6.42	0	0.48	3.75	0	0.51	3.48	0.001	0.44	4.07	0	0.47	3.69	0
59	46040	0.52	3.37	0	0.27	6.70	0	0.47	3.88	0	0.50	3.55	0.001	0.39	4.22	0	0.44	3.94	0
60	46037	0.51	3.45	0	0.28	6.88	0	0.44	4.01	0	0.49	3.62	0.001	0.39	4.32	0	0.39	4.20	0
61	43860	0.49	3.56	0	0.26	7.14	0	0.41	4.14	0	0.48	3.65	0.001	0.44	4.37	0	0.36	4.44	0
62	41407	0.49	3.65	0	0.21	7.33	0	0.40	4.26	0	0.49	3.72	0.001	0.47	4.38	0	0.33	4.68	0
63	39444	0.47	3.73	0	0.19	7.48	0	0.40	4.37	0	0.47	3.78	0.001	0.50	4.38	0	0.33	4.87	0
64	37425	0.46	3.86	0	0.21	7.68	0	0.39	4.40	0	0.47	3.79	0.001	0.49	4.46	0	0.32	5.04	0
65	34834	0.45	3.96	0	0.20	7.75	0	0.40	4.47	0	0.46	3.87	0.001	0.47	4.70	0	0.31	5.21	0
66	32020	0.44	4.04	0	0.20	7.99	0	0.41	4.52	0	0.46	3.99	0.001	0.42	4.94	0	0.32	5.31	0
67	28898	0.42	4.16	0	0.22	8.03	0	0.42	4.63	0	0.45	4.13	0.001	0.32	5.24	0	0.32	5.44	0
68	26630	0.40	4.35	0	0.16	8.17	0	0.37	4.75	0	0.39	4.30	0.001	0.25	5.49	0	0.30	5.59	0
69	24864	0.39	4.43	0	0.21	8.14	0	0.37	4.88	0	0.37	4.45	0.001	0.23	5.54	0	0.31	5.64	0
70	23407	0.39	4.51	0	0.21	8.32	0	0.35	4.98	0	0.36	4.60	0.001	0.23	5.54	0	0.30	5.71	0
71	20736	0.38	4.68	0	0.22	8.12	0	0.30	5.16	0	0.34	4.80	0.001	0.25	5.43	0	0.30	5.77	0
72	18423	0.37	4.79	0	0.27	8.14	0	0.29	5.32	0	0.32	5.03	0.001	0.28	5.33	0	0.31	5.81	0
73	16215	0.36	4.93	0	0.29	7.99	0	0.28	5.44	0	0.30	5.18	0.001	0.31	5.14	0	0.31	5.85	0
74	14848	0.35	4.99	0	0.31	7.94	0	0.29	5.48	0	0.32	5.31	0.001	0.35	4.87	0	0.32	5.76	0

Table 26. *For visa images AE error statistics by age, 0 to 90. Acc(3) is proportion of age estimates within 3 years (higher value is better), MAE is mean absolute error (MAE, lower is better), and the failure to process proportion (FTP, lower is better). (continued)*

		cognitec-000			**cvut-001**			**cvut-002**			**cvut-003**			**cyberlink-000**			**cyberlink-001**		
Age	Num. Images	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP
75	13197	0.33	5.29	0	0.31	7.92	0	0.30	5.72	0	0.31	5.59	0.001	0.41	4.72	0	0.32	5.89	0
76	11886	0.32	5.43	0	0.28	8.00	0	0.32	5.75	0	0.32	5.78	0.001	0.46	4.45	0	0.31	5.95	0
77	10839	0.30	5.68	0	0.30	8.07	0	0.32	5.94	0	0.28	6.17	0.002	0.52	4.16	0	0.31	5.99	0
78	9361	0.29	5.87	0	0.25	8.38	0	0.30	6.00	0	0.25	6.46	0.001	0.54	4.06	0	0.31	6.05	0
79	7540	0.26	6.06	0	0.19	8.36	0	0.31	6.07	0	0.21	6.75	0.001	0.58	3.88	0	0.30	5.97	0
80	6267	0.26	6.28	0	0.20	8.25	0	0.29	6.24	0	0.18	7.20	0.001	0.55	4.02	0	0.28	6.08	0
81	5221	0.24	6.44	0	0.15	8.30	0	0.28	6.14	0	0.12	7.48	0.000	0.48	4.08	0	0.30	5.95	0
82	3962	0.22	6.79	0	0.27	8.45	0	0.31	6.25	0	0.10	7.91	0.001	0.44	4.42	0	0.29	6.11	0
83	3277	0.19	7.19	0	0.27	8.35	0	0.27	6.47	0	0.06	8.66	0.001	0.35	4.77	0	0.30	6.12	0
84	2615	0.18	7.45	0	0.27	8.32	0	0.29	6.39	0	0.04	8.99	0.000	0.28	5.17	0	0.30	6.23	0
85	2206	0.16	7.69	0	0.29	8.42	0	0.29	6.58	0	0.02	9.66	0.001	0.24	5.57	0	0.31	6.17	0
86	1831	0.14	8.15	0	0.28	8.82	0	0.31	6.66	0	0.01	10.42	0.002	0.21	6.08	0	0.31	6.36	0
87	1402	0.13	8.78	0	0.27	9.22	0	0.30	7.12	0	0.00	11.03	0.002	0.20	6.67	0	0.30	6.69	0
88	1254	0.09	9.24	0	0.10	10.37	0	0.23	7.31	0	0.00	11.74	0.000	0.14	7.18	0	0.27	6.99	0
89	907	0.09	9.26	0	0.11	10.05	0	0.23	7.31	0	0.00	12.33	0.000	0.15	7.46	0	0.33	6.61	0
90	670	0.06	10.30	0	0.09	10.44	0	0.21	8.29	0	0.00	13.42	0.001	0.15	8.24	0	0.27	7.54	0

Table 27. *For visa images AE error statistics by age, 0 to 90. Acc(3) is proportion of age estimates within 3 years (higher value is better), MAE is mean absolute error (MAE, lower is better), and the failure to process proportion (FTP, lower is better).*

		daon-000			**daon-001**			**dermalog-001**			**dermalog-002**			**hzailu-001**			**idemia-001**		
Age	Num. Images	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP
0	133387	0.26	4.70	0	0.43	3.49	0	0.90	2.05	0.001	0.60	3.00	0.001	0.83	1.85	0	0.94	1.00	0
1	94475	0.35	3.94	0	0.57	2.94	0	0.87	1.84	0.000	0.60	2.97	0.000	0.76	2.17	0	0.93	1.35	0
2	82596	0.38	3.75	0	0.59	2.78	0	0.84	1.89	0.000	0.58	2.97	0.000	0.64	2.68	0	0.93	1.49	0
3	82473	0.41	3.53	0	0.65	2.52	0	0.76	2.12	0.000	0.61	2.80	0.000	0.56	3.08	0	0.95	1.35	0
4	84055	0.48	3.19	0	0.74	2.17	0	0.69	2.37	0.000	0.66	2.62	0.000	0.52	3.30	0	0.97	1.09	0
5	92521	0.56	2.85	0	0.81	1.88	0	0.63	2.64	0.000	0.70	2.49	0.000	0.52	3.42	0	0.98	0.94	0
6	91639	0.59	2.68	0	0.86	1.72	0	0.57	2.98	0.000	0.70	2.59	0.000	0.49	3.74	0	0.98	0.94	0
7	89993	0.59	2.69	0	0.90	1.62	0	0.46	3.34	0.000	0.66	2.91	0.000	0.43	4.36	0	0.97	1.06	0
8	89428	0.68	2.46	0	0.93	1.41	0	0.50	3.27	0.000	0.67	2.94	0.000	0.43	4.56	0	0.96	1.22	0
9	89644	0.77	2.25	0	0.94	1.25	0	0.59	3.10	0.000	0.68	2.96	0.000	0.43	4.77	0	0.94	1.36	0
10	98337	0.81	2.11	0	0.94	1.21	0	0.68	2.84	0.000	0.67	3.00	0.000	0.43	5.04	0	0.91	1.50	0
11	97415	0.79	2.21	0	0.90	1.41	0	0.74	2.65	0.000	0.65	3.09	0.000	0.40	5.59	0	0.88	1.61	0
12	94326	0.71	2.66	0	0.83	1.86	0	0.74	2.60	0.000	0.61	3.28	0.000	0.33	6.44	0	0.84	1.72	0
13	94047	0.58	3.48	0	0.69	2.65	0	0.68	2.87	0.000	0.53	3.66	0.000	0.24	7.61	0	0.81	1.87	0

Table 27. *For visa images AE error statistics by age, 0 to 90. Acc(3) is proportion of age estimates within 3 years (higher value is better), MAE is mean absolute error (MAE, lower is better), and the failure to process proportion (FTP, lower is better). (continued)*

		daon-000			**daon-001**			**dermalog-001**			**dermalog-002**			**hzailu-001**			**idemia-001**		
Age	Num. Images	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP
14	96915	0.44	4.35	0	0.53	3.50	0	0.59	3.43	0.000	0.45	4.10	0.000	0.16	8.66	0	0.77	2.06	0
15	97599	0.33	5.01	0	0.40	4.20	0	0.48	4.06	0.000	0.39	4.45	0.000	0.10	9.38	0	0.72	2.28	0
16	96388	0.28	5.27	0	0.33	4.58	0	0.41	4.50	0.000	0.36	4.60	0.000	0.07	9.59	0	0.69	2.46	0
17	99462	0.27	5.26	0	0.31	4.69	0	0.37	4.69	0.000	0.36	4.58	0.000	0.05	9.45	0	0.67	2.52	0
18	98765	0.28	5.16	0	0.30	4.70	0	0.33	4.89	0.000	0.36	4.62	0.000	0.05	9.12	0	0.63	2.73	0
19	105717	0.29	5.07	0	0.30	4.67	0	0.32	4.92	0.000	0.37	4.57	0.000	0.06	8.72	0	0.61	2.81	0
20	118643	0.31	4.90	0	0.31	4.55	0	0.34	4.81	0.000	0.39	4.49	0.000	0.06	8.34	0	0.62	2.77	0
21	124060	0.33	4.71	0	0.34	4.39	0	0.36	4.71	0.000	0.41	4.40	0.000	0.08	7.89	0	0.62	2.78	0
22	128864	0.36	4.53	0	0.37	4.22	0	0.37	4.59	0.000	0.43	4.36	0.000	0.10	7.47	0	0.61	2.80	0
23	133507	0.39	4.41	0	0.39	4.08	0	0.39	4.51	0.000	0.44	4.33	0.000	0.13	7.07	0	0.61	2.82	0
24	138094	0.41	4.26	0	0.42	3.93	0	0.41	4.42	0.000	0.44	4.31	0.000	0.17	6.66	0	0.60	2.85	0
25	139920	0.43	4.22	0	0.44	3.85	0	0.40	4.36	0.000	0.43	4.36	0.000	0.21	6.36	0	0.59	2.91	0
26	141741	0.44	4.15	0	0.46	3.76	0	0.42	4.30	0.000	0.43	4.38	0.000	0.26	6.08	0	0.59	2.93	0
27	138491	0.45	4.14	0	0.48	3.71	0	0.41	4.27	0.000	0.42	4.44	0.000	0.30	5.83	0	0.58	2.97	0
28	133633	0.45	4.15	0	0.49	3.69	0	0.43	4.27	0.000	0.41	4.51	0.000	0.34	5.66	0	0.57	3.02	0
29	129054	0.44	4.21	0	0.49	3.71	0	0.42	4.26	0.000	0.41	4.56	0.000	0.37	5.53	0	0.57	3.05	0
30	123437	0.43	4.24	0	0.48	3.74	0	0.44	4.25	0.000	0.40	4.60	0.000	0.38	5.47	0	0.56	3.10	0
31	118174	0.43	4.28	0	0.48	3.77	0	0.45	4.28	0.000	0.39	4.66	0.000	0.40	5.41	0	0.56	3.12	0
32	113131	0.42	4.32	0	0.48	3.81	0	0.46	4.32	0.000	0.39	4.73	0.000	0.39	5.47	0	0.56	3.14	0
33	109146	0.42	4.37	0	0.47	3.86	0	0.46	4.38	0.000	0.39	4.73	0.000	0.37	5.48	0	0.55	3.15	0
34	105908	0.41	4.42	0	0.46	3.92	0	0.44	4.45	0.000	0.39	4.79	0.000	0.35	5.57	0	0.55	3.20	0
35	103149	0.41	4.44	0	0.45	3.95	0	0.44	4.54	0.000	0.39	4.79	0.000	0.32	5.63	0	0.55	3.19	0
36	99901	0.40	4.48	0	0.44	4.01	0	0.41	4.65	0.000	0.38	4.86	0.000	0.30	5.73	0	0.54	3.22	0
37	97516	0.40	4.51	0	0.44	4.03	0	0.39	4.73	0.000	0.38	4.88	0.000	0.29	5.72	0	0.54	3.21	0
38	93939	0.40	4.49	0	0.43	4.03	0	0.35	4.78	0.000	0.37	4.89	0.000	0.28	5.75	0	0.55	3.21	0
39	91461	0.40	4.47	0	0.43	4.04	0	0.36	4.80	0.000	0.37	4.89	0.000	0.29	5.71	0	0.55	3.20	0
40	94056	0.40	4.49	0	0.43	4.08	0	0.33	4.89	0.000	0.37	4.92	0.000	0.29	5.71	0	0.54	3.22	0
41	90173	0.40	4.45	0	0.43	4.05	0	0.34	4.81	0.000	0.36	4.90	0.000	0.30	5.66	0	0.54	3.22	0
42	86423	0.41	4.43	0	0.43	4.03	0	0.35	4.71	0.000	0.37	4.87	0.000	0.31	5.56	0	0.54	3.21	0
43	83252	0.41	4.40	0	0.44	4.01	0	0.36	4.63	0.000	0.37	4.86	0.000	0.32	5.53	0	0.55	3.21	0
44	80602	0.42	4.34	0	0.44	3.97	0	0.39	4.51	0.000	0.37	4.83	0.000	0.33	5.48	0	0.55	3.20	0
45	77502	0.43	4.32	0	0.45	3.94	0	0.40	4.41	0.000	0.38	4.79	0.000	0.34	5.39	0	0.54	3.19	0
46	74182	0.43	4.26	0	0.45	3.91	0	0.42	4.29	0.000	0.38	4.74	0.000	0.34	5.35	0	0.54	3.19	0
47	70698	0.43	4.23	0	0.45	3.85	0	0.44	4.18	0.000	0.39	4.68	0.000	0.35	5.28	0	0.55	3.19	0
48	67856	0.45	4.17	0	0.46	3.79	0	0.43	4.13	0.000	0.39	4.63	0.000	0.36	5.22	0	0.55	3.17	0
49	65674	0.45	4.13	0	0.47	3.74	0	0.45	4.08	0.000	0.40	4.59	0.000	0.36	5.21	0	0.55	3.16	0
50	64896	0.45	4.09	0	0.48	3.68	0	0.45	4.02	0.000	0.41	4.52	0.000	0.37	5.15	0	0.55	3.16	0
51	63410	0.46	4.08	0	0.49	3.63	0	0.46	3.99	0.000	0.42	4.46	0.000	0.38	5.09	0	0.56	3.14	0

Table 27. *For visa images AE error statistics by age, 0 to 90. Acc(3) is proportion of age estimates within 3 years (higher value is better), MAE is mean absolute error (MAE, lower is better), and the failure to process proportion (FTP, lower is better). (continued)*

		daon-000			**daon-001**			**dermalog-001**			**dermalog-002**			**hzailu-001**			**idemia-001**		
Age	Num. Images	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP
52	60991	0.45	4.07	0	0.50	3.58	0	0.46	3.94	0.000	0.43	4.46	0.000	0.38	5.08	0	0.56	3.15	0
53	59550	0.45	4.05	0	0.51	3.53	0	0.46	3.90	0.000	0.43	4.42	0.000	0.38	5.06	0	0.56	3.12	0
54	56895	0.45	4.05	0	0.52	3.48	0	0.47	3.89	0.000	0.43	4.43	0.000	0.38	5.06	0	0.57	3.14	0
55	55297	0.44	4.06	0	0.52	3.45	0	0.46	3.87	0.000	0.43	4.41	0.000	0.38	5.03	0	0.56	3.16	0
56	52574	0.44	4.04	0	0.53	3.42	0	0.48	3.83	0.000	0.43	4.43	0.000	0.39	5.01	0	0.56	3.18	0
57	49823	0.44	4.07	0	0.54	3.43	0	0.48	3.84	0.000	0.43	4.48	0.000	0.38	5.10	0	0.56	3.24	0
58	48570	0.45	4.02	0	0.52	3.42	0	0.49	3.84	0.000	0.43	4.49	0.000	0.38	5.11	0	0.55	3.28	0
59	46040	0.45	4.06	0	0.51	3.47	0	0.49	3.85	0.000	0.42	4.61	0.000	0.38	5.11	0	0.54	3.37	0
60	46037	0.45	4.07	0	0.51	3.51	0	0.47	3.90	0.000	0.41	4.68	0.000	0.37	5.21	0	0.53	3.45	0
61	43860	0.46	4.06	0	0.50	3.54	0	0.47	3.95	0.000	0.40	4.77	0.000	0.37	5.23	0	0.51	3.56	0
62	41407	0.45	4.10	0	0.50	3.54	0	0.47	4.03	0.000	0.40	4.87	0.000	0.35	5.33	0	0.50	3.61	0
63	39444	0.45	4.16	0	0.50	3.53	0	0.45	4.12	0.000	0.38	4.98	0.000	0.35	5.37	0	0.49	3.68	0
64	37425	0.44	4.21	0	0.50	3.54	0	0.43	4.17	0.000	0.36	5.11	0.000	0.35	5.38	0	0.48	3.74	0
65	34834	0.43	4.27	0	0.51	3.54	0	0.42	4.27	0.000	0.35	5.17	0.000	0.34	5.46	0	0.47	3.79	0
66	32020	0.43	4.31	0	0.51	3.52	0	0.41	4.31	0.000	0.33	5.25	0.000	0.34	5.45	0	0.47	3.83	0
67	28898	0.41	4.44	0	0.50	3.58	0	0.40	4.36	0.000	0.31	5.29	0.000	0.33	5.50	0	0.46	3.89	0
68	26630	0.40	4.59	0	0.49	3.64	0	0.37	4.44	0.000	0.30	5.33	0.000	0.32	5.54	0	0.46	3.92	0
69	24864	0.39	4.65	0	0.49	3.66	0	0.38	4.43	0.000	0.30	5.32	0.000	0.32	5.55	0	0.45	3.91	0
70	23407	0.39	4.71	0	0.49	3.67	0	0.39	4.32	0.000	0.31	5.17	0.000	0.32	5.54	0	0.46	3.88	0
71	20736	0.38	4.81	0	0.48	3.71	0	0.39	4.29	0.000	0.33	5.09	0.000	0.33	5.51	0	0.46	3.87	0
72	18423	0.37	4.95	0	0.47	3.82	0	0.43	4.22	0.000	0.36	4.94	0.000	0.33	5.52	0	0.46	3.86	0
73	16215	0.36	5.02	0	0.47	3.81	0	0.47	4.11	0.000	0.40	4.78	0.000	0.33	5.55	0	0.47	3.78	0
74	14848	0.37	5.02	0	0.48	3.82	0	0.51	3.93	0.000	0.45	4.58	0.000	0.34	5.47	0	0.47	3.72	0
75	13197	0.35	5.26	0	0.46	4.00	0	0.52	3.93	0.000	0.49	4.55	0.000	0.33	5.60	0	0.48	3.69	0
76	11886	0.35	5.35	0	0.45	4.03	0	0.56	3.86	0.000	0.53	4.39	0.000	0.34	5.52	0	0.49	3.60	0
77	10839	0.35	5.47	0	0.44	4.10	0	0.54	4.10	0.000	0.53	4.49	0.000	0.34	5.67	0	0.50	3.52	0
78	9361	0.33	5.73	0	0.44	4.24	0	0.50	4.27	0.000	0.51	4.64	0.000	0.34	5.73	0	0.52	3.46	0
79	7540	0.32	5.86	0	0.43	4.30	0	0.42	4.57	0.000	0.46	4.83	0.000	0.34	5.81	0	0.54	3.35	0
80	6267	0.30	6.10	0	0.42	4.47	0	0.35	4.98	0.000	0.40	5.27	0.000	0.33	6.04	0	0.55	3.31	0
81	5221	0.29	6.29	0	0.41	4.54	0	0.28	5.34	0.000	0.33	5.62	0.000	0.32	6.09	0	0.58	3.22	0
82	3962	0.26	6.68	0	0.39	4.79	0	0.18	5.95	0.000	0.22	6.12	0.000	0.32	6.23	0	0.57	3.29	0
83	3277	0.21	7.12	0	0.35	5.03	0	0.12	6.50	0.000	0.13	6.67	0.000	0.31	6.44	0	0.57	3.28	0
84	2615	0.18	7.58	0	0.32	5.34	0	0.06	7.19	0.000	0.07	7.40	0.000	0.27	6.87	0	0.56	3.44	0
85	2206	0.15	7.97	0	0.29	5.53	0	0.03	7.81	0.000	0.04	7.97	0.000	0.28	7.11	0	0.52	3.60	0
86	1831	0.09	8.75	0	0.27	5.95	0	0.01	8.42	0.000	0.02	8.67	0.000	0.24	7.44	0	0.48	3.95	0
87	1402	0.07	9.20	0	0.23	6.41	0	0.00	9.20	0.001	0.01	9.35	0.001	0.21	8.07	0	0.39	4.41	0
88	1254	0.03	10.01	0	0.17	6.92	0	0.00	10.04	0.000	0.00	10.32	0.000	0.17	8.59	0	0.30	5.05	0
89	907	0.02	10.51	0	0.14	7.20	0	0.00	10.57	0.000	0.00	10.72	0.000	0.14	8.79	0	0.23	5.29	0

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Table 27. *For visa images AE error statistics by age, 0 to 90. Acc(3) is proportion of age estimates within 3 years (higher value is better), MAE is mean absolute error (MAE, lower is better), and the failure to process proportion (FTP, lower is better). (continued)*

		daon-000			**daon-001**			**dermalog-001**			**dermalog-002**			**hzailu-001**			**idemia-001**		
Age	Num. Images	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP
90	670	0.01	11.31	0	0.10	7.94	0	0.00	11.48	0.000	0.00	11.81	0.000	0.09	9.81	0	0.14	6.34	0

Table 28. *For visa images AE error statistics by age, 0 to 90. Acc(3) is proportion of age estimates within 3 years (higher value is better), MAE is mean absolute error (MAE, lower is better), and the failure to process proportion (FTP, lower is better).*

		idemia-002			**inbut-000**			**incode-000**			**incode-001**			**innovatrics-000**			**innovatrics-001**		
Age	Num. Images	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP
0	133387	0.93	1.27	0	1.00	0.38	0	1.00	0.34	0	0.99	0.32	0.001	1.00	0.74	0	1.00	0.36	0
1	94475	0.89	1.59	0	0.99	0.85	0	1.00	0.63	0	0.99	0.57	0.000	0.99	0.79	0	1.00	0.61	0
2	82596	0.85	1.83	0	0.96	1.41	0	0.99	0.92	0	0.99	0.77	0.000	0.97	1.31	0	0.98	1.12	0
3	82473	0.87	1.78	0	0.95	1.55	0	0.98	1.10	0	0.99	0.75	0.000	0.96	1.48	0	0.97	1.34	0
4	84055	0.90	1.56	0	0.94	1.45	0	0.96	1.24	0	0.98	0.83	0.000	0.95	1.41	0	0.96	1.29	0
5	92521	0.93	1.34	0	0.93	1.35	0	0.93	1.34	0	0.97	1.07	0.000	0.94	1.32	0	0.94	1.24	0
6	91639	0.93	1.23	0	0.90	1.41	0	0.91	1.36	0	0.94	1.27	0.000	0.91	1.36	0	0.90	1.35	0
7	89993	0.93	1.22	0	0.84	1.71	0	0.93	1.27	0	0.92	1.38	0.000	0.85	1.62	0	0.85	1.64	0
8	89428	0.93	1.30	0	0.77	2.13	0	0.91	1.42	0	0.85	1.77	0.000	0.80	1.86	0	0.80	1.91	0
9	89644	0.94	1.34	0	0.70	2.68	0	0.89	1.56	0	0.77	2.29	0.000	0.77	2.03	0	0.77	2.09	0
10	98337	0.93	1.33	0	0.63	3.54	0	0.88	1.71	0	0.67	2.84	0.000	0.74	2.19	0	0.72	2.26	0
11	97415	0.92	1.36	0	0.52	4.94	0	0.83	1.87	0	0.55	3.36	0.000	0.68	2.45	0	0.64	2.55	0
12	94326	0.89	1.46	0	0.35	6.83	0	0.76	2.03	0	0.43	3.73	0.000	0.59	2.79	0	0.55	2.93	0
13	94047	0.84	1.71	0	0.20	8.89	0	0.68	2.31	0	0.30	3.90	0.000	0.51	3.16	0	0.46	3.32	0
14	96915	0.78	2.07	0	0.12	10.41	0	0.64	2.58	0	0.20	3.81	0.000	0.46	3.42	0	0.43	3.56	0
15	97599	0.70	2.47	0	0.08	11.34	0	0.68	2.71	0	0.40	3.52	0.000	0.45	3.54	0	0.42	3.65	0
16	96388	0.64	2.80	0	0.07	11.74	0	0.73	2.73	0	0.71	3.18	0.000	0.46	3.55	0	0.45	3.59	0
17	99462	0.61	2.98	0	0.06	11.74	0	0.70	2.69	0	0.72	2.87	0.000	0.47	3.48	0	0.48	3.44	0
18	98765	0.56	3.32	0	0.06	11.47	0	0.62	2.98	0	0.64	2.98	0.000	0.46	3.48	0	0.47	3.38	0
19	105717	0.53	3.48	0	0.05	11.24	0	0.56	3.28	0	0.58	3.25	0.000	0.48	3.42	0	0.50	3.26	0
20	118643	0.53	3.47	0	0.05	10.99	0	0.53	3.50	0	0.55	3.52	0.000	0.50	3.32	0	0.54	3.11	0
21	124060	0.52	3.52	0	0.05	10.62	0	0.49	3.63	0	0.52	3.79	0.000	0.53	3.23	0	0.57	2.99	0
22	128864	0.51	3.57	0	0.05	10.26	0	0.46	3.65	0	0.46	3.94	0.000	0.54	3.16	0	0.59	2.91	0
23	133507	0.50	3.60	0	0.06	9.91	0	0.47	3.59	0	0.43	4.01	0.000	0.55	3.12	0	0.60	2.86	0
24	138094	0.49	3.62	0	0.06	9.57	0	0.49	3.50	0	0.43	4.01	0.000	0.56	3.09	0	0.60	2.83	0
25	139920	0.48	3.65	0	0.07	9.30	0	0.51	3.44	0	0.43	3.99	0.000	0.56	3.10	0	0.60	2.86	0
26	141741	0.48	3.64	0	0.08	9.02	0	0.53	3.36	0	0.44	3.95	0.000	0.56	3.09	0	0.60	2.87	0
27	138491	0.49	3.64	0	0.09	8.75	0	0.54	3.36	0	0.44	3.91	0.000	0.56	3.10	0	0.60	2.90	0
28	133633	0.48	3.66	0	0.10	8.56	0	0.54	3.39	0	0.45	3.90	0.000	0.55	3.12	0	0.59	2.92	0

Table 28. *For visa images AE error statistics by age, 0 to 90. Acc(3) is proportion of age estimates within 3 years (higher value is better), MAE is mean absolute error (MAE, lower is better), and the failure to process proportion (FTP, lower is better). (continued)*

		idemia-002			**inbut-000**			**incode-000**			**incode-001**			**innovatrics-000**			**innovatrics-001**		
Age	Num. Images	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP
29	129054	0.49	3.67	0	0.12	8.39	0	0.53	3.44	0	0.45	3.90	0.000	0.55	3.14	0	0.58	2.96	0
30	123437	0.48	3.69	0	0.13	8.24	0	0.52	3.52	0	0.45	3.92	0.000	0.54	3.16	0	0.57	3.01	0
31	118174	0.48	3.70	0	0.14	8.07	0	0.51	3.63	0	0.44	3.97	0.000	0.54	3.14	0	0.56	3.02	0
32	113131	0.48	3.72	0	0.15	7.91	0	0.49	3.74	0	0.44	4.01	0.000	0.54	3.11	0	0.56	3.03	0
33	109146	0.48	3.70	0	0.17	7.80	0	0.46	3.84	0	0.42	4.08	0.000	0.55	3.07	0	0.57	3.00	0
34	105908	0.47	3.75	0	0.18	7.65	0	0.44	3.95	0	0.41	4.16	0.000	0.57	3.03	0	0.58	2.96	0
35	103149	0.47	3.74	0	0.19	7.46	0	0.42	4.00	0	0.40	4.22	0.000	0.58	2.96	0	0.60	2.89	0
36	99901	0.47	3.75	0	0.21	7.31	0	0.41	4.02	0	0.39	4.26	0.000	0.59	2.91	0	0.61	2.86	0
37	97516	0.47	3.72	0	0.22	7.13	0	0.41	3.99	0	0.38	4.31	0.000	0.60	2.86	0	0.61	2.83	0
38	93939	0.48	3.71	0	0.24	6.91	0	0.42	3.92	0	0.39	4.31	0.000	0.60	2.85	0	0.60	2.86	0
39	91461	0.48	3.69	0	0.25	6.74	0	0.45	3.80	0	0.39	4.30	0.000	0.61	2.81	0	0.60	2.88	0
40	94056	0.49	3.65	0	0.25	6.76	0	0.47	3.72	0	0.38	4.32	0.000	0.61	2.81	0	0.60	2.90	0
41	90173	0.48	3.65	0	0.26	6.51	0	0.49	3.62	0	0.39	4.29	0.000	0.61	2.80	0	0.59	2.92	0
42	86423	0.48	3.63	0	0.26	6.31	0	0.51	3.56	0	0.39	4.28	0.000	0.62	2.77	0	0.59	2.95	0
43	83252	0.49	3.62	0	0.27	6.15	0	0.52	3.52	0	0.40	4.25	0.000	0.62	2.77	0	0.58	3.01	0
44	80602	0.49	3.58	0	0.27	5.94	0	0.51	3.52	0	0.40	4.23	0.000	0.62	2.77	0	0.58	3.09	0
45	77502	0.49	3.57	0	0.28	5.73	0	0.51	3.54	0	0.41	4.22	0.000	0.62	2.79	0	0.56	3.18	0
46	74182	0.49	3.56	0	0.29	5.52	0	0.50	3.59	0	0.41	4.23	0.000	0.61	2.81	0	0.54	3.28	0
47	70698	0.49	3.55	0	0.30	5.35	0	0.50	3.65	0	0.41	4.24	0.000	0.61	2.83	0	0.53	3.37	0
48	67856	0.50	3.52	0	0.32	5.16	0	0.50	3.72	0	0.42	4.28	0.000	0.61	2.84	0	0.51	3.44	0
49	65674	0.50	3.51	0	0.34	4.98	0	0.51	3.79	0	0.42	4.29	0.000	0.60	2.86	0	0.50	3.52	0
50	64896	0.50	3.49	0	0.35	4.80	0	0.51	3.89	0	0.41	4.32	0.000	0.60	2.85	0	0.49	3.57	0
51	63410	0.51	3.47	0	0.37	4.66	0	0.50	4.03	0	0.40	4.36	0.000	0.60	2.87	0	0.48	3.64	0
52	60991	0.51	3.46	0	0.38	4.51	0	0.48	4.16	0	0.39	4.37	0.000	0.60	2.88	0	0.48	3.67	0
53	59550	0.52	3.42	0	0.39	4.40	0	0.44	4.28	0	0.37	4.34	0.000	0.60	2.87	0	0.48	3.65	0
54	56895	0.52	3.43	0	0.40	4.29	0	0.38	4.36	0	0.35	4.27	0.000	0.60	2.87	0	0.48	3.62	0
55	55297	0.53	3.41	0	0.41	4.17	0	0.32	4.38	0	0.35	4.15	0.000	0.60	2.91	0	0.49	3.57	0
56	52574	0.53	3.42	0	0.42	4.08	0	0.28	4.30	0	0.37	4.01	0.000	0.60	2.91	0	0.51	3.46	0
57	49823	0.53	3.45	0	0.44	3.97	0	0.31	4.10	0	0.43	3.80	0.000	0.58	2.97	0	0.52	3.41	0
58	48570	0.53	3.47	0	0.45	3.85	0	0.41	3.78	0	0.48	3.57	0.000	0.57	3.03	0	0.54	3.29	0
59	46040	0.52	3.53	0	0.47	3.80	0	0.51	3.39	0	0.52	3.39	0.000	0.56	3.11	0	0.55	3.23	0
60	46037	0.51	3.58	0	0.48	3.70	0	0.58	2.99	0	0.55	3.23	0.000	0.55	3.18	0	0.57	3.13	0
61	43860	0.50	3.67	0	0.49	3.65	0	0.64	2.70	0	0.57	3.15	0.000	0.53	3.28	0	0.58	3.09	0
62	41407	0.49	3.70	0	0.50	3.56	0	0.70	2.52	0	0.58	3.06	0.000	0.52	3.36	0	0.58	3.06	0
63	39444	0.48	3.77	0	0.52	3.50	0	0.71	2.47	0	0.59	3.05	0.000	0.50	3.47	0	0.57	3.10	0
64	37425	0.47	3.81	0	0.52	3.50	0	0.70	2.50	0	0.58	3.06	0.000	0.49	3.58	0	0.56	3.13	0
65	34834	0.47	3.85	0	0.52	3.48	0	0.66	2.57	0	0.58	3.05	0.000	0.47	3.69	0	0.55	3.21	0
66	32020	0.46	3.88	0	0.52	3.50	0	0.63	2.68	0	0.58	3.04	0.000	0.46	3.79	0	0.53	3.33	0

Table 28. *For visa images AE error statistics by age, 0 to 90. Acc(3) is proportion of age estimates within 3 years (higher value is better), MAE is mean absolute error (MAE, lower is better), and the failure to process proportion (FTP, lower is better). (continued)*

		idemia-002			**inbut-000**			**incode-000**			**incode-001**			**innovatrics-000**			**innovatrics-001**		
Age	Num. Images	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP
67	28898	0.46	3.94	0	0.50	3.55	0	0.59	2.84	0	0.57	3.08	0.000	0.44	3.95	0	0.51	3.46	0
68	26630	0.45	3.96	0	0.49	3.61	0	0.56	3.03	0	0.57	3.07	0.000	0.41	4.15	0	0.47	3.68	0
69	24864	0.45	3.94	0	0.49	3.63	0	0.53	3.17	0	0.57	3.08	0.000	0.40	4.28	0	0.45	3.84	0
70	23407	0.46	3.91	0	0.48	3.68	0	0.52	3.29	0	0.56	3.09	0.000	0.38	4.45	0	0.44	3.99	0
71	20736	0.45	3.89	0	0.48	3.74	0	0.49	3.45	0	0.56	3.11	0.000	0.36	4.63	0	0.42	4.16	0
72	18423	0.46	3.87	0	0.47	3.76	0	0.48	3.63	0	0.55	3.15	0.000	0.33	4.89	0	0.39	4.43	0
73	16215	0.47	3.78	0	0.46	3.85	0	0.46	3.78	0	0.55	3.14	0.000	0.30	5.14	0	0.37	4.64	0
74	14848	0.47	3.72	0	0.47	3.82	0	0.45	3.91	0	0.56	3.13	0.000	0.27	5.38	0	0.35	4.80	0
75	13197	0.48	3.65	0	0.46	3.97	0	0.43	4.15	0	0.55	3.18	0.000	0.23	5.82	0	0.32	5.14	0
76	11886	0.49	3.59	0	0.46	3.95	0	0.41	4.33	0	0.55	3.18	0.000	0.19	6.13	0	0.31	5.27	0
77	10839	0.50	3.49	0	0.46	3.99	0	0.37	4.61	0	0.55	3.19	0.000	0.14	6.60	0	0.28	5.55	0
78	9361	0.52	3.41	0	0.46	4.11	0	0.35	4.86	0	0.56	3.25	0.000	0.10	7.03	0	0.27	5.83	0
79	7540	0.55	3.26	0	0.46	4.21	0	0.32	5.05	0	0.54	3.28	0.000	0.07	7.46	0	0.24	6.09	0
80	6267	0.56	3.23	0	0.45	4.38	0	0.30	5.33	0	0.53	3.38	0.000	0.04	7.94	0	0.22	6.34	0
81	5221	0.58	3.12	0	0.45	4.41	0	0.26	5.63	0	0.52	3.41	0.000	0.02	8.42	0	0.20	6.57	0
82	3962	0.58	3.16	0	0.42	4.63	0	0.23	5.98	0	0.51	3.58	0.000	0.00	8.93	0	0.17	6.93	0
83	3277	0.59	3.11	0	0.36	5.12	0	0.20	6.48	0	0.48	3.78	0.000	0.00	9.54	0	0.14	7.37	0
84	2615	0.58	3.26	0	0.31	5.50	0	0.18	6.80	0	0.47	3.88	0.000	0.00	10.17	0	0.13	7.68	0
85	2206	0.55	3.39	0	0.25	5.84	0	0.17	7.17	0	0.44	4.04	0.000	0.00	10.69	0	0.11	8.01	0
86	1831	0.51	3.74	0	0.18	6.41	0	0.14	7.56	0	0.42	4.30	0.000	0.00	11.35	0	0.07	8.65	0
87	1402	0.43	4.18	0	0.13	6.87	0	0.11	8.16	0	0.39	4.52	0.000	0.00	12.13	0	0.06	9.07	0
88	1254	0.33	4.83	0	0.08	7.64	0	0.09	8.59	0	0.39	4.76	0.000	0.00	12.87	0	0.05	9.71	0
89	907	0.25	5.08	0	0.06	7.81	0	0.06	8.85	0	0.36	4.75	0.000	0.00	13.33	0	0.03	9.92	0
90	670	0.16	6.12	0	0.03	8.80	0	0.02	9.77	0	0.31	5.58	0.000	0.00	14.39	0	0.02	10.93	0

Table 29. *For visa images AE error statistics by age, 0 to 90. Acc(3) is proportion of age estimates within 3 years (higher value is better), MAE is mean absolute error (MAE, lower is better), and the failure to process proportion (FTP, lower is better).*

		innovatrics-002			**jumio-000**			**neuro-000**			**neuro-001**			**nominder-000**			**nominder-001**		
Age	Num. Images	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP
0	133387	1.00	0.41	0	0.00	18.43	0.018	0.97	1.23	0	0.85	1.87	0.000	0.99	0.68	0	0.99	0.66	0
1	94475	0.99	0.74	0	0.01	15.25	0.009	0.96	1.11	0	0.84	1.82	0.000	0.92	1.07	0	0.92	1.04	0
2	82596	0.97	1.18	0	0.02	13.27	0.011	0.92	1.25	0	0.82	1.80	0.000	0.84	1.80	0	0.83	1.87	0
3	82473	0.95	1.48	0	0.06	10.99	0.011	0.88	1.50	0	0.80	1.95	0.000	0.91	1.90	0	0.95	1.89	0
4	84055	0.94	1.48	0	0.11	9.37	0.015	0.86	1.64	0	0.79	2.09	0.000	0.87	1.75	0	0.92	1.57	0
5	92521	0.92	1.41	0	0.19	8.06	0.021	0.84	1.76	0	0.78	2.22	0.000	0.80	1.74	0	0.87	1.38	0

Table 29. *For visa images AE error statistics by age, 0 to 90. Acc(3) is proportion of age estimates within 3 years (higher value is better), MAE is mean absolute error (MAE, lower is better), and the failure to process proportion (FTP, lower is better). (continued)*

		innovatrics-002			**jumio-000**			**neuro-000**			**neuro-001**			**nominder-000**			**nominder-001**		
Age	Num. Images	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP
6	91639	0.88	1.49	0	0.26	7.29	0.028	0.82	1.96	0	0.75	2.49	0.000	0.71	2.12	0	0.82	1.65	0
7	89993	0.82	1.77	0	0.30	6.84	0.038	0.75	2.39	0	0.67	3.00	0.000	0.59	2.69	0	0.77	2.08	0
8	89428	0.78	1.98	0	0.30	6.83	0.032	0.67	2.83	0	0.60	3.42	0.000	0.54	2.91	0	0.70	2.46	0
9	89644	0.77	2.05	0	0.27	7.00	0.028	0.60	3.25	0	0.54	3.79	0.000	0.53	2.94	0	0.63	2.72	0
10	98337	0.77	2.02	0	0.23	7.10	0.030	0.53	3.68	0	0.47	4.15	0.000	0.57	2.91	0	0.61	2.96	0
11	97415	0.77	2.01	0	0.18	7.04	0.032	0.45	4.16	0	0.40	4.56	0.000	0.63	2.84	0	0.57	3.22	0
12	94326	0.83	1.99	0	0.14	6.68	0.038	0.35	4.68	0	0.31	4.99	0.000	0.66	2.78	0	0.51	3.54	0
13	94047	0.85	1.96	0	0.12	6.13	0.041	0.25	5.17	0	0.21	5.37	0.000	0.64	2.82	0	0.41	3.92	0
14	96915	0.83	1.91	0	0.13	5.62	0.041	0.18	5.34	0	0.16	5.46	0.000	0.61	2.91	0	0.34	4.17	0
15	97599	0.79	1.95	0	0.21	5.24	0.039	0.16	5.29	0	0.14	5.36	0.000	0.57	3.11	0	0.32	4.31	0
16	96388	0.75	2.10	0	0.32	4.94	0.035	0.20	4.96	0	0.19	5.01	0.000	0.54	3.28	0	0.35	4.28	0
17	99462	0.71	2.35	0	0.39	4.62	0.033	0.31	4.46	0	0.30	4.50	0.000	0.53	3.36	0	0.40	4.12	0
18	98765	0.65	2.74	0	0.37	4.73	0.032	0.44	3.93	0	0.42	3.94	0.000	0.51	3.46	0	0.42	4.06	0
19	105717	0.60	2.99	0	0.36	4.67	0.029	0.52	3.47	0	0.51	3.45	0.000	0.50	3.52	0	0.45	3.94	0
20	118643	0.56	3.14	0	0.38	4.46	0.027	0.59	3.15	0	0.58	3.11	0.000	0.51	3.51	0	0.48	3.74	0
21	124060	0.54	3.24	0	0.39	4.37	0.026	0.64	2.91	0	0.64	2.85	0.000	0.51	3.50	0	0.51	3.62	0
22	128864	0.54	3.31	0	0.40	4.23	0.023	0.65	2.88	0	0.66	2.79	0.000	0.51	3.49	0	0.52	3.53	0
23	133507	0.52	3.33	0	0.41	4.09	0.023	0.63	2.97	0	0.65	2.85	0.000	0.51	3.50	0	0.53	3.49	0
24	138094	0.50	3.36	0	0.43	3.91	0.022	0.58	3.12	0	0.61	3.00	0.000	0.51	3.51	0	0.53	3.45	0
25	139920	0.50	3.42	0	0.45	3.77	0.021	0.53	3.35	0	0.56	3.24	0.000	0.50	3.56	0	0.52	3.46	0
26	141741	0.50	3.44	0	0.47	3.61	0.019	0.49	3.60	0	0.50	3.52	0.000	0.50	3.57	0	0.52	3.43	0
27	138491	0.50	3.42	0	0.50	3.47	0.018	0.44	3.90	0	0.45	3.86	0.000	0.49	3.59	0	0.51	3.46	0
28	133633	0.50	3.39	0	0.51	3.38	0.018	0.41	4.18	0	0.40	4.20	0.000	0.49	3.63	0	0.51	3.49	0
29	129054	0.52	3.36	0	0.53	3.29	0.017	0.38	4.46	0	0.36	4.52	0.000	0.49	3.64	0	0.51	3.53	0
30	123437	0.53	3.34	0	0.54	3.24	0.015	0.36	4.71	0	0.33	4.81	0.000	0.50	3.67	0	0.50	3.58	0
31	118174	0.54	3.30	0	0.55	3.21	0.015	0.35	4.93	0	0.32	5.06	0.000	0.50	3.69	0	0.50	3.60	0
32	113131	0.55	3.30	0	0.55	3.21	0.015	0.33	5.17	0	0.31	5.32	0.000	0.49	3.72	0	0.49	3.66	0
33	109146	0.54	3.30	0	0.56	3.21	0.014	0.33	5.36	0	0.31	5.50	0.000	0.49	3.74	0	0.48	3.70	0
34	105908	0.54	3.31	0	0.55	3.26	0.015	0.32	5.52	0	0.31	5.65	0.000	0.48	3.78	0	0.48	3.75	0
35	103149	0.53	3.32	0	0.55	3.29	0.014	0.31	5.69	0	0.30	5.81	0.000	0.48	3.79	0	0.48	3.75	0
36	99901	0.52	3.33	0	0.54	3.33	0.014	0.31	5.79	0	0.31	5.89	0.000	0.47	3.82	0	0.47	3.77	0
37	97516	0.52	3.31	0	0.53	3.37	0.014	0.30	5.91	0	0.30	6.00	0.000	0.47	3.81	0	0.48	3.76	0
38	93939	0.53	3.28	0	0.53	3.40	0.014	0.29	5.98	0	0.30	6.06	0.000	0.47	3.82	0	0.48	3.74	0
39	91461	0.55	3.21	0	0.52	3.41	0.013	0.30	6.00	0	0.30	6.06	0.000	0.48	3.82	0	0.49	3.71	0
40	94056	0.56	3.18	0	0.52	3.48	0.013	0.29	6.06	0	0.29	6.11	0.000	0.47	3.87	0	0.49	3.70	0
41	90173	0.57	3.14	0	0.51	3.48	0.014	0.29	6.07	0	0.29	6.10	0.000	0.47	3.87	0	0.49	3.67	0
42	86423	0.58	3.12	0	0.51	3.50	0.013	0.29	6.09	0	0.29	6.12	0.000	0.46	3.89	0	0.49	3.64	0
43	83252	0.58	3.15	0	0.51	3.51	0.013	0.30	6.04	0	0.30	6.05	0.000	0.45	3.92	0	0.49	3.62	0

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Table 29. *For visa images AE error statistics by age, 0 to 90. Acc(3) is proportion of age estimates within 3 years (higher value is better), MAE is mean absolute error (MAE, lower is better), and the failure to process proportion (FTP, lower is better). (continued)*

		innovatrics-002			**jumio-000**			**neuro-000**			**neuro-001**			**nominder-000**			**nominder-001**		
Age	Num. Images	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP
44	80602	0.57	3.19	0	0.51	3.51	0.014	0.30	6.03	0	0.30	6.04	0.000	0.44	3.95	0	0.49	3.60	0
45	77502	0.57	3.25	0	0.51	3.48	0.013	0.30	5.95	0	0.30	5.95	0.000	0.44	3.93	0	0.50	3.54	0
46	74182	0.56	3.32	0	0.51	3.48	0.014	0.31	5.83	0	0.31	5.83	0.000	0.44	3.89	0	0.50	3.49	0
47	70698	0.54	3.43	0	0.51	3.45	0.014	0.32	5.72	0	0.32	5.71	0.000	0.46	3.81	0	0.50	3.43	0
48	67856	0.52	3.55	0	0.51	3.42	0.015	0.33	5.57	0	0.34	5.57	0.000	0.47	3.71	0	0.52	3.34	0
49	65674	0.49	3.70	0	0.52	3.38	0.015	0.35	5.46	0	0.35	5.44	0.000	0.49	3.63	0	0.54	3.24	0
50	64896	0.46	3.81	0	0.53	3.32	0.015	0.37	5.27	0	0.37	5.25	0.000	0.51	3.53	0	0.55	3.15	0
51	63410	0.44	3.94	0	0.54	3.26	0.015	0.39	5.13	0	0.39	5.11	0.000	0.53	3.46	0	0.57	3.09	0
52	60991	0.42	4.00	0	0.55	3.21	0.017	0.40	5.04	0	0.40	5.01	0.000	0.53	3.42	0	0.58	3.03	0
53	59550	0.43	4.02	0	0.56	3.15	0.016	0.41	4.94	0	0.41	4.91	0.000	0.54	3.38	0	0.59	2.99	0
54	56895	0.44	4.01	0	0.56	3.10	0.018	0.41	4.88	0	0.41	4.86	0.000	0.53	3.41	0	0.59	2.99	0
55	55297	0.45	3.98	0	0.57	3.09	0.018	0.41	4.80	0	0.42	4.78	0.000	0.53	3.42	0	0.58	3.02	0
56	52574	0.47	3.95	0	0.57	3.07	0.019	0.42	4.72	0	0.42	4.70	0.000	0.52	3.43	0	0.58	3.05	0
57	49823	0.47	3.99	0	0.57	3.06	0.020	0.41	4.74	0	0.41	4.72	0.000	0.51	3.51	0	0.56	3.15	0
58	48570	0.48	3.99	0	0.57	3.05	0.023	0.41	4.74	0	0.41	4.73	0.000	0.51	3.54	0	0.55	3.19	0
59	46040	0.46	4.06	0	0.57	3.08	0.023	0.41	4.78	0	0.41	4.78	0.000	0.51	3.61	0	0.54	3.31	0
60	46037	0.45	4.07	0	0.57	3.09	0.024	0.40	4.82	0	0.40	4.82	0.000	0.49	3.70	0	0.52	3.41	0
61	43860	0.43	4.13	0	0.56	3.12	0.025	0.40	4.88	0	0.40	4.88	0.000	0.48	3.77	0	0.51	3.50	0
62	41407	0.41	4.16	0	0.55	3.15	0.027	0.39	4.98	0	0.39	4.99	0.000	0.47	3.87	0	0.50	3.61	0
63	39444	0.41	4.17	0	0.55	3.23	0.028	0.38	5.20	0	0.38	5.22	0.000	0.45	4.02	0	0.47	3.78	0
64	37425	0.40	4.14	0	0.53	3.29	0.030	0.38	5.39	0	0.38	5.40	0.000	0.44	4.14	0	0.46	3.89	0
65	34834	0.41	4.07	0	0.52	3.37	0.032	0.35	5.64	0	0.35	5.66	0.000	0.42	4.26	0	0.43	4.06	0
66	32020	0.43	3.96	0	0.52	3.42	0.032	0.31	5.91	0	0.31	5.93	0.000	0.40	4.38	0	0.43	4.13	0
67	28898	0.46	3.82	0	0.51	3.53	0.036	0.26	6.39	0	0.26	6.42	0.000	0.39	4.57	0	0.41	4.30	0
68	26630	0.51	3.70	0	0.48	3.70	0.037	0.20	6.94	0	0.19	6.96	0.000	0.36	4.79	0	0.39	4.47	0
69	24864	0.54	3.54	0	0.47	3.82	0.040	0.13	7.46	0	0.13	7.48	0.000	0.34	4.93	0	0.38	4.56	0
70	23407	0.56	3.44	0	0.45	3.96	0.043	0.06	8.08	0	0.06	8.11	0.000	0.33	5.08	0	0.37	4.64	0
71	20736	0.57	3.39	0	0.43	4.13	0.042	0.01	8.66	0	0.01	8.69	0.000	0.31	5.26	0	0.36	4.73	0
72	18423	0.56	3.41	0	0.40	4.37	0.048	0.00	9.36	0	0.00	9.37	0.000	0.30	5.49	0	0.35	4.86	0
73	16215	0.54	3.54	0	0.38	4.57	0.048	0.00	9.98	0	0.00	10.00	0.000	0.29	5.62	0	0.36	4.89	0
74	14848	0.51	3.63	0	0.37	4.72	0.050	0.00	10.65	0	0.00	10.67	0.000	0.29	5.75	0	0.37	4.87	0
75	13197	0.46	3.89	0	0.31	5.14	0.049	0.00	11.39	0	0.00	11.41	0.000	0.28	6.00	0	0.37	5.00	0
76	11886	0.42	4.07	0	0.28	5.46	0.055	0.00	12.02	0	0.00	12.04	0.000	0.28	6.14	0	0.37	5.04	0
77	10839	0.38	4.35	0	0.25	5.77	0.055	0.00	12.85	0	0.00	12.86	0.000	0.26	6.40	0	0.38	5.08	0
78	9361	0.35	4.67	0	0.21	6.21	0.061	0.00	13.55	0	0.00	13.57	0.000	0.26	6.58	0	0.37	5.23	0
79	7540	0.32	4.89	0	0.17	6.52	0.068	0.00	14.40	0	0.00	14.41	0.000	0.26	6.65	0	0.37	5.19	0
80	6267	0.30	5.22	0	0.14	7.03	0.066	0.00	15.18	0	0.00	15.20	0.000	0.25	6.90	0	0.36	5.37	0
81	5221	0.28	5.41	0	0.11	7.38	0.072	0.00	16.00	0	0.00	16.01	0.000	0.24	7.01	0	0.34	5.51	0

Table 29. *For visa images AE error statistics by age, 0 to 90. Acc(3) is proportion of age estimates within 3 years (higher value is better), MAE is mean absolute error (MAE, lower is better), and the failure to process proportion (FTP, lower is better). (continued)*

		innovatrics-002			**jumio-000**			**neuro-000**			**neuro-001**			**nominder-000**			**nominder-001**		
Age	Num. Images	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP
82	3962	0.25	5.81	0	0.08	7.94	0.076	0.00	16.78	0	0.00	16.80	0.000	0.23	7.36	0	0.33	5.69	0
83	3277	0.21	6.31	0	0.06	8.48	0.070	0.00	17.66	0	0.00	17.68	0.000	0.19	7.65	0	0.27	6.11	0
84	2615	0.16	6.76	0	0.04	9.03	0.081	0.00	18.45	0	0.00	18.49	0.000	0.16	8.02	0	0.26	6.39	0
85	2206	0.14	7.19	0	0.03	9.62	0.079	0.00	19.29	0	0.00	19.32	0.000	0.15	8.22	0	0.22	6.63	0
86	1831	0.11	7.64	0	0.01	10.17	0.082	0.00	20.24	0	0.00	20.25	0.000	0.14	8.61	0	0.20	7.06	0
87	1402	0.07	8.21	0	0.01	10.81	0.086	0.00	21.17	0	0.00	21.15	0.000	0.11	9.11	0	0.15	7.49	0
88	1254	0.04	9.07	0	0.01	11.54	0.093	0.00	22.10	0	0.00	22.14	0.000	0.11	9.40	0	0.12	8.13	0
89	907	0.02	9.24	0	0.01	12.06	0.097	0.00	22.86	0	0.00	22.89	0.001	0.10	9.57	0	0.11	8.32	0
90	670	0.01	10.21	0	0.00	13.01	0.099	0.00	24.05	0	0.00	24.06	0.000	0.09	10.64	0	0.07	9.27	0

Table 30. *For visa images AE error statistics by age, 0 to 90. Acc(3) is proportion of age estimates within 3 years (higher value is better), MAE is mean absolute error (MAE, lower is better), and the failure to process proportion (FTP, lower is better).*

		ondato-000			**ondato-001**			**privately-000**			**regula-000**			**roc-000**			**roc-001**		
Age	Num. Images	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP
0	133387	0.85	2.29	0	0.93	1.66	0	0.98	1.40	0	0.98	1.28	0	0.72	2.28	0	0.00	7.75	0
1	94475	0.86	1.68	0	0.90	1.76	0	0.93	1.30	0	1.00	0.46	0	0.83	1.80	0	0.01	7.52	0
2	82596	0.77	2.13	0	0.84	2.04	0	0.75	1.81	0	1.00	0.56	0	0.83	1.78	0	0.02	7.17	0
3	82473	0.69	2.52	0	0.78	2.18	0	0.67	2.25	0	1.00	0.66	0	0.84	1.75	0	0.02	6.87	0
4	84055	0.64	2.77	0	0.74	2.22	0	0.74	2.28	0	1.00	0.68	0	0.87	1.64	0	0.02	6.58	0
5	92521	0.61	2.94	0	0.71	2.34	0	0.82	2.05	0	1.00	0.74	0	0.88	1.59	0	0.03	6.32	0
6	91639	0.55	3.25	0	0.68	2.53	0	0.87	1.74	0	0.99	0.85	0	0.87	1.60	0	0.03	5.92	0
7	89993	0.48	3.65	0	0.63	2.82	0	0.90	1.52	0	0.99	0.91	0	0.85	1.66	0	0.05	5.22	0
8	89428	0.44	3.88	0	0.60	3.01	0	0.90	1.48	0	0.99	0.97	0	0.80	1.88	0	0.06	5.04	0
9	89644	0.41	4.00	0	0.57	3.14	0	0.90	1.52	0	0.98	1.00	0	0.73	2.19	0	0.08	4.81	0
10	98337	0.39	3.99	0	0.54	3.23	0	0.88	1.64	0	0.97	1.06	0	0.64	2.64	0	0.10	4.59	0
11	97415	0.38	3.97	0	0.50	3.40	0	0.85	1.84	0	0.94	1.23	0	0.53	3.18	0	0.13	4.39	0
12	94326	0.38	3.85	0	0.45	3.55	0	0.82	2.00	0	0.90	1.46	0	0.39	3.76	0	0.16	4.18	0
13	94047	0.41	3.70	0	0.42	3.63	0	0.76	2.18	0	0.84	1.73	0	0.26	4.18	0	0.20	4.00	0
14	96915	0.47	3.50	0	0.42	3.60	0	0.70	2.41	0	0.79	1.98	0	0.19	4.20	0	0.29	3.81	0
15	97599	0.52	3.36	0	0.46	3.52	0	0.65	2.76	0	0.76	2.13	0	0.30	4.00	0	0.42	3.63	0
16	96388	0.54	3.25	0	0.50	3.44	0	0.62	3.05	0	0.75	2.21	0	0.52	3.65	0	0.54	3.47	0
17	99462	0.56	3.16	0	0.53	3.32	0	0.60	3.16	0	0.75	2.20	0	0.62	3.29	0	0.55	3.35	0
18	98765	0.55	3.21	0	0.53	3.33	0	0.52	3.34	0	0.71	2.36	0	0.60	3.25	0	0.49	3.53	0
19	105717	0.56	3.21	0	0.53	3.32	0	0.50	3.37	0	0.69	2.47	0	0.59	3.28	0	0.46	3.69	0
20	118643	0.56	3.18	0	0.53	3.28	0	0.53	3.34	0	0.68	2.55	0	0.58	3.38	0	0.46	3.79	0

Table 30. *For visa images AE error statistics by age, 0 to 90. Acc(3) is proportion of age estimates within 3 years (higher value is better), MAE is mean absolute error (MAE, lower is better), and the failure to process proportion (FTP, lower is better). (continued)*

		ondato-000			**ondato-001**			**privately-000**			**regula-000**			**roc-000**			**roc-001**		
Age	Num. Images	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP
21	124060	0.56	3.16	0	0.54	3.24	0	0.54	3.35	0	0.66	2.64	0	0.55	3.60	0	0.44	3.93	0
22	128864	0.56	3.12	0	0.54	3.19	0	0.54	3.34	0	0.63	2.72	0	0.51	3.81	0	0.42	4.03	0
23	133507	0.57	3.09	0	0.55	3.14	0	0.53	3.38	0	0.62	2.76	0	0.46	3.99	0	0.41	4.13	0
24	138094	0.58	3.04	0	0.57	3.07	0	0.55	3.38	0	0.62	2.75	0	0.43	4.14	0	0.40	4.21	0
25	139920	0.58	3.03	0	0.57	3.04	0	0.54	3.38	0	0.62	2.74	0	0.41	4.28	0	0.38	4.32	0
26	141741	0.58	3.02	0	0.58	2.99	0	0.53	3.37	0	0.63	2.72	0	0.40	4.37	0	0.37	4.37	0
27	138491	0.58	3.04	0	0.58	2.99	0	0.54	3.42	0	0.63	2.73	0	0.39	4.49	0	0.36	4.44	0
28	133633	0.56	3.10	0	0.57	3.02	0	0.54	3.46	0	0.63	2.74	0	0.37	4.58	0	0.36	4.50	0
29	129054	0.55	3.16	0	0.57	3.05	0	0.54	3.52	0	0.62	2.80	0	0.37	4.65	0	0.35	4.57	0
30	123437	0.54	3.21	0	0.56	3.09	0	0.53	3.53	0	0.61	2.88	0	0.36	4.73	0	0.34	4.60	0
31	118174	0.54	3.28	0	0.56	3.11	0	0.52	3.59	0	0.59	2.96	0	0.35	4.75	0	0.34	4.61	0
32	113131	0.53	3.34	0	0.55	3.15	0	0.52	3.67	0	0.58	3.04	0	0.35	4.77	0	0.34	4.60	0
33	109146	0.53	3.35	0	0.56	3.15	0	0.51	3.76	0	0.56	3.11	0	0.35	4.77	0	0.34	4.60	0
34	105908	0.53	3.38	0	0.56	3.17	0	0.49	3.88	0	0.55	3.20	0	0.34	4.78	0	0.34	4.63	0
35	103149	0.53	3.43	0	0.56	3.19	0	0.47	4.03	0	0.55	3.23	0	0.35	4.73	0	0.35	4.60	0
36	99901	0.53	3.47	0	0.56	3.22	0	0.44	4.21	0	0.54	3.28	0	0.35	4.73	0	0.35	4.59	0
37	97516	0.52	3.52	0	0.56	3.25	0	0.41	4.36	0	0.53	3.31	0	0.35	4.67	0	0.36	4.58	0
38	93939	0.51	3.61	0	0.55	3.32	0	0.38	4.53	0	0.53	3.34	0	0.37	4.60	0	0.36	4.56	0
39	91461	0.50	3.66	0	0.54	3.38	0	0.36	4.69	0	0.53	3.35	0	0.37	4.55	0	0.37	4.55	0
40	94056	0.49	3.73	0	0.53	3.48	0	0.34	4.82	0	0.52	3.41	0	0.38	4.50	0	0.37	4.60	0
41	90173	0.48	3.79	0	0.51	3.57	0	0.33	4.91	0	0.51	3.44	0	0.39	4.43	0	0.37	4.60	0
42	86423	0.47	3.84	0	0.49	3.66	0	0.32	4.95	0	0.51	3.46	0	0.40	4.36	0	0.37	4.61	0
43	83252	0.46	3.90	0	0.48	3.74	0	0.32	4.95	0	0.51	3.48	0	0.41	4.33	0	0.37	4.62	0
44	80602	0.46	3.90	0	0.47	3.80	0	0.34	4.91	0	0.50	3.49	0	0.41	4.30	0	0.37	4.65	0
45	77502	0.46	3.90	0	0.46	3.83	0	0.37	4.79	0	0.50	3.51	0	0.42	4.27	0	0.36	4.66	0
46	74182	0.46	3.88	0	0.46	3.86	0	0.41	4.64	0	0.50	3.50	0	0.42	4.27	0	0.36	4.67	0
47	70698	0.46	3.86	0	0.45	3.85	0	0.44	4.49	0	0.51	3.50	0	0.43	4.25	0	0.35	4.70	0
48	67856	0.47	3.80	0	0.46	3.81	0	0.46	4.33	0	0.51	3.49	0	0.43	4.25	0	0.35	4.69	0
49	65674	0.49	3.74	0	0.46	3.77	0	0.48	4.23	0	0.52	3.44	0	0.43	4.24	0	0.35	4.67	0
50	64896	0.50	3.69	0	0.48	3.69	0	0.49	4.16	0	0.52	3.42	0	0.44	4.23	0	0.35	4.63	0
51	63410	0.50	3.66	0	0.49	3.62	0	0.49	4.18	0	0.52	3.42	0	0.43	4.26	0	0.36	4.58	0
52	60991	0.51	3.61	0	0.50	3.54	0	0.47	4.20	0	0.52	3.40	0	0.43	4.24	0	0.36	4.51	0
53	59550	0.51	3.58	0	0.52	3.44	0	0.45	4.23	0	0.52	3.38	0	0.44	4.18	0	0.38	4.41	0
54	56895	0.52	3.55	0	0.54	3.36	0	0.45	4.29	0	0.52	3.36	0	0.44	4.18	0	0.39	4.32	0
55	55297	0.51	3.57	0	0.55	3.31	0	0.44	4.39	0	0.53	3.35	0	0.44	4.13	0	0.40	4.21	0
56	52574	0.50	3.56	0	0.55	3.26	0	0.42	4.49	0	0.53	3.31	0	0.44	4.08	0	0.42	4.08	0
57	49823	0.50	3.59	0	0.56	3.25	0	0.40	4.67	0	0.54	3.29	0	0.45	4.02	0	0.43	3.97	0
58	48570	0.50	3.60	0	0.56	3.25	0	0.38	4.83	0	0.55	3.23	0	0.45	3.97	0	0.45	3.82	0

Table 30. *For visa images AE error statistics by age, 0 to 90. Acc(3) is proportion of age estimates within 3 years (higher value is better), MAE is mean absolute error (MAE, lower is better), and the failure to process proportion (FTP, lower is better). (continued)*

		ondato-000			**ondato-001**			**privately-000**			**regula-000**			**roc-000**			**roc-001**		
Age	Num. Images	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP
59	46040	0.49	3.64	0	0.55	3.29	0	0.37	4.98	0	0.55	3.23	0	0.46	3.90	0	0.47	3.70	0
60	46037	0.49	3.68	0	0.54	3.35	0	0.35	5.19	0	0.55	3.21	0	0.46	3.85	0	0.49	3.59	0
61	43860	0.48	3.70	0	0.53	3.41	0	0.33	5.38	0	0.55	3.20	0	0.47	3.77	0	0.51	3.49	0
62	41407	0.48	3.73	0	0.51	3.52	0	0.32	5.54	0	0.56	3.16	0	0.49	3.69	0	0.53	3.35	0
63	39444	0.48	3.78	0	0.49	3.63	0	0.30	5.79	0	0.56	3.17	0	0.49	3.64	0	0.54	3.27	0
64	37425	0.47	3.84	0	0.48	3.73	0	0.30	5.97	0	0.55	3.16	0	0.50	3.59	0	0.55	3.21	0
65	34834	0.46	3.92	0	0.46	3.84	0	0.30	6.17	0	0.55	3.16	0	0.50	3.54	0	0.56	3.14	0
66	32020	0.46	3.95	0	0.45	3.94	0	0.31	6.33	0	0.56	3.13	0	0.51	3.52	0	0.57	3.10	0
67	28898	0.45	4.04	0	0.44	4.02	0	0.31	6.59	0	0.56	3.13	0	0.50	3.54	0	0.56	3.14	0
68	26630	0.44	4.16	0	0.42	4.20	0	0.28	6.84	0	0.56	3.14	0	0.51	3.55	0	0.56	3.14	0
69	24864	0.44	4.22	0	0.42	4.28	0	0.26	7.05	0	0.56	3.14	0	0.50	3.56	0	0.56	3.16	0
70	23407	0.44	4.34	0	0.41	4.41	0	0.23	7.27	0	0.56	3.13	0	0.49	3.64	0	0.55	3.19	0
71	20736	0.43	4.46	0	0.41	4.52	0	0.19	7.59	0	0.56	3.14	0	0.48	3.72	0	0.54	3.27	0
72	18423	0.42	4.69	0	0.40	4.73	0	0.15	7.72	0	0.55	3.17	0	0.48	3.79	0	0.53	3.35	0
73	16215	0.40	4.85	0	0.40	4.83	0	0.13	7.72	0	0.55	3.19	0	0.45	3.97	0	0.51	3.49	0
74	14848	0.37	5.06	0	0.39	4.95	0	0.15	7.79	0	0.55	3.18	0	0.45	4.06	0	0.50	3.54	0
75	13197	0.31	5.57	0	0.34	5.37	0	0.16	7.85	0	0.54	3.31	0	0.41	4.35	0	0.48	3.73	0
76	11886	0.25	5.95	0	0.30	5.66	0	0.17	7.77	0	0.53	3.37	0	0.39	4.51	0	0.45	3.91	0
77	10839	0.17	6.49	0	0.23	6.17	0	0.19	7.87	0	0.52	3.45	0	0.36	4.84	0	0.43	4.13	0
78	9361	0.10	7.11	0	0.16	6.72	0	0.21	7.66	0	0.51	3.56	0	0.33	5.21	0	0.42	4.30	0
79	7540	0.04	7.65	0	0.09	7.18	0	0.23	7.48	0	0.50	3.63	0	0.30	5.45	0	0.40	4.41	0
80	6267	0.01	8.31	0	0.02	7.78	0	0.26	7.27	0	0.48	3.82	0	0.29	5.75	0	0.38	4.64	0
81	5221	0.00	8.91	0	0.00	8.34	0	0.29	7.15	0	0.47	3.83	0	0.25	6.09	0	0.36	4.83	0
82	3962	0.00	9.61	0	0.00	8.98	0	0.33	6.92	0	0.44	4.11	0	0.23	6.46	0	0.34	5.05	0
83	3277	0.00	10.40	0	0.00	9.71	0	0.36	6.88	0	0.40	4.36	0	0.19	7.06	0	0.31	5.34	0
84	2615	0.00	11.06	0	0.00	10.41	0	0.38	6.88	0	0.40	4.47	0	0.17	7.45	0	0.29	5.57	0
85	2206	0.00	11.76	0	0.00	11.07	0	0.39	6.93	0	0.37	4.69	0	0.14	7.88	0	0.28	5.80	0
86	1831	0.00	12.56	0	0.00	11.87	0	0.37	7.03	0	0.33	5.02	0	0.12	8.26	0	0.28	6.01	0
87	1402	0.00	13.37	0	0.00	12.71	0	0.33	7.58	0	0.29	5.42	0	0.09	9.02	0	0.24	6.45	0
88	1254	0.00	14.28	0	0.00	13.61	0	0.28	8.40	0	0.25	5.79	0	0.07	9.67	0	0.22	6.89	0
89	907	0.00	14.92	0	0.00	14.22	0	0.24	8.60	0	0.22	5.97	0	0.07	9.85	0	0.22	6.96	0
90	670	0.00	16.05	0	0.00	15.34	0	0.18	9.09	0	0.17	6.84	0	0.06	10.89	0	0.19	7.68	0

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Table 31. *For visa images AE error statistics by age, 0 to 90. Acc(3) is proportion of age estimates within 3 years (higher value is better), MAE is mean absolute error (MAE, lower is better), and the failure to process proportion (FTP, lower is better).*

		roc-002			**shufti-000**			**unissey-001**			**viante-000**			**yoti-001**			**yoti-002**		
Age	Num. Images	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP
0	133387	1.00	0.61	0	0.61	3.01	0.001	1.00	0.60	0	1.00	0.82	0	0.96	1.39	0.012	0.97	1.11	0
1	94475	1.00	0.56	0	0.58	3.06	0.000	0.99	1.31	0	0.98	1.16	0	0.93	1.46	0.005	0.98	0.96	0
2	82596	1.00	0.69	0	0.58	3.17	0.000	0.95	1.32	0	0.95	1.38	0	0.88	1.73	0.004	0.95	1.26	0
3	82473	0.99	0.83	0	0.64	3.11	0.000	0.95	1.24	0	0.94	1.66	0	0.88	1.82	0.003	0.95	1.45	0
4	84055	0.98	0.91	0	0.72	2.88	0.000	0.87	1.36	0	0.92	1.65	0	0.91	1.67	0.003	0.95	1.41	0
5	92521	0.97	1.00	0	0.77	2.60	0.000	0.85	1.60	0	0.87	1.68	0	0.92	1.51	0.002	0.95	1.28	0
6	91639	0.96	1.08	0	0.76	2.49	0.000	0.79	2.02	0	0.76	1.93	0	0.93	1.34	0.002	0.93	1.22	0
7	89993	0.96	1.10	0	0.69	2.61	0.000	0.70	2.49	0	0.60	2.43	0	0.91	1.30	0.001	0.91	1.34	0
8	89428	0.94	1.22	0	0.64	2.76	0.000	0.59	2.71	0	0.52	2.57	0	0.89	1.42	0.000	0.89	1.47	0
9	89644	0.93	1.30	0	0.60	2.94	0.000	0.49	2.81	0	0.79	2.35	0	0.86	1.55	0.000	0.88	1.49	0
10	98337	0.90	1.43	0	0.57	3.04	0.000	0.68	2.80	0	0.93	1.97	0	0.84	1.68	0.000	0.89	1.49	0
11	97415	0.86	1.60	0	0.53	3.19	0.000	0.61	2.79	0	0.95	1.62	0	0.83	1.80	0.000	0.89	1.49	0
12	94326	0.82	1.78	0	0.53	3.26	0.000	0.67	2.81	0	0.88	1.70	0	0.80	1.97	0.000	0.87	1.56	0
13	94047	0.81	1.92	0	0.51	3.28	0.000	0.59	3.07	0	0.74	2.57	0	0.77	2.17	0.000	0.85	1.69	0
14	96915	0.82	1.93	0	0.51	3.22	0.000	0.53	3.36	0	0.55	3.99	0	0.74	2.35	0.000	0.84	1.82	0
15	97599	0.85	1.82	0	0.60	3.11	0.000	0.49	3.67	0	0.36	5.38	0	0.70	2.61	0.000	0.82	1.94	0
16	96388	0.87	1.65	0	0.65	3.00	0.000	0.49	3.86	0	0.23	6.19	0	0.66	2.85	0.000	0.78	2.06	0
17	99462	0.87	1.53	0	0.66	2.85	0.000	0.57	3.85	0	0.16	6.54	0	0.62	3.06	0.000	0.75	2.22	0
18	98765	0.84	1.65	0	0.61	3.11	0.000	0.53	3.86	0	0.12	6.86	0	0.56	3.46	0.000	0.68	2.63	0
19	105717	0.80	1.89	0	0.58	3.29	0.000	0.48	3.93	0	0.09	6.86	0	0.52	3.70	0.000	0.62	2.93	0
20	118643	0.76	2.15	0	0.58	3.38	0.000	0.44	4.03	0	0.10	6.60	0	0.48	3.79	0.000	0.57	3.11	0
21	124060	0.70	2.41	0	0.55	3.50	0.000	0.40	4.16	0	0.12	6.34	0	0.46	3.83	0.000	0.53	3.23	0
22	128864	0.65	2.60	0	0.53	3.61	0.000	0.43	4.23	0	0.16	6.07	0	0.45	3.85	0.000	0.51	3.29	0
23	133507	0.61	2.73	0	0.51	3.69	0.000	0.37	4.23	0	0.21	5.83	0	0.46	3.83	0.000	0.52	3.28	0
24	138094	0.59	2.83	0	0.50	3.75	0.000	0.37	4.15	0	0.24	5.61	0	0.48	3.76	0.000	0.55	3.21	0
25	139920	0.59	2.88	0	0.49	3.81	0.000	0.40	4.14	0	0.26	5.47	0	0.50	3.69	0.000	0.58	3.12	0
26	141741	0.59	2.92	0	0.48	3.85	0.000	0.45	4.14	0	0.28	5.35	0	0.52	3.61	0.000	0.61	3.03	0
27	138491	0.58	2.97	0	0.47	3.91	0.000	0.49	4.11	0	0.29	5.30	0	0.53	3.59	0.000	0.61	3.03	0
28	133633	0.57	3.03	0	0.46	4.00	0.000	0.46	4.10	0	0.29	5.31	0	0.53	3.60	0.000	0.61	3.07	0
29	129054	0.56	3.09	0	0.45	4.05	0.000	0.52	4.13	0	0.28	5.31	0	0.53	3.64	0.000	0.60	3.18	0
30	123437	0.55	3.16	0	0.44	4.14	0.000	0.49	4.21	0	0.27	5.32	0	0.51	3.70	0.000	0.57	3.32	0
31	118174	0.54	3.20	0	0.43	4.21	0.000	0.45	4.31	0	0.29	5.27	0	0.50	3.78	0.000	0.54	3.47	0
32	113131	0.54	3.21	0	0.42	4.25	0.000	0.40	4.43	0	0.29	5.23	0	0.48	3.84	0.000	0.51	3.60	0
33	109146	0.53	3.23	0	0.41	4.31	0.000	0.35	4.59	0	0.35	5.18	0	0.46	3.90	0.000	0.49	3.71	0
34	105908	0.54	3.22	0	0.40	4.36	0.000	0.33	4.65	0	0.36	5.16	0	0.45	3.94	0.000	0.47	3.81	0
35	103149	0.54	3.20	0	0.40	4.40	0.000	0.36	4.61	0	0.40	5.08	0	0.45	3.95	0.000	0.46	3.86	0
36	99901	0.55	3.18	0	0.40	4.42	0.000	0.40	4.50	0	0.39	5.09	0	0.45	3.95	0.000	0.46	3.91	0

Table 31. *For visa images AE error statistics by age, 0 to 90. Acc(3) is proportion of age estimates within 3 years (higher value is better), MAE is mean absolute error (MAE, lower is better), and the failure to process proportion (FTP, lower is better). (continued)*

		roc-002			**shufti-000**			**unissey-001**			**viante-000**			**yoti-001**			**yoti-002**		
Age	Num. Images	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP
37	97516	0.55	3.15	0	0.39	4.42	0.000	0.44	4.32	0	0.36	5.07	0	0.45	3.92	0.000	0.45	3.91	0
38	93939	0.55	3.13	0	0.40	4.41	0.000	0.47	4.24	0	0.34	5.05	0	0.46	3.86	0.000	0.45	3.93	0
39	91461	0.56	3.10	0	0.40	4.39	0.000	0.48	4.21	0	0.30	5.06	0	0.47	3.84	0.000	0.46	3.91	0
40	94056	0.56	3.11	0	0.40	4.39	0.000	0.52	4.22	0	0.26	5.05	0	0.47	3.83	0.000	0.46	3.89	0
41	90173	0.56	3.10	0	0.40	4.37	0.000	0.45	4.25	0	0.25	4.87	0	0.48	3.80	0.000	0.46	3.89	0
42	86423	0.57	3.08	0	0.40	4.34	0.000	0.41	4.29	0	0.28	4.62	0	0.48	3.80	0.000	0.46	3.88	0
43	83252	0.57	3.09	0	0.41	4.31	0.000	0.39	4.31	0	0.32	4.31	0	0.48	3.80	0.000	0.46	3.90	0
44	80602	0.57	3.10	0	0.42	4.25	0.000	0.37	4.35	0	0.33	3.99	0	0.47	3.83	0.000	0.45	3.90	0
45	77502	0.56	3.12	0	0.42	4.19	0.000	0.42	4.33	0	0.43	3.67	0	0.46	3.85	0.000	0.45	3.90	0
46	74182	0.56	3.14	0	0.42	4.19	0.000	0.41	4.24	0	0.50	3.38	0	0.46	3.86	0.000	0.45	3.88	0
47	70698	0.55	3.16	0	0.43	4.16	0.000	0.44	4.13	0	0.57	3.11	0	0.46	3.89	0.000	0.45	3.85	0
48	67856	0.56	3.15	0	0.43	4.12	0.000	0.46	4.06	0	0.63	2.89	0	0.46	3.90	0.000	0.46	3.84	0
49	65674	0.55	3.16	0	0.44	4.07	0.000	0.48	4.04	0	0.63	2.76	0	0.47	3.89	0.000	0.48	3.78	0
50	64896	0.55	3.16	0	0.44	4.03	0.000	0.51	4.01	0	0.64	2.73	0	0.47	3.90	0.000	0.49	3.75	0
51	63410	0.55	3.17	0	0.45	3.96	0.000	0.47	4.04	0	0.64	2.80	0	0.47	3.90	0.000	0.49	3.72	0
52	60991	0.56	3.18	0	0.45	3.88	0.000	0.45	4.07	0	0.64	2.89	0	0.47	3.92	0.000	0.49	3.71	0
53	59550	0.56	3.15	0	0.46	3.78	0.000	0.44	4.13	0	0.60	2.97	0	0.46	3.91	0.000	0.49	3.70	0
54	56895	0.55	3.16	0	0.47	3.68	0.000	0.43	4.20	0	0.55	3.06	0	0.45	3.93	0.000	0.48	3.71	0
55	55297	0.56	3.14	0	0.47	3.57	0.000	0.42	4.29	0	0.54	3.14	0	0.44	3.89	0.000	0.48	3.69	0
56	52574	0.56	3.13	0	0.49	3.42	0.000	0.40	4.30	0	0.53	3.19	0	0.44	3.85	0.000	0.47	3.68	0
57	49823	0.57	3.13	0	0.51	3.23	0.000	0.44	4.40	0	0.52	3.21	0	0.44	3.77	0.000	0.48	3.63	0
58	48570	0.56	3.13	0	0.53	3.06	0.000	0.44	4.46	0	0.53	3.16	0	0.46	3.64	0.000	0.49	3.56	0
59	46040	0.56	3.14	0	0.57	2.86	0.000	0.44	4.52	0	0.54	3.10	0	0.48	3.52	0.000	0.50	3.53	0
60	46037	0.55	3.19	0	0.64	2.65	0.000	0.42	4.69	0	0.55	2.99	0	0.50	3.38	0.000	0.51	3.46	0
61	43860	0.55	3.21	0	0.74	2.43	0.000	0.41	4.86	0	0.64	2.86	0	0.53	3.25	0.000	0.51	3.43	0
62	41407	0.55	3.23	0	0.76	2.28	0.000	0.39	5.12	0	0.64	2.75	0	0.57	3.07	0.000	0.53	3.32	0
63	39444	0.54	3.27	0	0.74	2.28	0.000	0.30	5.35	0	0.65	2.65	0	0.60	2.96	0.001	0.54	3.28	0
64	37425	0.54	3.30	0	0.70	2.57	0.000	0.29	5.56	0	0.64	2.66	0	0.63	2.83	0.001	0.55	3.23	0
65	34834	0.53	3.35	0	0.63	3.18	0.000	0.28	5.71	0	0.65	2.76	0	0.65	2.81	0.001	0.56	3.21	0
66	32020	0.52	3.40	0	0.48	3.85	0.000	0.28	5.87	0	0.65	2.86	0	0.65	2.82	0.001	0.56	3.16	0
67	28898	0.52	3.46	0	0.25	4.61	0.000	0.26	6.07	0	0.54	3.01	0	0.63	2.91	0.001	0.57	3.14	0
68	26630	0.50	3.54	0	0.14	5.59	0.000	0.27	6.19	0	0.52	3.23	0	0.60	3.12	0.001	0.57	3.18	0
69	24864	0.50	3.59	0	0.10	6.44	0.000	0.27	6.33	0	0.49	3.46	0	0.55	3.38	0.002	0.56	3.20	0
70	23407	0.48	3.68	0	0.09	7.50	0.000	0.27	6.36	0	0.46	3.73	0	0.49	3.69	0.002	0.55	3.26	0
71	20736	0.47	3.76	0	0.08	8.59	0.000	0.27	6.42	0	0.39	4.03	0	0.43	4.07	0.001	0.56	3.30	0
72	18423	0.47	3.81	0	0.08	9.75	0.000	0.27	6.49	0	0.36	4.33	0	0.36	4.52	0.002	0.57	3.40	0
73	16215	0.45	3.93	0	0.08	11.08	0.000	0.28	6.49	0	0.31	4.60	0	0.30	4.95	0.002	0.54	3.50	0
74	14848	0.45	3.95	0	0.08	12.42	0.000	0.28	6.43	0	0.32	4.82	0	0.24	5.42	0.002	0.51	3.69	0

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Table 31. *For visa images AE error statistics by age, 0 to 90. Acc(3) is proportion of age estimates within 3 years (higher value is better), MAE is mean absolute error (MAE, lower is better), and the failure to process proportion (FTP, lower is better). (continued)*

		roc-002			**shufti-000**			**unissey-001**			**viante-000**			**yoti-001**			**yoti-002**		
Age	Num. Images	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP
75	13197	0.44	4.13	0	0.08	13.73	0.000	0.28	6.53	0	0.29	5.20	0	0.17	6.09	0.003	0.45	4.15	0
76	11886	0.43	4.20	0	0.08	15.25	0.000	0.29	6.46	0	0.27	5.51	0	0.12	6.68	0.002	0.38	4.64	0
77	10839	0.41	4.39	0	0.08	16.94	0.000	0.29	6.50	0	0.25	5.99	0	0.08	7.33	0.003	0.27	5.22	0
78	9361	0.40	4.51	0	0.09	18.64	0.000	0.30	6.58	0	0.14	6.41	0	0.04	7.97	0.004	0.08	5.90	0
79	7540	0.39	4.56	0	0.10	20.50	0.000	0.32	6.46	0	0.10	6.80	0	0.01	8.56	0.003	0.00	6.52	0
80	6267	0.38	4.69	0	0.11	22.58	0.000	0.32	6.62	0	0.07	7.28	0	0.00	9.37	0.007	0.00	7.24	0
81	5221	0.38	4.75	0	0.11	25.46	0.000	0.34	6.48	0	0.00	7.75	0	0.00	10.02	0.005	0.00	7.91	0
82	3962	0.38	4.87	0	0.10	26.77	0.000	0.34	6.56	0	0.00	8.32	0	0.00	10.72	0.007	0.00	8.74	0
83	3277	0.34	5.13	0	0.09	29.02	0.000	0.35	6.63	0	0.00	8.90	0	0.00	11.61	0.007	0.00	9.57	0
84	2615	0.32	5.34	0	0.08	31.06	0.000	0.34	6.85	0	0.00	9.55	0	0.00	12.26	0.007	0.00	10.35	0
85	2206	0.31	5.41	0	0.06	33.71	0.000	0.33	6.98	0	0.00	10.07	0	0.00	13.07	0.008	0.00	11.20	0
86	1831	0.31	5.55	0	0.02	37.96	0.000	0.29	7.18	0	0.00	10.77	0	0.00	13.86	0.011	0.00	12.17	0
87	1402	0.29	5.87	0	0.00	38.35	0.000	0.23	7.61	0	0.00	11.57	0	0.00	14.69	0.011	0.00	13.08	0
88	1254	0.23	6.43	0	0.00	39.91	0.000	0.19	8.13	0	0.00	12.34	0	0.00	15.78	0.014	0.00	14.03	0
89	907	0.26	6.29	0	0.00	41.86	0.000	0.15	7.91	0	0.00	12.91	0	0.00	16.57	0.012	0.00	14.93	0
90	670	0.21	6.96	0	0.00	44.54	0.000	0.10	8.24	0	0.00	13.99	0	0.00	17.55	0.015	0.00	16.11	0

Table 32. *For visa images AE error statistics by age, 0 to 90. Acc(3) is proportion of age estimates within 3 years (higher value is better), MAE is mean absolute error (MAE, lower is better), and the failure to process proportion (FTP, lower is better).*

		yoti-003			**yoti-004**			**youverse-000**		
Age	Num. Images	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP
0	133387	0.94	1.42	0	0.96	1.14	0	0.60	3.31	0.026
1	94475	0.95	1.27	0	0.98	1.09	0	0.42	3.88	0.006
2	82596	0.93	1.45	0	0.97	1.23	0	0.29	4.64	0.003
3	82473	0.94	1.56	0	0.97	1.28	0	0.25	5.04	0.003
4	84055	0.95	1.42	0	0.97	1.18	0	0.22	5.31	0.002
5	92521	0.96	1.22	0	0.97	1.08	0	0.20	5.47	0.002
6	91639	0.94	1.14	0	0.95	1.09	0	0.17	5.75	0.001
7	89993	0.90	1.28	0	0.92	1.26	0	0.13	6.18	0.001
8	89428	0.87	1.44	0	0.90	1.41	0	0.11	6.27	0.001
9	89644	0.86	1.55	0	0.89	1.49	0	0.10	6.13	0.000
10	98337	0.87	1.65	0	0.88	1.56	0	0.10	5.86	0.000
11	97415	0.86	1.73	0	0.86	1.65	0	0.09	5.53	0.000
12	94326	0.85	1.78	0	0.84	1.77	0	0.09	5.13	0.000
13	94047	0.84	1.77	0	0.81	1.90	0	0.14	4.69	0.000

Table 32. *For visa images AE error statistics by age, 0 to 90. Acc(3) is proportion of age estimates within 3 years (higher value is better), MAE is mean absolute error (MAE, lower is better), and the failure to process proportion (FTP, lower is better). (continued)*

		yoti-003			**yoti-004**			**youverse-000**		
Age	Num. Images	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP
14	96915	0.83	1.76	0	0.79	1.99	0	0.29	4.32	0.000
15	97599	0.82	1.85	0	0.75	2.11	0	0.43	3.99	0.000
16	96388	0.78	2.02	0	0.72	2.27	0	0.49	3.67	0.000
17	99462	0.75	2.23	0	0.69	2.39	0	0.52	3.39	0.000
18	98765	0.68	2.65	0	0.64	2.63	0	0.54	3.29	0.000
19	105717	0.61	2.94	0	0.62	2.72	0	0.57	3.17	0.000
20	118643	0.56	3.11	0	0.63	2.68	0	0.58	3.11	0.000
21	124060	0.53	3.23	0	0.65	2.60	0	0.59	3.05	0.000
22	128864	0.51	3.28	0	0.67	2.49	0	0.60	3.02	0.000
23	133507	0.52	3.28	0	0.70	2.39	0	0.59	3.01	0.000
24	138094	0.54	3.24	0	0.73	2.30	0	0.58	3.05	0.000
25	139920	0.56	3.19	0	0.74	2.27	0	0.57	3.13	0.000
26	141741	0.58	3.11	0	0.73	2.29	0	0.55	3.22	0.000
27	138491	0.59	3.11	0	0.72	2.40	0	0.52	3.33	0.000
28	133633	0.59	3.14	0	0.69	2.57	0	0.50	3.44	0.000
29	129054	0.58	3.21	0	0.65	2.76	0	0.49	3.54	0.000
30	123437	0.56	3.33	0	0.60	2.96	0	0.48	3.65	0.000
31	118174	0.54	3.44	0	0.56	3.15	0	0.47	3.77	0.000
32	113131	0.51	3.56	0	0.53	3.34	0	0.46	3.89	0.000
33	109146	0.49	3.67	0	0.50	3.48	0	0.46	3.99	0.000
34	105908	0.47	3.78	0	0.48	3.59	0	0.45	4.12	0.000
35	103149	0.46	3.85	0	0.47	3.65	0	0.43	4.31	0.000
36	99901	0.45	3.90	0	0.47	3.67	0	0.42	4.44	0.000
37	97516	0.45	3.91	0	0.48	3.63	0	0.40	4.65	0.000
38	93939	0.45	3.94	0	0.48	3.60	0	0.37	4.90	0.000
39	91461	0.46	3.91	0	0.50	3.53	0	0.34	5.12	0.000
40	94056	0.45	3.92	0	0.50	3.51	0	0.32	5.29	0.000
41	90173	0.45	3.92	0	0.51	3.46	0	0.30	5.57	0.000
42	86423	0.45	3.88	0	0.52	3.41	0	0.27	5.87	0.000
43	83252	0.46	3.86	0	0.52	3.37	0	0.24	6.19	0.000
44	80602	0.45	3.85	0	0.53	3.34	0	0.21	6.54	0.000
45	77502	0.45	3.81	0	0.53	3.31	0	0.19	6.89	0.000
46	74182	0.46	3.77	0	0.53	3.28	0	0.17	7.26	0.000
47	70698	0.47	3.71	0	0.54	3.25	0	0.15	7.61	0.000
48	67856	0.48	3.66	0	0.55	3.23	0	0.13	8.01	0.000
49	65674	0.50	3.55	0	0.56	3.18	0	0.11	8.43	0.000
50	64896	0.52	3.48	0	0.56	3.15	0	0.10	8.84	0.000
51	63410	0.53	3.42	0	0.57	3.13	0	0.08	9.31	0.000

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Table 32. *For visa images AE error statistics by age, 0 to 90. Acc(3) is proportion of age estimates within 3 years (higher value is better), MAE is mean absolute error (MAE, lower is better), and the failure to process proportion (FTP, lower is better). (continued)*

		yoti-003			**yoti-004**			**youverse-000**		
Age	Num. Images	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP
52	60991	0.54	3.40	0	0.57	3.12	0	0.07	9.74	0.000
53	59550	0.53	3.40	0	0.57	3.10	0	0.06	10.18	0.000
54	56895	0.53	3.41	0	0.57	3.10	0	0.05	10.64	0.000
55	55297	0.52	3.44	0	0.56	3.10	0	0.04	11.12	0.000
56	52574	0.51	3.46	0	0.56	3.11	0	0.04	11.60	0.000
57	49823	0.50	3.44	0	0.57	3.08	0	0.03	12.13	0.000
58	48570	0.51	3.41	0	0.57	3.06	0	0.03	12.64	0.000
59	46040	0.51	3.41	0	0.57	3.08	0	0.02	13.14	0.000
60	46037	0.52	3.37	0	0.57	3.09	0	0.02	13.63	0.000
61	43860	0.53	3.35	0	0.57	3.11	0	0.02	14.14	0.000
62	41407	0.54	3.29	0	0.57	3.13	0	0.01	14.70	0.000
63	39444	0.54	3.28	0	0.56	3.17	0	0.01	15.24	0.000
64	37425	0.55	3.27	0	0.55	3.24	0	0.01	15.80	0.000
65	34834	0.55	3.26	0	0.54	3.29	0	0.01	16.35	0.000
66	32020	0.55	3.23	0	0.53	3.35	0	0.01	16.96	0.000
67	28898	0.55	3.25	0	0.51	3.45	0	0.00	17.58	0.000
68	26630	0.54	3.30	0	0.50	3.55	0	0.00	18.20	0.000
69	24864	0.54	3.33	0	0.50	3.59	0	0.00	18.83	0.000
70	23407	0.54	3.33	0	0.49	3.63	0	0.00	19.45	0.000
71	20736	0.52	3.42	0	0.48	3.72	0	0.00	20.09	0.000
72	18423	0.51	3.52	0	0.47	3.83	0	0.00	20.82	0.000
73	16215	0.50	3.60	0	0.47	3.89	0	0.00	21.48	0.000
74	14848	0.48	3.71	0	0.46	3.94	0	0.00	22.08	0.000
75	13197	0.46	3.94	0	0.44	4.12	0	0.00	22.93	0.000
76	11886	0.44	4.04	0	0.44	4.20	0	0.00	23.52	0.000
77	10839	0.42	4.21	0	0.42	4.35	0	0.00	24.26	0.000
78	9361	0.40	4.46	0	0.41	4.51	0	0.00	24.95	0.000
79	7540	0.38	4.58	0	0.39	4.64	0	0.00	25.67	0.000
80	6267	0.36	4.79	0	0.37	4.80	0	0.00	26.54	0.000
81	5221	0.35	4.91	0	0.36	4.92	0	0.00	27.29	0.000
82	3962	0.32	5.25	0	0.33	5.23	0	0.00	28.08	0.000
83	3277	0.30	5.45	0	0.30	5.47	0	0.00	28.84	0.000
84	2615	0.29	5.71	0	0.30	5.65	0	0.00	29.72	0.000
85	2206	0.27	5.93	0	0.28	5.72	0	0.00	30.26	0.000
86	1831	0.25	6.28	0	0.28	6.08	0	0.00	31.21	0.000
87	1402	0.21	6.85	0	0.24	6.43	0	0.00	32.31	0.000
88	1254	0.18	7.36	0	0.22	6.87	0	0.00	33.22	0.000
89	907	0.15	7.46	0	0.21	6.93	0	0.00	33.91	0.000

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Table 32. *For visa images AE error statistics by age, 0 to 90. Acc(3) is proportion of age estimates within 3 years (higher value is better), MAE is mean absolute error (MAE, lower is better), and the failure to process proportion (FTP, lower is better). (continued)*

		yoti-003			**yoti-004**			**youverse-000**		
Age	Num. Images	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP	Acc(3)	MAE	FTP
90	670	0.09	8.43	0	0.21	7.69	0	0.00	34.86	0.000

Appendix A.2. Age Estimation Performance Across Demographics

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Table 33. *Mean raw error for Application-type images for algorithm cognitec-000. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	2.3 ± 0.3	1.5 ± 0.1	1.4 ± 0.2	1.1 ± 0.1	1.1 ± 0.2	3.2 ± 0.3	1.2 ± 0.2	1.43 ± 0.10	0.7 ± 0.1	1.0 ± 0.1	1.2 ± 0.2	1.5 ± 0.3	W Africa F	E Europe M
15	2.4 ± 0.4	1.5 ± 0.1	1.4 ± 0.2	1.4 ± 0.2	1.3 ± 0.3	2.9 ± 0.4	1.1 ± 0.3	1.55 ± 0.09	0.9 ± 0.2	1.4 ± 0.1	1.5 ± 0.2	1.6 ± 0.3	W Africa F	E Europe M
16	2.1 ± 0.4	1.5 ± 0.1	1.1 ± 0.2	1.0 ± 0.2	1.5 ± 0.3	3.3 ± 0.5	1.7 ± 0.3	1.44 ± 0.09	1.0 ± 0.2	1.5 ± 0.1	1.5 ± 0.2	1.8 ± 0.3	W Africa F	E Europe M
17	2.4 ± 0.4	1.3 ± 0.1	0.9 ± 0.2	1.0 ± 0.2	1.4 ± 0.3	3.1 ± 0.3	1.5 ± 0.3	1.3 ± 0.1	0.8 ± 0.2	1.5 ± 0.1	1.6 ± 0.2	2.0 ± 0.4	W Africa F	E Europe M
18	1.7 ± 0.3	0.8 ± 0.1	0.3 ± 0.2	0.6 ± 0.1	1.0 ± 0.2	2.4 ± 0.4	1.2 ± 0.2	0.84 ± 0.09	0.4 ± 0.2	1.1 ± 0.1	1.3 ± 0.2	1.2 ± 0.3	W Africa F	E Europe F
19	1.8 ± 0.3	0.6 ± 0.1	0.1 ± 0.2	0.7 ± 0.1	1.0 ± 0.2	2.8 ± 0.3	1.5 ± 0.3	0.8 ± 0.1	0.1 ± 0.2	1.3 ± 0.1	1.1 ± 0.2	1.4 ± 0.3	W Africa F	E Europe F
20	1.9 ± 0.3	0.6 ± 0.1	-0.4 ± 0.2	0.4 ± 0.2	0.9 ± 0.2	2.2 ± 0.3	1.5 ± 0.3	0.6 ± 0.1	0.3 ± 0.2	1.3 ± 0.1	1.1 ± 0.2	1.2 ± 0.3	W Africa F	E Europe F
21	1.4 ± 0.3	0.6 ± 0.1	-0.7 ± 0.2	0.3 ± 0.1	0.6 ± 0.2	2.2 ± 0.3	1.4 ± 0.2	0.5 ± 0.1	-0.1 ± 0.2	1.2 ± 0.1	0.9 ± 0.2	1.0 ± 0.3	W Africa F	E Europe F
22	1.2 ± 0.3	0.3 ± 0.1	-1.0 ± 0.1	0.0 ± 0.1	0.5 ± 0.2	1.6 ± 0.3	1.8 ± 0.3	0.3 ± 0.1	0.0 ± 0.2	1.1 ± 0.1	0.8 ± 0.2	0.7 ± 0.3	E Africa M	E Europe F
23	1.1 ± 0.3	0.2 ± 0.1	-1.1 ± 0.1	-0.1 ± 0.1	0.4 ± 0.1	1.3 ± 0.3	1.4 ± 0.3	0.2 ± 0.1	-0.2 ± 0.2	1.0 ± 0.1	0.6 ± 0.2	0.8 ± 0.2	E Africa M	E Europe F
24	0.9 ± 0.3	-0.1 ± 0.1	-1.2 ± 0.1	-0.3 ± 0.1	0.1 ± 0.1	1.0 ± 0.3	1.5 ± 0.3	-0.0 ± 0.1	-0.2 ± 0.2	1.1 ± 0.1	0.6 ± 0.2	0.5 ± 0.2	E Africa M	E Europe F
25	0.2 ± 0.3	-0.2 ± 0.1	-1.4 ± 0.1	-0.7 ± 0.1	-0.1 ± 0.1	0.8 ± 0.3	1.2 ± 0.3	0.0 ± 0.1	-0.3 ± 0.2	0.9 ± 0.1	0.5 ± 0.2	0.3 ± 0.2	E Africa M	E Europe F
26	-0.2 ± 0.3	-0.35 ± 0.10	-1.5 ± 0.1	-0.9 ± 0.1	-0.1 ± 0.1	0.4 ± 0.2	1.0 ± 0.2	0.1 ± 0.1	-0.4 ± 0.2	0.8 ± 0.1	0.4 ± 0.2	-0.0 ± 0.2	E Africa M	E Europe F
27	-0.3 ± 0.3	-0.50 ± 0.10	-1.5 ± 0.1	-1.2 ± 0.1	-0.5 ± 0.1	0.3 ± 0.2	0.7 ± 0.2	-0.1 ± 0.1	-0.4 ± 0.1	0.6 ± 0.1	0.5 ± 0.2	-0.3 ± 0.2	E Africa M	E Europe F
28	-0.6 ± 0.2	-0.60 ± 0.09	-1.4 ± 0.1	-1.3 ± 0.1	-0.6 ± 0.1	-0.2 ± 0.2	0.4 ± 0.2	-0.0 ± 0.1	-0.4 ± 0.1	0.46 ± 0.10	0.2 ± 0.2	-0.6 ± 0.2	S Asia M	E Europe F
29	-0.6 ± 0.3	-0.83 ± 0.09	-1.4 ± 0.1	-1.5 ± 0.1	-0.8 ± 0.1	-0.5 ± 0.2	0.2 ± 0.2	-0.1 ± 0.1	-0.5 ± 0.2	0.33 ± 0.09	-0.0 ± 0.2	-0.5 ± 0.2	S Asia M	S Asia F
30	-1.0 ± 0.3	-0.94 ± 0.09	-1.5 ± 0.1	-1.8 ± 0.1	-0.8 ± 0.1	-0.8 ± 0.2	0.3 ± 0.2	-0.3 ± 0.1	-0.7 ± 0.2	0.14 ± 0.09	-0.1 ± 0.2	-0.8 ± 0.2	E Africa M	S Asia F
31	-1.3 ± 0.3	-1.05 ± 0.09	-1.5 ± 0.1	-2.0 ± 0.1	-1.1 ± 0.1	-1.0 ± 0.2	0.0 ± 0.2	-0.4 ± 0.1	-0.7 ± 0.2	0.01 ± 0.09	-0.1 ± 0.2	-0.9 ± 0.2	E Africa M	S Asia F
32	-1.1 ± 0.3	-1.13 ± 0.10	-1.4 ± 0.1	-2.1 ± 0.1	-1.1 ± 0.2	-1.1 ± 0.3	-0.4 ± 0.2	-0.5 ± 0.1	-0.7 ± 0.2	-0.06 ± 0.09	-0.1 ± 0.2	-1.2 ± 0.2	S Asia M	S Asia F
33	-1.5 ± 0.3	-1.27 ± 0.10	-1.6 ± 0.1	-2.1 ± 0.1	-1.3 ± 0.2	-1.5 ± 0.3	-0.2 ± 0.2	-0.5 ± 0.1	-0.6 ± 0.2	-0.30 ± 0.09	-0.4 ± 0.2	-1.3 ± 0.2	E Africa M	S Asia F
34	-1.8 ± 0.3	-1.29 ± 0.10	-1.5 ± 0.2	-2.3 ± 0.1	-1.3 ± 0.2	-1.7 ± 0.3	-0.8 ± 0.2	-0.7 ± 0.1	-0.9 ± 0.2	-0.41 ± 0.10	-0.4 ± 0.2	-1.5 ± 0.2	S E Asia M	S Asia F
35	-1.6 ± 0.3	-1.5 ± 0.1	-1.6 ± 0.2	-2.4 ± 0.1	-1.6 ± 0.2	-2.2 ± 0.3	-0.6 ± 0.3	-0.8 ± 0.1	-0.8 ± 0.2	-0.49 ± 0.10	-0.5 ± 0.2	-1.6 ± 0.2	S Asia M	S Asia F
36	-1.8 ± 0.3	-1.6 ± 0.1	-1.5 ± 0.2	-2.4 ± 0.1	-1.3 ± 0.2	-2.1 ± 0.3	-0.8 ± 0.3	-0.8 ± 0.1	-0.7 ± 0.2	-0.71 ± 0.10	-0.3 ± 0.2	-1.7 ± 0.3	S E Asia M	S Asia F
37	-1.9 ± 0.3	-1.5 ± 0.1	-1.5 ± 0.2	-2.4 ± 0.1	-1.5 ± 0.2	-2.5 ± 0.3	-0.8 ± 0.3	-0.9 ± 0.1	-0.9 ± 0.2	-0.9 ± 0.1	-0.6 ± 0.2	-1.9 ± 0.2	S E Asia M	W Africa F
38	-1.4 ± 0.4	-1.7 ± 0.1	-1.5 ± 0.2	-2.4 ± 0.1	-1.4 ± 0.2	-2.5 ± 0.3	-1.2 ± 0.3	-0.9 ± 0.1	-0.9 ± 0.2	-1.0 ± 0.1	-0.3 ± 0.2	-1.9 ± 0.3	S E Asia M	W Africa F
39	-1.9 ± 0.4	-1.7 ± 0.1	-1.6 ± 0.2	-2.6 ± 0.1	-1.4 ± 0.2	-2.2 ± 0.3	-0.8 ± 0.3	-1.1 ± 0.1	-0.9 ± 0.2	-1.1 ± 0.1	-0.5 ± 0.2	-2.1 ± 0.3	S E Asia M	S Asia F
40	-2.0 ± 0.4	-1.7 ± 0.1	-1.4 ± 0.2	-2.5 ± 0.2	-1.4 ± 0.2	-2.9 ± 0.3	-0.9 ± 0.3	-1.1 ± 0.1	-0.8 ± 0.2	-1.2 ± 0.1	-0.7 ± 0.2	-2.1 ± 0.3	S E Asia M	W Africa F
41	-2.2 ± 0.4	-1.8 ± 0.1	-1.5 ± 0.2	-2.4 ± 0.2	-1.6 ± 0.2	-3.3 ± 0.3	-1.0 ± 0.3	-1.1 ± 0.1	-0.9 ± 0.2	-1.3 ± 0.1	-0.8 ± 0.2	-2.3 ± 0.3	S E Asia M	W Africa F
42	-1.8 ± 0.4	-1.7 ± 0.1	-1.4 ± 0.2	-2.2 ± 0.2	-1.6 ± 0.2	-2.8 ± 0.3	-1.0 ± 0.3	-1.2 ± 0.1	-0.7 ± 0.2	-1.5 ± 0.1	-0.5 ± 0.2	-2.3 ± 0.3	S E Asia M	W Africa F
43	-1.7 ± 0.4	-1.8 ± 0.1	-1.6 ± 0.2	-2.4 ± 0.2	-1.6 ± 0.2	-3.2 ± 0.3	-1.0 ± 0.3	-1.2 ± 0.1	-0.9 ± 0.2	-1.5 ± 0.1	-0.7 ± 0.2	-2.7 ± 0.3	S E Asia M	W Africa F
44	-1.6 ± 0.5	-1.9 ± 0.1	-1.8 ± 0.2	-2.4 ± 0.2	-1.3 ± 0.2	-3.3 ± 0.4	-1.5 ± 0.3	-1.2 ± 0.1	-0.5 ± 0.2	-1.7 ± 0.1	-0.5 ± 0.2	-2.6 ± 0.3	S E Asia M	W Africa F
45	-2.0 ± 0.5	-1.9 ± 0.1	-1.7 ± 0.2	-2.3 ± 0.2	-1.4 ± 0.2	-3.4 ± 0.4	-1.5 ± 0.4	-1.3 ± 0.1	-0.7 ± 0.2	-1.6 ± 0.1	-0.6 ± 0.2	-2.9 ± 0.3	S E Asia M	W Africa F
46	-1.3 ± 0.5	-2.0 ± 0.1	-1.7 ± 0.2	-2.2 ± 0.2	-1.6 ± 0.2	-3.3 ± 0.4	-1.6 ± 0.4	-1.4 ± 0.1	-0.5 ± 0.2	-1.6 ± 0.2	-0.6 ± 0.3	-2.9 ± 0.3	E Europe M	W Africa F
47	-1.5 ± 0.5	-1.9 ± 0.1	-1.7 ± 0.2	-2.3 ± 0.2	-1.4 ± 0.2	-3.5 ± 0.4	-1.5 ± 0.4	-1.4 ± 0.1	-0.6 ± 0.2	-1.6 ± 0.2	-0.4 ± 0.3	-2.8 ± 0.3	S E Asia M	W Africa F
48	-1.9 ± 0.5	-2.0 ± 0.1	-1.7 ± 0.2	-2.1 ± 0.2	-1.5 ± 0.2	-3.5 ± 0.4	-1.8 ± 0.4	-1.5 ± 0.1	-0.6 ± 0.3	-1.5 ± 0.2	-0.4 ± 0.3	-3.3 ± 0.3	S E Asia M	W Africa F
49	-1.5 ± 0.6	-2.1 ± 0.1	-1.8 ± 0.2	-2.1 ± 0.2	-1.3 ± 0.2	-3.8 ± 0.5	-2.3 ± 0.4	-1.5 ± 0.1	-0.8 ± 0.2	-1.8 ± 0.2	-0.2 ± 0.3	-3.1 ± 0.3	S E Asia M	W Africa F
50	-2.2 ± 0.6	-2.1 ± 0.1	-1.6 ± 0.2	-2.2 ± 0.2	-1.4 ± 0.2	-3.8 ± 0.4	-2.0 ± 0.4	-1.5 ± 0.1	-1.0 ± 0.2	-1.8 ± 0.2	-0.1 ± 0.3	-3.6 ± 0.3	S E Asia M	W Africa F
51	-1.6 ± 0.5	-2.1 ± 0.1	-1.8 ± 0.2	-2.1 ± 0.2	-1.5 ± 0.2	-3.7 ± 0.5	-2.5 ± 0.5	-1.6 ± 0.1	-0.9 ± 0.2	-1.8 ± 0.2	-0.1 ± 0.3	-3.8 ± 0.4	S E Asia M	W Africa M
52	-2.1 ± 0.6	-2.2 ± 0.1	-1.6 ± 0.2	-2.2 ± 0.2	-1.2 ± 0.2	-4.2 ± 0.5	-2.5 ± 0.5	-1.7 ± 0.1	-1.0 ± 0.3	-2.0 ± 0.2	-0.5 ± 0.3	-3.7 ± 0.4	S E Asia M	W Africa F

Table 34. *Mean raw error for Application-type images for algorithm cvut-001. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	6.3 ± 0.4	3.1 ± 0.1	2.4 ± 0.2	2.9 ± 0.2	2.5 ± 0.3	6.3 ± 0.5	2.6 ± 0.4	1.9 ± 0.1	0.6 ± 0.2	1.1 ± 0.1	1.6 ± 0.3	3.8 ± 0.5	E Africa F	E Europe M
15	6.2 ± 0.5	3.2 ± 0.2	2.3 ± 0.2	3.1 ± 0.2	2.6 ± 0.3	5.3 ± 0.5	2.6 ± 0.4	2.5 ± 0.1	1.0 ± 0.2	1.5 ± 0.2	2.2 ± 0.3	4.3 ± 0.4	E Africa F	E Europe M
16	6.2 ± 0.4	3.1 ± 0.2	2.1 ± 0.2	2.7 ± 0.2	2.7 ± 0.3	5.4 ± 0.6	3.5 ± 0.3	2.6 ± 0.1	1.1 ± 0.3	1.8 ± 0.2	2.4 ± 0.3	4.1 ± 0.4	E Africa F	E Europe M
17	6.1 ± 0.5	2.8 ± 0.2	1.6 ± 0.2	2.6 ± 0.2	2.3 ± 0.3	5.2 ± 0.5	3.5 ± 0.4	2.5 ± 0.1	0.9 ± 0.2	2.3 ± 0.2	2.5 ± 0.3	4.2 ± 0.4	E Africa F	E Europe M
18	5.3 ± 0.4	2.0 ± 0.1	0.7 ± 0.3	1.9 ± 0.2	1.7 ± 0.2	4.2 ± 0.5	3.3 ± 0.3	1.8 ± 0.1	0.6 ± 0.3	1.9 ± 0.2	1.8 ± 0.2	3.5 ± 0.4	E Africa F	E Europe M
19	5.6 ± 0.4	1.7 ± 0.1	0.3 ± 0.3	1.9 ± 0.2	1.2 ± 0.2	4.8 ± 0.4	3.3 ± 0.3	1.6 ± 0.1	0.5 ± 0.3	2.1 ± 0.2	1.3 ± 0.2	3.7 ± 0.4	E Africa F	E Europe F
20	5.3 ± 0.4	1.4 ± 0.1	0.2 ± 0.2	1.4 ± 0.2	0.8 ± 0.2	4.5 ± 0.4	3.8 ± 0.3	1.2 ± 0.1	1.0 ± 0.3	2.2 ± 0.2	1.0 ± 0.2	3.6 ± 0.4	E Africa F	E Europe F
21	5.0 ± 0.3	1.0 ± 0.1	-0.5 ± 0.2	1.2 ± 0.2	0.3 ± 0.2	4.2 ± 0.4	3.8 ± 0.3	0.6 ± 0.1	0.8 ± 0.3	2.1 ± 0.2	0.6 ± 0.2	3.4 ± 0.3	E Africa F	E Europe F
22	4.7 ± 0.3	0.4 ± 0.1	-0.7 ± 0.2	0.8 ± 0.2	-0.2 ± 0.2	4.0 ± 0.4	4.0 ± 0.3	0.2 ± 0.1	1.2 ± 0.3	2.0 ± 0.2	0.1 ± 0.2	3.5 ± 0.3	E Africa F	E Europe F
23	4.3 ± 0.3	-0.0 ± 0.1	-1.0 ± 0.2	0.6 ± 0.1	-0.7 ± 0.1	3.6 ± 0.4	3.6 ± 0.3	-0.2 ± 0.1	0.9 ± 0.3	2.0 ± 0.2	-0.3 ± 0.2	3.4 ± 0.3	E Africa F	E Europe F
24	3.9 ± 0.3	-0.7 ± 0.1	-1.4 ± 0.2	0.3 ± 0.1	-1.2 ± 0.1	3.5 ± 0.3	3.5 ± 0.3	-0.5 ± 0.1	1.2 ± 0.2	1.9 ± 0.2	-0.8 ± 0.2	3.1 ± 0.3	E Africa F	E Europe F
25	3.2 ± 0.3	-1.16 ± 0.10	-1.8 ± 0.2	-0.3 ± 0.1	-1.9 ± 0.1	3.0 ± 0.3	3.2 ± 0.3	-0.6 ± 0.2	1.1 ± 0.2	1.8 ± 0.1	-0.8 ± 0.2	2.6 ± 0.2	E Africa F	S E Asia F
26	2.9 ± 0.2	-1.70 ± 0.09	-2.0 ± 0.2	-0.7 ± 0.1	-2.3 ± 0.1	2.6 ± 0.3	2.9 ± 0.2	-0.8 ± 0.1	0.9 ± 0.2	1.5 ± 0.1	-0.9 ± 0.3	2.1 ± 0.2	E Africa F	S E Asia F
27	2.4 ± 0.3	-2.26 ± 0.08	-2.2 ± 0.2	-1.1 ± 0.1	-2.8 ± 0.1	2.1 ± 0.3	2.5 ± 0.2	-1.1 ± 0.2	1.2 ± 0.2	1.3 ± 0.1	-1.0 ± 0.3	1.7 ± 0.2	E Africa M	S E Asia F
28	2.0 ± 0.3	-2.73 ± 0.08	-2.4 ± 0.2	-1.4 ± 0.1	-3.2 ± 0.1	1.9 ± 0.3	2.1 ± 0.2	-1.1 ± 0.2	1.1 ± 0.2	0.9 ± 0.1	-1.2 ± 0.3	1.2 ± 0.2	E Africa M	S E Asia F
29	1.5 ± 0.3	-3.25 ± 0.08	-2.5 ± 0.2	-1.8 ± 0.1	-3.6 ± 0.1	1.5 ± 0.3	1.7 ± 0.2	-1.0 ± 0.2	0.7 ± 0.2	0.6 ± 0.1	-1.2 ± 0.3	1.1 ± 0.2	E Africa M	S E Asia F
30	0.9 ± 0.3	-3.72 ± 0.08	-2.7 ± 0.2	-2.3 ± 0.1	-3.9 ± 0.2	1.0 ± 0.3	1.5 ± 0.2	-1.3 ± 0.2	0.6 ± 0.2	0.1 ± 0.1	-1.3 ± 0.3	0.4 ± 0.2	E Africa M	S E Asia F
31	0.5 ± 0.2	-4.25 ± 0.08	-2.6 ± 0.2	-2.8 ± 0.1	-4.5 ± 0.2	0.7 ± 0.3	1.2 ± 0.2	-1.3 ± 0.2	0.2 ± 0.2	-0.2 ± 0.1	-1.5 ± 0.3	0.1 ± 0.2	E Africa M	S E Asia F
32	0.3 ± 0.2	-4.71 ± 0.09	-2.9 ± 0.2	-3.0 ± 0.1	-4.7 ± 0.2	0.3 ± 0.3	0.7 ± 0.2	-1.3 ± 0.2	0.3 ± 0.2	-0.6 ± 0.1	-1.3 ± 0.3	-0.4 ± 0.2	E Africa M	S E Asia F
33	-0.4 ± 0.3	-5.13 ± 0.09	-3.0 ± 0.2	-3.3 ± 0.1	-5.2 ± 0.2	0.2 ± 0.3	0.2 ± 0.2	-1.3 ± 0.2	0.3 ± 0.2	-0.8 ± 0.1	-1.4 ± 0.3	-0.8 ± 0.2	E Europe M	S E Asia F
34	-0.8 ± 0.3	-5.5 ± 0.1	-3.2 ± 0.2	-3.5 ± 0.1	-5.3 ± 0.2	-0.4 ± 0.3	-0.2 ± 0.2	-1.6 ± 0.2	-0.2 ± 0.2	-1.2 ± 0.1	-1.5 ± 0.3	-1.4 ± 0.2	E Africa M	E Asia F
35	-1.1 ± 0.3	-6.0 ± 0.1	-3.4 ± 0.2	-4.0 ± 0.1	-5.6 ± 0.2	-0.6 ± 0.3	-0.5 ± 0.2	-1.6 ± 0.2	-0.5 ± 0.2	-1.6 ± 0.1	-1.6 ± 0.3	-1.6 ± 0.2	E Europe M	E Asia F
36	-1.1 ± 0.3	-6.3 ± 0.1	-3.4 ± 0.2	-4.2 ± 0.1	-5.5 ± 0.2	-1.1 ± 0.3	-1.0 ± 0.3	-1.7 ± 0.2	-0.6 ± 0.2	-1.8 ± 0.1	-1.6 ± 0.3	-2.1 ± 0.2	E Europe M	E Asia F
37	-1.8 ± 0.4	-6.5 ± 0.1	-3.6 ± 0.2	-4.3 ± 0.2	-5.9 ± 0.2	-1.6 ± 0.3	-1.1 ± 0.3	-1.9 ± 0.2	-0.8 ± 0.2	-2.1 ± 0.1	-1.7 ± 0.3	-2.5 ± 0.2	E Europe M	E Asia F
38	-1.8 ± 0.3	-6.8 ± 0.1	-3.6 ± 0.3	-4.4 ± 0.2	-5.6 ± 0.3	-1.9 ± 0.3	-1.8 ± 0.3	-2.0 ± 0.2	-1.1 ± 0.3	-2.4 ± 0.1	-1.5 ± 0.3	-3.0 ± 0.2	E Europe M	E Asia F
39	-2.1 ± 0.4	-7.1 ± 0.1	-3.6 ± 0.3	-4.7 ± 0.2	-5.8 ± 0.3	-2.1 ± 0.3	-1.6 ± 0.3	-2.3 ± 0.1	-1.1 ± 0.2	-2.7 ± 0.1	-1.8 ± 0.3	-3.5 ± 0.2	E Europe M	E Asia F
40	-2.5 ± 0.4	-7.2 ± 0.1	-3.5 ± 0.3	-4.7 ± 0.2	-5.8 ± 0.3	-2.6 ± 0.3	-1.8 ± 0.3	-2.6 ± 0.1	-1.3 ± 0.2	-2.8 ± 0.1	-2.1 ± 0.3	-3.8 ± 0.2	E Europe M	E Asia F
41	-3.4 ± 0.4	-7.3 ± 0.1	-3.6 ± 0.3	-4.8 ± 0.2	-5.8 ± 0.3	-3.1 ± 0.3	-2.1 ± 0.3	-3.0 ± 0.1	-1.6 ± 0.2	-3.0 ± 0.2	-2.5 ± 0.3	-3.9 ± 0.3	E Europe M	E Asia F
42	-2.9 ± 0.4	-7.5 ± 0.1	-3.5 ± 0.3	-4.4 ± 0.2	-5.9 ± 0.3	-3.3 ± 0.4	-2.5 ± 0.4	-3.4 ± 0.1	-1.6 ± 0.3	-3.1 ± 0.2	-2.5 ± 0.3	-4.3 ± 0.3	E Europe M	E Asia F
43	-3.1 ± 0.5	-7.7 ± 0.1	-3.5 ± 0.3	-4.8 ± 0.3	-5.8 ± 0.3	-3.7 ± 0.3	-2.2 ± 0.4	-3.7 ± 0.1	-1.9 ± 0.3	-3.3 ± 0.2	-2.7 ± 0.3	-5.1 ± 0.3	E Europe M	E Asia F
44	-3.2 ± 0.5	-7.9 ± 0.1	-3.7 ± 0.3	-4.6 ± 0.3	-5.2 ± 0.3	-4.1 ± 0.4	-2.9 ± 0.4	-4.1 ± 0.1	-1.8 ± 0.3	-3.3 ± 0.2	-2.7 ± 0.3	-5.0 ± 0.3	E Europe M	E Asia F
45	-3.9 ± 0.5	-7.9 ± 0.2	-3.5 ± 0.3	-4.5 ± 0.3	-5.5 ± 0.3	-4.2 ± 0.4	-3.2 ± 0.4	-4.6 ± 0.1	-2.0 ± 0.3	-3.2 ± 0.2	-2.9 ± 0.4	-5.3 ± 0.3	E Europe M	E Asia F
46	-3.6 ± 0.6	-8.1 ± 0.2	-3.5 ± 0.3	-4.4 ± 0.3	-5.3 ± 0.3	-4.6 ± 0.5	-3.3 ± 0.5	-5.0 ± 0.1	-1.9 ± 0.3	-3.2 ± 0.2	-3.1 ± 0.4	-5.5 ± 0.3	E Europe M	E Asia F
47	-3.6 ± 0.7	-8.1 ± 0.2	-3.5 ± 0.4	-4.5 ± 0.3	-5.5 ± 0.3	-4.7 ± 0.4	-3.0 ± 0.4	-5.4 ± 0.1	-2.3 ± 0.4	-3.3 ± 0.2	-3.3 ± 0.4	-5.5 ± 0.4	E Europe M	E Asia F
48	-4.5 ± 0.6	-8.2 ± 0.2	-3.7 ± 0.3	-4.3 ± 0.3	-5.5 ± 0.3	-5.1 ± 0.4	-3.6 ± 0.5	-5.8 ± 0.2	-2.3 ± 0.4	-3.5 ± 0.2	-2.9 ± 0.4	-6.1 ± 0.4	E Europe M	E Asia F
49	-3.9 ± 0.7	-8.3 ± 0.2	-3.7 ± 0.3	-4.2 ± 0.3	-5.3 ± 0.3	-5.5 ± 0.5	-3.7 ± 0.6	-6.2 ± 0.2	-2.1 ± 0.4	-3.4 ± 0.2	-3.4 ± 0.4	-6.1 ± 0.4	E Europe M	E Asia F
50	-4.6 ± 0.7	-8.3 ± 0.2	-3.5 ± 0.3	-4.6 ± 0.3	-4.9 ± 0.4	-5.4 ± 0.5	-4.0 ± 0.6	-6.3 ± 0.2	-2.4 ± 0.4	-3.5 ± 0.3	-2.8 ± 0.5	-6.2 ± 0.4	E Europe M	E Asia F
51	-4.1 ± 0.6	-8.4 ± 0.2	-3.7 ± 0.3	-4.3 ± 0.3	-5.1 ± 0.4	-6.0 ± 0.5	-4.2 ± 0.6	-6.3 ± 0.2	-1.7 ± 0.4	-3.8 ± 0.3	-2.4 ± 0.5	-6.7 ± 0.5	E Europe M	E Asia F
52	-4.4 ± 0.7	-8.2 ± 0.2	-3.7 ± 0.3	-4.7 ± 0.3	-4.8 ± 0.4	-6.1 ± 0.6	-3.5 ± 0.7	-6.6 ± 0.2	-2.0 ± 0.3	-4.0 ± 0.2	-2.9 ± 0.5	-6.8 ± 0.5	E Europe M	E Asia F

Table 35. *Mean raw error for Application-type images for algorithm cvut-002. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	4.3 ± 0.3	3.4 ± 0.1	2.7 ± 0.2	2.6 ± 0.1	2.8 ± 0.2	5.1 ± 0.3	1.6 ± 0.2	2.2 ± 0.1	0.9 ± 0.2	1.2 ± 0.1	1.5 ± 0.2	2.0 ± 0.4	W Africa F	E Europe M
15	4.0 ± 0.4	3.3 ± 0.1	2.7 ± 0.2	2.9 ± 0.2	2.8 ± 0.3	4.7 ± 0.3	1.5 ± 0.3	2.4 ± 0.1	0.9 ± 0.3	1.5 ± 0.1	1.9 ± 0.3	2.4 ± 0.3	W Africa F	E Europe M
16	3.8 ± 0.3	3.0 ± 0.1	2.4 ± 0.2	2.5 ± 0.2	2.7 ± 0.3	4.7 ± 0.4	2.0 ± 0.3	2.24 ± 0.10	1.2 ± 0.2	1.8 ± 0.1	2.1 ± 0.2	2.3 ± 0.3	W Africa F	E Europe M
17	3.7 ± 0.3	2.47 ± 0.10	2.0 ± 0.3	2.3 ± 0.2	2.0 ± 0.3	4.2 ± 0.3	2.1 ± 0.4	2.0 ± 0.1	1.0 ± 0.2	2.2 ± 0.2	2.0 ± 0.2	2.7 ± 0.4	W Africa F	E Europe M
18	2.9 ± 0.3	1.57 ± 0.10	1.4 ± 0.2	1.7 ± 0.1	1.4 ± 0.2	3.6 ± 0.3	2.3 ± 0.3	1.27 ± 0.10	0.9 ± 0.2	1.9 ± 0.2	1.3 ± 0.2	2.4 ± 0.4	W Africa F	E Europe M
19	2.8 ± 0.3	1.0 ± 0.1	1.0 ± 0.2	1.5 ± 0.2	1.1 ± 0.2	3.6 ± 0.3	2.4 ± 0.3	0.8 ± 0.1	0.8 ± 0.2	2.0 ± 0.1	0.8 ± 0.2	2.6 ± 0.4	W Africa F	S E Asia M
20	2.5 ± 0.3	0.5 ± 0.1	0.7 ± 0.2	1.1 ± 0.2	0.5 ± 0.1	3.4 ± 0.3	2.6 ± 0.3	0.37 ± 0.10	1.2 ± 0.2	2.0 ± 0.1	0.5 ± 0.2	2.9 ± 0.3	W Africa F	E Asia M
21	2.2 ± 0.3	-0.0 ± 0.1	0.3 ± 0.2	0.8 ± 0.1	-0.0 ± 0.1	2.9 ± 0.3	2.4 ± 0.3	-0.18 ± 0.09	0.9 ± 0.2	1.9 ± 0.1	0.2 ± 0.1	2.7 ± 0.3	W Africa F	E Asia M
22	1.9 ± 0.3	-0.81 ± 0.09	-0.1 ± 0.2	0.3 ± 0.1	-0.8 ± 0.1	2.6 ± 0.3	2.8 ± 0.3	-0.70 ± 0.09	1.1 ± 0.2	1.6 ± 0.2	-0.4 ± 0.1	2.6 ± 0.3	E Africa M	S E Asia F
23	1.3 ± 0.3	-1.23 ± 0.10	-0.4 ± 0.2	0.1 ± 0.1	-1.3 ± 0.1	2.3 ± 0.3	2.6 ± 0.3	-1.20 ± 0.10	0.7 ± 0.2	1.5 ± 0.2	-0.9 ± 0.2	2.7 ± 0.3	W Africa M	S E Asia F
24	1.0 ± 0.3	-1.88 ± 0.09	-0.8 ± 0.1	-0.4 ± 0.1	-1.7 ± 0.1	1.8 ± 0.2	2.3 ± 0.3	-1.7 ± 0.1	0.6 ± 0.2	1.3 ± 0.1	-1.4 ± 0.2	2.5 ± 0.2	W Africa M	E Asia F
25	0.4 ± 0.3	-2.40 ± 0.10	-1.1 ± 0.1	-1.0 ± 0.1	-2.3 ± 0.1	1.4 ± 0.3	2.2 ± 0.3	-2.1 ± 0.1	0.5 ± 0.2	1.1 ± 0.1	-1.6 ± 0.2	2.1 ± 0.3	E Africa M	E Asia F
26	-0.0 ± 0.3	-2.92 ± 0.09	-1.5 ± 0.1	-1.50 ± 0.10	-2.7 ± 0.1	0.8 ± 0.3	1.8 ± 0.3	-2.4 ± 0.1	0.1 ± 0.2	0.7 ± 0.1	-2.0 ± 0.2	1.9 ± 0.2	W Africa M	E Asia F
27	-0.3 ± 0.3	-3.38 ± 0.09	-1.7 ± 0.1	-2.0 ± 0.1	-3.2 ± 0.1	0.6 ± 0.2	1.6 ± 0.2	-2.8 ± 0.1	0.4 ± 0.2	0.4 ± 0.1	-2.0 ± 0.2	1.4 ± 0.2	E Africa M	E Asia F
28	-0.7 ± 0.3	-3.78 ± 0.09	-1.9 ± 0.1	-2.41 ± 0.10	-3.6 ± 0.1	0.2 ± 0.2	1.1 ± 0.2	-3.1 ± 0.1	0.5 ± 0.2	-0.1 ± 0.1	-2.4 ± 0.2	1.0 ± 0.2	E Africa M	E Asia F
29	-0.9 ± 0.3	-4.15 ± 0.09	-2.0 ± 0.2	-2.9 ± 0.1	-3.8 ± 0.1	-0.2 ± 0.2	0.8 ± 0.3	-3.3 ± 0.1	0.1 ± 0.2	-0.5 ± 0.1	-2.9 ± 0.2	1.0 ± 0.2	W Africa M	E Asia F
30	-1.3 ± 0.3	-4.50 ± 0.09	-2.3 ± 0.2	-3.3 ± 0.1	-4.1 ± 0.2	-0.7 ± 0.2	0.8 ± 0.2	-3.8 ± 0.1	0.1 ± 0.2	-1.0 ± 0.1	-3.1 ± 0.2	0.5 ± 0.2	E Africa M	E Asia F
31	-1.7 ± 0.3	-4.91 ± 0.10	-2.2 ± 0.2	-3.8 ± 0.1	-4.6 ± 0.2	-1.1 ± 0.3	0.6 ± 0.3	-4.0 ± 0.1	-0.2 ± 0.2	-1.3 ± 0.1	-3.3 ± 0.2	0.1 ± 0.2	E Africa M	E Asia F
32	-1.6 ± 0.3	-5.24 ± 0.10	-2.4 ± 0.2	-4.1 ± 0.1	-4.8 ± 0.2	-1.4 ± 0.3	0.1 ± 0.2	-4.2 ± 0.1	-0.1 ± 0.2	-1.8 ± 0.1	-3.4 ± 0.3	-0.3 ± 0.2	E Africa M	E Asia F
33	-2.1 ± 0.3	-5.5 ± 0.1	-2.5 ± 0.2	-4.4 ± 0.1	-5.1 ± 0.2	-1.6 ± 0.3	-0.1 ± 0.3	-4.4 ± 0.1	-0.0 ± 0.2	-2.1 ± 0.1	-3.6 ± 0.2	-0.5 ± 0.2	E Europe M	E Asia F
34	-2.5 ± 0.3	-5.7 ± 0.1	-2.7 ± 0.2	-4.6 ± 0.1	-5.1 ± 0.2	-2.1 ± 0.3	-0.5 ± 0.2	-4.7 ± 0.1	-0.3 ± 0.2	-2.4 ± 0.1	-4.0 ± 0.3	-1.0 ± 0.2	E Europe M	E Asia F
35	-2.5 ± 0.3	-6.0 ± 0.1	-2.7 ± 0.2	-5.0 ± 0.1	-5.5 ± 0.2	-2.4 ± 0.3	-0.7 ± 0.3	-4.8 ± 0.1	-0.5 ± 0.2	-2.6 ± 0.1	-4.0 ± 0.3	-1.5 ± 0.2	E Europe M	E Asia F
36	-2.7 ± 0.4	-6.1 ± 0.1	-2.7 ± 0.2	-5.3 ± 0.1	-5.5 ± 0.2	-2.5 ± 0.3	-1.1 ± 0.3	-4.9 ± 0.1	-0.5 ± 0.2	-2.9 ± 0.1	-4.1 ± 0.3	-1.9 ± 0.2	E Europe M	E Asia F
37	-2.7 ± 0.4	-6.3 ± 0.1	-2.9 ± 0.2	-5.4 ± 0.1	-5.9 ± 0.2	-3.1 ± 0.3	-1.1 ± 0.3	-5.1 ± 0.1	-0.7 ± 0.2	-3.2 ± 0.1	-4.4 ± 0.3	-2.3 ± 0.2	E Europe M	E Asia F
38	-2.7 ± 0.4	-6.5 ± 0.1	-2.8 ± 0.2	-5.5 ± 0.2	-5.6 ± 0.2	-3.3 ± 0.3	-1.6 ± 0.3	-5.1 ± 0.1	-1.0 ± 0.2	-3.3 ± 0.1	-4.1 ± 0.3	-2.6 ± 0.2	E Europe M	E Asia F
39	-2.8 ± 0.4	-6.7 ± 0.1	-3.0 ± 0.3	-5.7 ± 0.2	-5.7 ± 0.2	-3.5 ± 0.3	-1.4 ± 0.3	-5.3 ± 0.1	-0.9 ± 0.2	-3.6 ± 0.1	-4.1 ± 0.3	-3.0 ± 0.2	E Europe M	E Asia F
40	-3.1 ± 0.4	-6.8 ± 0.1	-2.6 ± 0.3	-5.6 ± 0.2	-6.0 ± 0.2	-4.0 ± 0.3	-1.6 ± 0.3	-5.5 ± 0.2	-1.1 ± 0.3	-3.6 ± 0.1	-4.4 ± 0.3	-3.4 ± 0.3	E Europe M	E Asia F
41	-3.8 ± 0.4	-6.9 ± 0.1	-3.1 ± 0.3	-5.8 ± 0.2	-5.9 ± 0.2	-4.3 ± 0.3	-2.0 ± 0.3	-5.5 ± 0.1	-1.2 ± 0.3	-3.8 ± 0.2	-4.3 ± 0.3	-3.8 ± 0.3	E Europe M	E Asia F
42	-3.3 ± 0.4	-7.1 ± 0.1	-3.0 ± 0.3	-5.4 ± 0.2	-6.2 ± 0.2	-4.3 ± 0.3	-2.3 ± 0.4	-5.6 ± 0.2	-1.0 ± 0.3	-3.9 ± 0.2	-4.2 ± 0.3	-3.9 ± 0.2	E Europe M	E Asia F
43	-3.2 ± 0.4	-7.3 ± 0.1	-2.8 ± 0.3	-5.7 ± 0.2	-6.4 ± 0.3	-4.8 ± 0.4	-2.0 ± 0.4	-5.7 ± 0.2	-1.2 ± 0.3	-3.9 ± 0.2	-4.3 ± 0.3	-4.7 ± 0.3	E Europe M	E Asia F
44	-3.3 ± 0.5	-7.5 ± 0.1	-3.0 ± 0.3	-5.6 ± 0.3	-5.8 ± 0.2	-5.3 ± 0.4	-2.5 ± 0.3	-5.8 ± 0.2	-1.1 ± 0.3	-4.1 ± 0.2	-4.2 ± 0.3	-4.8 ± 0.3	E Europe M	E Asia F
45	-3.8 ± 0.5	-7.6 ± 0.1	-3.0 ± 0.3	-5.3 ± 0.2	-6.1 ± 0.3	-5.4 ± 0.4	-3.0 ± 0.5	-5.8 ± 0.1	-1.1 ± 0.3	-3.8 ± 0.2	-4.2 ± 0.3	-5.1 ± 0.3	E Europe M	E Asia F
46	-3.1 ± 0.5	-7.7 ± 0.1	-3.1 ± 0.3	-5.1 ± 0.3	-6.3 ± 0.3	-5.6 ± 0.4	-2.9 ± 0.5	-5.9 ± 0.2	-1.3 ± 0.4	-3.9 ± 0.2	-4.1 ± 0.4	-5.4 ± 0.3	E Europe M	E Asia F
47	-3.5 ± 0.6	-7.7 ± 0.1	-3.0 ± 0.3	-5.1 ± 0.3	-6.2 ± 0.3	-5.8 ± 0.4	-2.7 ± 0.5	-6.0 ± 0.2	-1.2 ± 0.3	-3.9 ± 0.2	-3.8 ± 0.3	-5.3 ± 0.3	E Europe M	E Asia F
48	-4.0 ± 0.6	-7.8 ± 0.1	-3.0 ± 0.3	-4.9 ± 0.3	-6.2 ± 0.3	-5.9 ± 0.4	-3.5 ± 0.6	-5.8 ± 0.2	-1.1 ± 0.4	-3.9 ± 0.2	-3.8 ± 0.4	-6.0 ± 0.4	E Europe M	E Asia F
49	-3.4 ± 0.6	-7.9 ± 0.2	-3.3 ± 0.4	-4.9 ± 0.3	-6.3 ± 0.3	-6.3 ± 0.4	-3.4 ± 0.5	-5.8 ± 0.2	-1.1 ± 0.3	-3.9 ± 0.3	-3.7 ± 0.4	-6.1 ± 0.3	E Europe M	E Asia F
50	-4.4 ± 0.6	-7.9 ± 0.2	-2.8 ± 0.4	-4.8 ± 0.3	-6.2 ± 0.3	-6.3 ± 0.5	-3.6 ± 0.5	-5.8 ± 0.2	-1.3 ± 0.4	-3.9 ± 0.3	-3.2 ± 0.4	-6.3 ± 0.4	E Europe M	E Asia F
51	-3.9 ± 0.6	-7.9 ± 0.2	-2.7 ± 0.3	-4.6 ± 0.3	-6.3 ± 0.3	-6.7 ± 0.4	-3.9 ± 0.6	-5.7 ± 0.2	-0.8 ± 0.3	-4.1 ± 0.3	-2.9 ± 0.4	-6.4 ± 0.4	E Europe M	E Asia F
52	-4.2 ± 0.8	-8.0 ± 0.2	-2.7 ± 0.3	-4.7 ± 0.3	-5.7 ± 0.3	-7.0 ± 0.5	-3.9 ± 0.7	-5.7 ± 0.2	-0.9 ± 0.3	-4.0 ± 0.3	-3.6 ± 0.4	-7.0 ± 0.5	E Europe M	E Asia F

Table 36. *Mean raw error for Application-type images for algorithm cvut-003. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	4.8 ± 0.2	3.73 ± 0.08	3.1 ± 0.1	3.4 ± 0.1	3.5 ± 0.2	5.5 ± 0.3	2.6 ± 0.2	2.46 ± 0.08	1.4 ± 0.1	1.89 ± 0.09	2.0 ± 0.2	2.8 ± 0.2	W Africa F	E Europe M
15	4.3 ± 0.3	3.56 ± 0.09	3.0 ± 0.2	3.3 ± 0.2	3.3 ± 0.2	5.0 ± 0.3	2.2 ± 0.2	2.50 ± 0.09	1.3 ± 0.2	1.9 ± 0.1	2.2 ± 0.2	2.7 ± 0.3	W Africa F	E Europe M
16	4.1 ± 0.3	3.21 ± 0.10	2.7 ± 0.2	2.9 ± 0.1	3.2 ± 0.2	5.0 ± 0.4	2.6 ± 0.3	2.33 ± 0.08	1.5 ± 0.2	2.2 ± 0.1	2.3 ± 0.2	2.5 ± 0.3	W Africa F	E Europe M
17	4.0 ± 0.3	2.75 ± 0.09	2.3 ± 0.2	2.7 ± 0.1	2.7 ± 0.2	4.7 ± 0.3	2.5 ± 0.2	2.13 ± 0.09	1.3 ± 0.2	2.5 ± 0.1	2.2 ± 0.2	2.9 ± 0.4	W Africa F	E Europe M
18	3.0 ± 0.3	1.97 ± 0.08	1.7 ± 0.2	2.1 ± 0.1	1.9 ± 0.1	4.2 ± 0.3	2.5 ± 0.2	1.56 ± 0.07	1.3 ± 0.2	2.2 ± 0.1	1.7 ± 0.2	2.7 ± 0.3	W Africa F	E Europe M
19	3.0 ± 0.3	1.45 ± 0.09	1.3 ± 0.2	1.9 ± 0.1	1.6 ± 0.1	4.3 ± 0.3	2.5 ± 0.3	1.20 ± 0.07	1.0 ± 0.2	2.3 ± 0.1	1.2 ± 0.1	2.8 ± 0.3	W Africa F	E Europe M
20	2.6 ± 0.3	1.0 ± 0.1	1.0 ± 0.2	1.4 ± 0.1	1.1 ± 0.1	4.1 ± 0.3	2.8 ± 0.3	0.75 ± 0.08	1.2 ± 0.2	2.2 ± 0.1	0.9 ± 0.1	2.8 ± 0.3	W Africa F	E Asia M
21	2.3 ± 0.3	0.53 ± 0.10	0.5 ± 0.2	1.1 ± 0.1	0.6 ± 0.1	3.6 ± 0.3	2.7 ± 0.3	0.24 ± 0.07	1.0 ± 0.2	1.9 ± 0.1	0.5 ± 0.1	2.7 ± 0.3	W Africa F	E Asia M
22	2.3 ± 0.3	-0.18 ± 0.09	0.2 ± 0.2	0.7 ± 0.1	-0.1 ± 0.1	3.2 ± 0.3	3.0 ± 0.3	-0.23 ± 0.08	0.9 ± 0.2	1.6 ± 0.1	-0.1 ± 0.1	2.6 ± 0.3	W Africa F	E Asia M
23	1.7 ± 0.3	-0.50 ± 0.09	-0.2 ± 0.2	0.4 ± 0.1	-0.4 ± 0.1	3.1 ± 0.3	2.7 ± 0.3	-0.64 ± 0.09	0.4 ± 0.2	1.4 ± 0.1	-0.5 ± 0.1	2.7 ± 0.3	W Africa F	E Asia M
24	1.4 ± 0.3	-1.11 ± 0.09	-0.6 ± 0.1	-0.1 ± 0.1	-0.8 ± 0.1	2.5 ± 0.3	2.6 ± 0.3	-1.03 ± 0.10	0.4 ± 0.2	1.2 ± 0.1	-0.8 ± 0.1	2.5 ± 0.2	E Africa M	E Asia F
25	0.9 ± 0.3	-1.54 ± 0.08	-0.8 ± 0.1	-0.58 ± 0.10	-1.3 ± 0.1	2.2 ± 0.3	2.5 ± 0.3	-1.3 ± 0.1	0.2 ± 0.2	0.9 ± 0.1	-1.1 ± 0.2	2.2 ± 0.2	E Africa M	E Asia F
26	0.5 ± 0.3	-2.01 ± 0.09	-1.1 ± 0.1	-1.15 ± 0.09	-1.6 ± 0.1	1.8 ± 0.2	2.2 ± 0.2	-1.6 ± 0.1	-0.2 ± 0.2	0.6 ± 0.1	-1.3 ± 0.2	2.0 ± 0.2	E Africa M	E Asia F
27	0.4 ± 0.3	-2.43 ± 0.08	-1.3 ± 0.1	-1.57 ± 0.09	-2.0 ± 0.1	1.5 ± 0.2	1.9 ± 0.2	-2.0 ± 0.1	-0.1 ± 0.2	0.3 ± 0.1	-1.3 ± 0.2	1.7 ± 0.2	E Africa M	E Asia F
28	0.1 ± 0.3	-2.77 ± 0.09	-1.4 ± 0.1	-1.96 ± 0.09	-2.3 ± 0.1	1.1 ± 0.2	1.5 ± 0.2	-2.1 ± 0.1	-0.0 ± 0.2	-0.1 ± 0.1	-1.6 ± 0.2	1.3 ± 0.2	E Africa M	E Asia F
29	-0.1 ± 0.3	-3.03 ± 0.09	-1.5 ± 0.1	-2.34 ± 0.10	-2.6 ± 0.1	0.9 ± 0.2	1.3 ± 0.2	-2.2 ± 0.1	-0.3 ± 0.2	-0.51 ± 0.10	-2.0 ± 0.2	1.3 ± 0.2	E Africa M	E Asia F
30	-0.4 ± 0.3	-3.39 ± 0.09	-1.7 ± 0.2	-2.7 ± 0.1	-2.7 ± 0.2	0.4 ± 0.2	1.2 ± 0.2	-2.5 ± 0.1	-0.3 ± 0.2	-0.90 ± 0.09	-2.1 ± 0.2	0.9 ± 0.2	E Africa M	E Asia F
31	-0.7 ± 0.3	-3.66 ± 0.09	-1.5 ± 0.2	-3.2 ± 0.1	-3.1 ± 0.2	0.1 ± 0.2	1.0 ± 0.2	-2.6 ± 0.1	-0.5 ± 0.2	-1.22 ± 0.10	-2.3 ± 0.2	0.6 ± 0.2	E Africa M	E Asia F
32	-0.6 ± 0.3	-3.94 ± 0.10	-1.7 ± 0.2	-3.4 ± 0.1	-3.2 ± 0.2	-0.3 ± 0.2	0.6 ± 0.2	-2.8 ± 0.1	-0.3 ± 0.2	-1.57 ± 0.10	-2.1 ± 0.2	0.2 ± 0.2	E Africa M	E Asia F
33	-1.2 ± 0.3	-4.0 ± 0.1	-1.8 ± 0.2	-3.7 ± 0.1	-3.5 ± 0.2	-0.4 ± 0.2	0.4 ± 0.2	-2.8 ± 0.1	-0.3 ± 0.2	-1.8 ± 0.1	-2.4 ± 0.2	-0.2 ± 0.2	E Africa M	E Asia F
34	-1.4 ± 0.3	-4.2 ± 0.1	-1.9 ± 0.2	-3.9 ± 0.1	-3.5 ± 0.2	-1.0 ± 0.2	-0.0 ± 0.2	-3.0 ± 0.1	-0.6 ± 0.2	-2.1 ± 0.1	-2.5 ± 0.3	-0.5 ± 0.2	E Africa M	E Asia F
35	-1.5 ± 0.3	-4.5 ± 0.1	-1.9 ± 0.2	-4.2 ± 0.1	-3.7 ± 0.2	-1.3 ± 0.2	-0.2 ± 0.2	-3.1 ± 0.1	-0.7 ± 0.2	-2.4 ± 0.1	-2.7 ± 0.3	-1.0 ± 0.2	E Africa M	E Asia F
36	-1.7 ± 0.3	-4.4 ± 0.1	-1.8 ± 0.2	-4.4 ± 0.1	-3.6 ± 0.2	-1.5 ± 0.2	-0.6 ± 0.2	-3.2 ± 0.1	-0.6 ± 0.2	-2.6 ± 0.1	-2.6 ± 0.2	-1.4 ± 0.2	E Africa M	S Asia F
37	-1.8 ± 0.3	-4.6 ± 0.1	-2.0 ± 0.2	-4.5 ± 0.1	-4.1 ± 0.2	-2.0 ± 0.3	-0.6 ± 0.2	-3.4 ± 0.1	-0.9 ± 0.2	-2.9 ± 0.1	-2.8 ± 0.2	-1.8 ± 0.2	E Africa M	E Asia F
38	-1.8 ± 0.3	-4.7 ± 0.1	-1.9 ± 0.2	-4.6 ± 0.2	-3.8 ± 0.2	-2.3 ± 0.3	-1.1 ± 0.3	-3.5 ± 0.1	-1.2 ± 0.2	-3.1 ± 0.1	-2.7 ± 0.2	-2.2 ± 0.2	E Africa M	E Asia F
39	-2.0 ± 0.3	-4.9 ± 0.1	-2.2 ± 0.2	-4.8 ± 0.2	-4.0 ± 0.2	-2.6 ± 0.3	-1.1 ± 0.3	-3.6 ± 0.1	-1.1 ± 0.2	-3.3 ± 0.1	-2.8 ± 0.2	-2.6 ± 0.2	E Africa M	E Asia F
40	-2.3 ± 0.4	-5.0 ± 0.1	-1.9 ± 0.2	-4.7 ± 0.2	-4.2 ± 0.2	-3.1 ± 0.3	-1.2 ± 0.3	-3.9 ± 0.1	-1.1 ± 0.2	-3.3 ± 0.1	-3.0 ± 0.2	-3.0 ± 0.2	E Europe M	E Asia F
41	-3.1 ± 0.4	-5.1 ± 0.1	-2.2 ± 0.2	-4.8 ± 0.2	-4.3 ± 0.2	-3.5 ± 0.3	-1.6 ± 0.3	-4.0 ± 0.1	-1.3 ± 0.2	-3.5 ± 0.1	-3.2 ± 0.2	-3.3 ± 0.2	E Europe M	E Asia F
42	-2.6 ± 0.4	-5.2 ± 0.1	-2.2 ± 0.2	-4.5 ± 0.2	-4.5 ± 0.2	-3.6 ± 0.3	-1.8 ± 0.3	-4.2 ± 0.1	-1.0 ± 0.2	-3.6 ± 0.2	-3.1 ± 0.2	-3.6 ± 0.2	E Europe M	E Asia F
43	-2.6 ± 0.4	-5.5 ± 0.1	-2.2 ± 0.2	-4.8 ± 0.2	-4.7 ± 0.2	-4.0 ± 0.3	-1.5 ± 0.3	-4.2 ± 0.1	-1.3 ± 0.3	-3.6 ± 0.2	-3.2 ± 0.3	-4.2 ± 0.2	E Europe M	E Asia F
44	-2.8 ± 0.4	-5.7 ± 0.1	-2.5 ± 0.3	-4.7 ± 0.2	-4.3 ± 0.2	-4.3 ± 0.3	-2.2 ± 0.3	-4.4 ± 0.1	-1.0 ± 0.3	-3.7 ± 0.2	-3.1 ± 0.3	-4.4 ± 0.2	E Europe M	E Asia F
45	-3.2 ± 0.4	-5.8 ± 0.1	-2.5 ± 0.3	-4.6 ± 0.2	-4.7 ± 0.2	-4.5 ± 0.3	-2.4 ± 0.3	-4.6 ± 0.1	-1.1 ± 0.3	-3.5 ± 0.2	-3.2 ± 0.3	-4.7 ± 0.3	E Europe M	E Asia F
46	-2.6 ± 0.5	-6.0 ± 0.1	-2.6 ± 0.3	-4.3 ± 0.2	-4.9 ± 0.2	-4.9 ± 0.3	-2.4 ± 0.4	-4.6 ± 0.1	-1.0 ± 0.3	-3.3 ± 0.2	-3.2 ± 0.3	-5.1 ± 0.3	E Europe M	E Asia F
47	-2.8 ± 0.5	-6.1 ± 0.1	-2.5 ± 0.3	-4.3 ± 0.2	-4.8 ± 0.2	-5.0 ± 0.3	-2.2 ± 0.4	-4.7 ± 0.1	-1.1 ± 0.3	-3.4 ± 0.2	-3.0 ± 0.3	-5.0 ± 0.3	E Europe M	E Asia F
48	-3.4 ± 0.6	-6.2 ± 0.1	-2.5 ± 0.3	-4.1 ± 0.3	-5.0 ± 0.2	-5.3 ± 0.4	-2.9 ± 0.4	-4.7 ± 0.1	-0.9 ± 0.3	-3.3 ± 0.2	-3.0 ± 0.3	-5.8 ± 0.3	E Europe M	E Asia F
49	-3.0 ± 0.6	-6.3 ± 0.1	-2.7 ± 0.3	-4.0 ± 0.3	-4.9 ± 0.2	-5.7 ± 0.4	-3.1 ± 0.5	-4.8 ± 0.2	-0.9 ± 0.3	-3.4 ± 0.2	-2.9 ± 0.3	-6.0 ± 0.3	E Europe M	E Asia F
50	-3.9 ± 0.6	-6.4 ± 0.1	-2.4 ± 0.3	-4.0 ± 0.2	-5.0 ± 0.3	-5.6 ± 0.4	-3.3 ± 0.5	-4.7 ± 0.2	-1.1 ± 0.3	-3.4 ± 0.2	-2.5 ± 0.3	-6.1 ± 0.3	E Europe M	E Asia F
51	-3.3 ± 0.6	-6.4 ± 0.1	-2.5 ± 0.3	-3.9 ± 0.3	-5.1 ± 0.2	-6.1 ± 0.4	-3.5 ± 0.5	-4.7 ± 0.2	-0.7 ± 0.3	-3.4 ± 0.3	-2.4 ± 0.3	-6.4 ± 0.3	E Europe M	W Africa M
52	-3.4 ± 0.7	-6.4 ± 0.1	-2.3 ± 0.3	-4.0 ± 0.3	-4.7 ± 0.2	-6.5 ± 0.4	-3.3 ± 0.5	-4.7 ± 0.2	-0.8 ± 0.3	-3.4 ± 0.3	-2.8 ± 0.4	-6.6 ± 0.4	E Europe M	W Africa M

Table 37. *Mean raw error for Application-type images for algorithm cyberlink-000. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	5.8 ± 0.3	5.3 ± 0.1	4.7 ± 0.2	4.9 ± 0.2	5.5 ± 0.3	6.6 ± 0.3	5.0 ± 0.3	4.0 ± 0.1	2.8 ± 0.2	3.4 ± 0.1	4.0 ± 0.3	5.1 ± 0.4	W Africa F	E Europe M
15	5.5 ± 0.3	5.2 ± 0.1	4.7 ± 0.2	4.9 ± 0.2	5.6 ± 0.3	6.3 ± 0.4	4.6 ± 0.3	4.3 ± 0.1	3.2 ± 0.2	3.8 ± 0.2	4.4 ± 0.3	4.8 ± 0.4	W Africa F	E Europe M
16	5.5 ± 0.3	5.2 ± 0.1	4.9 ± 0.2	4.7 ± 0.2	5.3 ± 0.3	6.3 ± 0.5	5.0 ± 0.3	4.1 ± 0.1	3.5 ± 0.2	3.9 ± 0.2	4.4 ± 0.3	5.0 ± 0.3	W Africa F	E Europe M
17	5.6 ± 0.4	4.8 ± 0.1	4.3 ± 0.2	4.4 ± 0.2	5.1 ± 0.2	5.8 ± 0.4	4.9 ± 0.3	4.2 ± 0.1	3.2 ± 0.2	4.3 ± 0.2	4.4 ± 0.3	5.2 ± 0.3	W Africa F	E Europe M
18	4.7 ± 0.3	4.2 ± 0.1	3.8 ± 0.2	3.9 ± 0.1	4.6 ± 0.2	5.1 ± 0.3	4.7 ± 0.3	3.7 ± 0.1	3.0 ± 0.2	3.9 ± 0.1	4.2 ± 0.2	4.6 ± 0.3	W Africa F	E Europe M
19	4.6 ± 0.3	3.8 ± 0.1	3.3 ± 0.2	3.5 ± 0.1	4.2 ± 0.2	5.2 ± 0.3	4.7 ± 0.3	3.8 ± 0.1	2.9 ± 0.2	4.1 ± 0.1	4.0 ± 0.2	4.7 ± 0.3	W Africa F	E Europe M
20	4.3 ± 0.3	3.4 ± 0.1	2.8 ± 0.2	3.0 ± 0.2	3.8 ± 0.1	4.7 ± 0.3	4.8 ± 0.3	3.6 ± 0.1	2.8 ± 0.2	4.2 ± 0.1	4.1 ± 0.2	4.5 ± 0.3	E Africa M	E Europe M
21	4.0 ± 0.3	2.91 ± 0.10	2.3 ± 0.2	2.3 ± 0.1	3.1 ± 0.1	4.3 ± 0.3	4.6 ± 0.2	3.5 ± 0.1	2.4 ± 0.2	4.0 ± 0.1	3.9 ± 0.2	4.2 ± 0.3	E Africa M	S Asia F
22	3.8 ± 0.3	2.42 ± 0.09	2.0 ± 0.2	1.7 ± 0.1	2.7 ± 0.1	4.0 ± 0.3	4.8 ± 0.3	3.3 ± 0.1	2.3 ± 0.2	3.7 ± 0.1	3.5 ± 0.2	3.9 ± 0.3	E Africa M	S Asia F
23	3.0 ± 0.3	2.00 ± 0.09	1.6 ± 0.1	1.2 ± 0.1	2.2 ± 0.1	3.6 ± 0.3	4.3 ± 0.3	3.1 ± 0.1	2.0 ± 0.2	3.6 ± 0.1	3.2 ± 0.2	3.9 ± 0.2	E Africa M	S Asia F
24	2.7 ± 0.3	1.35 ± 0.08	1.2 ± 0.1	0.6 ± 0.1	1.8 ± 0.1	2.9 ± 0.3	4.2 ± 0.2	2.9 ± 0.1	1.8 ± 0.2	3.3 ± 0.1	3.0 ± 0.2	3.5 ± 0.2	E Africa M	S Asia F
25	2.1 ± 0.3	0.89 ± 0.08	0.7 ± 0.1	0.05 ± 0.10	1.2 ± 0.1	2.8 ± 0.3	4.0 ± 0.2	2.5 ± 0.1	1.6 ± 0.1	2.9 ± 0.1	2.7 ± 0.2	3.2 ± 0.2	E Africa M	S Asia F
26	1.6 ± 0.3	0.36 ± 0.08	0.3 ± 0.1	-0.60 ± 0.10	0.8 ± 0.1	2.3 ± 0.3	3.6 ± 0.2	2.2 ± 0.1	1.2 ± 0.1	2.5 ± 0.1	2.4 ± 0.2	2.9 ± 0.2	E Africa M	S Asia F
27	1.5 ± 0.3	-0.17 ± 0.08	0.0 ± 0.1	-1.08 ± 0.10	0.3 ± 0.1	2.1 ± 0.3	3.3 ± 0.2	1.9 ± 0.1	1.0 ± 0.1	2.1 ± 0.1	2.3 ± 0.2	2.5 ± 0.2	E Africa M	S Asia F
28	1.0 ± 0.3	-0.62 ± 0.08	-0.3 ± 0.1	-1.4 ± 0.1	-0.1 ± 0.1	1.6 ± 0.3	2.8 ± 0.2	1.6 ± 0.1	0.8 ± 0.1	1.61 ± 0.09	1.9 ± 0.2	2.0 ± 0.2	E Africa M	S Asia F
29	0.8 ± 0.3	-1.03 ± 0.08	-0.6 ± 0.1	-1.8 ± 0.1	-0.5 ± 0.1	1.1 ± 0.3	2.6 ± 0.2	1.24 ± 0.10	0.4 ± 0.1	1.17 ± 0.09	1.4 ± 0.2	2.0 ± 0.2	E Africa M	S Asia F
30	0.3 ± 0.3	-1.45 ± 0.08	-1.0 ± 0.1	-2.2 ± 0.1	-0.7 ± 0.1	0.5 ± 0.3	2.5 ± 0.2	0.88 ± 0.10	0.1 ± 0.2	0.73 ± 0.09	1.2 ± 0.2	1.5 ± 0.2	E Africa M	S Asia F
31	-0.0 ± 0.3	-1.77 ± 0.08	-1.2 ± 0.2	-2.6 ± 0.1	-1.1 ± 0.1	0.3 ± 0.3	2.4 ± 0.2	0.6 ± 0.1	-0.0 ± 0.2	0.43 ± 0.09	0.8 ± 0.2	1.2 ± 0.2	E Africa M	S Asia F
32	0.2 ± 0.3	-2.22 ± 0.09	-1.4 ± 0.2	-2.9 ± 0.1	-1.3 ± 0.2	-0.0 ± 0.3	1.9 ± 0.2	0.1 ± 0.1	-0.1 ± 0.2	0.11 ± 0.09	0.7 ± 0.2	0.8 ± 0.2	E Africa M	S Asia F
33	-0.3 ± 0.3	-2.47 ± 0.09	-1.9 ± 0.2	-3.2 ± 0.1	-1.7 ± 0.2	-0.1 ± 0.3	1.8 ± 0.3	-0.2 ± 0.1	0.0 ± 0.2	-0.21 ± 0.10	0.5 ± 0.2	0.5 ± 0.2	E Africa M	S Asia F
34	-0.8 ± 0.3	-2.68 ± 0.10	-1.9 ± 0.2	-3.4 ± 0.1	-1.9 ± 0.2	-0.6 ± 0.3	1.3 ± 0.3	-0.6 ± 0.1	-0.3 ± 0.2	-0.5 ± 0.1	0.2 ± 0.2	0.2 ± 0.2	E Africa M	S Asia F
35	-0.8 ± 0.4	-3.1 ± 0.1	-1.9 ± 0.2	-3.7 ± 0.1	-2.1 ± 0.2	-0.9 ± 0.3	1.2 ± 0.3	-0.8 ± 0.1	-0.3 ± 0.2	-0.7 ± 0.1	-0.1 ± 0.2	-0.1 ± 0.2	E Africa M	S Asia F
36	-0.6 ± 0.4	-3.1 ± 0.1	-2.0 ± 0.2	-3.9 ± 0.1	-2.0 ± 0.2	-1.0 ± 0.4	0.9 ± 0.3	-1.1 ± 0.1	-0.2 ± 0.2	-1.1 ± 0.1	-0.2 ± 0.2	-0.4 ± 0.2	E Africa M	S Asia F
37	-0.8 ± 0.4	-3.2 ± 0.1	-2.1 ± 0.3	-3.8 ± 0.2	-2.3 ± 0.2	-1.4 ± 0.4	0.9 ± 0.3	-1.3 ± 0.1	-0.5 ± 0.2	-1.2 ± 0.1	-0.5 ± 0.3	-0.7 ± 0.2	E Africa M	S Asia F
38	-0.5 ± 0.5	-3.5 ± 0.1	-2.0 ± 0.3	-4.0 ± 0.2	-2.0 ± 0.2	-1.4 ± 0.4	0.7 ± 0.3	-1.4 ± 0.1	-0.5 ± 0.2	-1.6 ± 0.1	-0.1 ± 0.3	-0.9 ± 0.3	E Africa M	S Asia F
39	-0.6 ± 0.5	-3.5 ± 0.1	-1.9 ± 0.3	-4.0 ± 0.2	-1.9 ± 0.2	-1.5 ± 0.4	1.0 ± 0.3	-1.6 ± 0.1	-0.6 ± 0.2	-1.7 ± 0.1	-0.1 ± 0.3	-1.0 ± 0.3	E Africa M	S Asia F
40	-0.8 ± 0.5	-3.6 ± 0.1	-1.3 ± 0.3	-4.0 ± 0.2	-2.0 ± 0.3	-2.1 ± 0.4	0.7 ± 0.4	-1.7 ± 0.1	-0.4 ± 0.2	-1.9 ± 0.1	-0.4 ± 0.3	-1.4 ± 0.3	E Africa M	S Asia F
41	-1.1 ± 0.6	-3.5 ± 0.1	-1.5 ± 0.3	-4.0 ± 0.2	-1.9 ± 0.3	-2.2 ± 0.5	0.5 ± 0.4	-1.6 ± 0.1	-0.6 ± 0.3	-1.9 ± 0.1	-0.4 ± 0.3	-1.3 ± 0.3	E Africa M	S Asia F
42	-0.5 ± 0.6	-3.3 ± 0.1	-1.2 ± 0.3	-3.5 ± 0.2	-1.8 ± 0.3	-1.6 ± 0.5	0.5 ± 0.4	-1.7 ± 0.2	-0.4 ± 0.3	-2.1 ± 0.2	-0.1 ± 0.3	-1.6 ± 0.3	E Africa M	S Asia F
43	-0.6 ± 0.6	-3.3 ± 0.2	-1.2 ± 0.3	-3.6 ± 0.3	-1.8 ± 0.3	-1.9 ± 0.5	0.9 ± 0.4	-1.7 ± 0.2	-0.6 ± 0.3	-2.1 ± 0.2	-0.3 ± 0.3	-2.0 ± 0.3	E Africa M	S Asia F
44	-0.1 ± 0.7	-3.2 ± 0.2	-1.1 ± 0.3	-3.3 ± 0.3	-1.2 ± 0.3	-2.2 ± 0.5	0.2 ± 0.4	-1.6 ± 0.2	-0.3 ± 0.3	-2.2 ± 0.2	-0.1 ± 0.3	-2.0 ± 0.3	E Africa M	S Asia F
45	-0.9 ± 0.6	-3.0 ± 0.2	-0.8 ± 0.3	-3.3 ± 0.3	-1.3 ± 0.3	-2.0 ± 0.5	0.1 ± 0.4	-1.8 ± 0.2	-0.3 ± 0.3	-2.2 ± 0.2	-0.1 ± 0.3	-2.4 ± 0.4	E Africa M	S Asia F
46	0.1 ± 0.7	-3.0 ± 0.2	-0.7 ± 0.3	-2.7 ± 0.3	-1.4 ± 0.3	-2.0 ± 0.5	0.0 ± 0.5	-1.8 ± 0.2	-0.0 ± 0.3	-1.9 ± 0.2	-0.1 ± 0.3	-2.3 ± 0.4	E Africa F	E Asia F
47	0.2 ± 0.7	-2.6 ± 0.2	-0.5 ± 0.4	-2.7 ± 0.3	-1.1 ± 0.3	-1.7 ± 0.6	0.6 ± 0.5	-1.9 ± 0.2	-0.1 ± 0.3	-1.9 ± 0.2	0.2 ± 0.3	-2.2 ± 0.4	E Africa M	S Asia F
48	0.3 ± 0.7	-2.7 ± 0.2	-0.6 ± 0.3	-2.3 ± 0.3	-1.0 ± 0.3	-1.8 ± 0.6	-0.1 ± 0.5	-1.8 ± 0.2	0.1 ± 0.4	-1.9 ± 0.2	-0.2 ± 0.3	-2.6 ± 0.4	E Africa F	E Asia F
49	0.7 ± 0.7	-2.5 ± 0.2	-0.4 ± 0.3	-2.3 ± 0.3	-0.8 ± 0.3	-2.0 ± 0.6	-0.4 ± 0.5	-2.0 ± 0.2	0.1 ± 0.3	-1.8 ± 0.2	0.1 ± 0.3	-2.6 ± 0.4	E Africa F	W Africa M
50	-0.5 ± 0.8	-2.4 ± 0.2	-0.1 ± 0.3	-2.2 ± 0.3	-0.9 ± 0.3	-1.8 ± 0.6	-0.3 ± 0.6	-2.0 ± 0.2	-0.1 ± 0.3	-1.9 ± 0.3	0.2 ± 0.3	-2.9 ± 0.4	S E Asia M	W Africa M
51	0.3 ± 0.7	-2.4 ± 0.2	-0.5 ± 0.3	-2.1 ± 0.3	-1.0 ± 0.3	-1.6 ± 0.6	-0.9 ± 0.6	-2.0 ± 0.2	0.4 ± 0.3	-2.0 ± 0.3	0.0 ± 0.3	-3.0 ± 0.4	E Europe M	W Africa M
52	0.3 ± 0.8	-2.4 ± 0.2	0.2 ± 0.4	-2.3 ± 0.3	-0.8 ± 0.3	-2.5 ± 0.6	-0.2 ± 0.6	-2.3 ± 0.2	0.2 ± 0.4	-2.0 ± 0.3	-0.4 ± 0.3	-3.3 ± 0.5	E Africa F	W Africa M

Table 38. *Mean raw error for Application-type images for algorithm cyberlink-001. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	4.5 ± 0.2	3.9 ± 0.1	3.1 ± 0.2	3.3 ± 0.1	3.7 ± 0.2	4.9 ± 0.3	3.5 ± 0.2	3.3 ± 0.1	2.0 ± 0.2	2.6 ± 0.1	2.9 ± 0.2	3.9 ± 0.2	W Africa F	E Europe M
15	4.2 ± 0.2	3.9 ± 0.1	3.2 ± 0.2	3.3 ± 0.2	3.7 ± 0.3	4.5 ± 0.3	3.0 ± 0.2	3.29 ± 0.09	2.2 ± 0.2	2.7 ± 0.1	3.1 ± 0.2	3.5 ± 0.3	W Africa F	E Europe M
16	3.6 ± 0.3	3.6 ± 0.1	3.1 ± 0.2	2.9 ± 0.2	3.5 ± 0.3	4.3 ± 0.4	3.3 ± 0.2	2.99 ± 0.09	2.4 ± 0.2	2.7 ± 0.1	2.9 ± 0.2	3.4 ± 0.3	W Africa F	E Europe M
17	3.5 ± 0.3	3.1 ± 0.1	2.8 ± 0.2	2.7 ± 0.2	3.2 ± 0.3	3.9 ± 0.3	2.9 ± 0.2	2.8 ± 0.1	2.1 ± 0.2	2.7 ± 0.1	2.9 ± 0.2	3.2 ± 0.3	W Africa F	E Europe M
18	2.7 ± 0.3	2.5 ± 0.1	2.2 ± 0.2	2.1 ± 0.1	2.6 ± 0.2	3.2 ± 0.3	2.6 ± 0.2	2.25 ± 0.10	1.8 ± 0.2	2.3 ± 0.1	2.4 ± 0.2	2.7 ± 0.2	W Africa F	E Europe M
19	2.5 ± 0.3	2.1 ± 0.1	1.7 ± 0.2	1.7 ± 0.1	2.3 ± 0.2	3.2 ± 0.3	2.5 ± 0.2	2.1 ± 0.1	1.6 ± 0.2	2.4 ± 0.1	2.1 ± 0.2	2.7 ± 0.3	W Africa F	E Europe M
20	2.2 ± 0.3	1.8 ± 0.1	1.3 ± 0.2	1.2 ± 0.2	2.0 ± 0.1	3.1 ± 0.3	2.5 ± 0.3	1.9 ± 0.1	1.6 ± 0.2	2.5 ± 0.1	2.1 ± 0.2	2.4 ± 0.3	W Africa F	S Asia F
21	1.7 ± 0.3	1.4 ± 0.1	0.9 ± 0.2	0.6 ± 0.1	1.3 ± 0.1	2.6 ± 0.3	2.5 ± 0.2	1.7 ± 0.1	1.3 ± 0.2	2.3 ± 0.1	2.0 ± 0.2	2.1 ± 0.3	W Africa F	S Asia F
22	1.5 ± 0.3	0.86 ± 0.09	0.6 ± 0.1	0.1 ± 0.1	0.9 ± 0.1	2.2 ± 0.3	2.8 ± 0.3	1.5 ± 0.1	1.3 ± 0.2	2.2 ± 0.1	1.6 ± 0.2	1.9 ± 0.3	E Africa M	S Asia F
23	0.8 ± 0.2	0.48 ± 0.09	0.2 ± 0.1	-0.2 ± 0.1	0.5 ± 0.1	1.8 ± 0.3	2.3 ± 0.3	1.3 ± 0.1	1.0 ± 0.2	2.2 ± 0.1	1.5 ± 0.2	1.9 ± 0.2	E Africa M	S Asia F
24	0.4 ± 0.3	-0.10 ± 0.09	-0.1 ± 0.1	-0.8 ± 0.1	0.1 ± 0.1	1.4 ± 0.3	2.3 ± 0.2	1.2 ± 0.1	1.0 ± 0.2	2.1 ± 0.1	1.3 ± 0.2	1.7 ± 0.2	E Africa M	S Asia F
25	0.1 ± 0.3	-0.44 ± 0.08	-0.5 ± 0.1	-1.32 ± 0.10	-0.4 ± 0.1	1.1 ± 0.3	2.2 ± 0.2	1.1 ± 0.1	0.8 ± 0.2	1.9 ± 0.1	1.3 ± 0.2	1.4 ± 0.2	E Africa M	S Asia F
26	-0.4 ± 0.2	-0.93 ± 0.08	-0.8 ± 0.1	-1.92 ± 0.10	-0.7 ± 0.1	0.6 ± 0.3	1.8 ± 0.2	0.9 ± 0.1	0.6 ± 0.2	1.7 ± 0.1	1.3 ± 0.2	1.0 ± 0.2	E Africa M	S Asia F
27	-0.6 ± 0.2	-1.39 ± 0.08	-1.0 ± 0.1	-2.32 ± 0.10	-1.1 ± 0.1	0.5 ± 0.3	1.5 ± 0.2	0.7 ± 0.1	0.7 ± 0.2	1.4 ± 0.1	1.3 ± 0.2	0.8 ± 0.2	E Africa M	S Asia F
28	-1.0 ± 0.2	-1.70 ± 0.08	-1.4 ± 0.1	-2.71 ± 0.10	-1.4 ± 0.1	-0.0 ± 0.3	1.2 ± 0.2	0.7 ± 0.1	0.6 ± 0.2	1.1 ± 0.1	1.0 ± 0.2	0.3 ± 0.2	E Africa M	S Asia F
29	-1.2 ± 0.3	-2.07 ± 0.08	-1.6 ± 0.1	-3.01 ± 0.10	-1.7 ± 0.1	-0.3 ± 0.3	0.9 ± 0.2	0.5 ± 0.1	0.3 ± 0.2	0.83 ± 0.09	0.6 ± 0.2	0.3 ± 0.2	E Africa M	S Asia F
30	-1.9 ± 0.3	-2.37 ± 0.09	-1.9 ± 0.1	-3.4 ± 0.1	-1.9 ± 0.1	-0.9 ± 0.3	0.7 ± 0.2	0.3 ± 0.1	0.1 ± 0.2	0.52 ± 0.09	0.6 ± 0.2	-0.2 ± 0.2	E Africa M	S Asia F
31	-2.1 ± 0.3	-2.58 ± 0.09	-2.2 ± 0.1	-3.9 ± 0.1	-2.3 ± 0.1	-0.9 ± 0.3	0.6 ± 0.2	0.1 ± 0.1	-0.1 ± 0.2	0.32 ± 0.09	0.4 ± 0.2	-0.5 ± 0.2	E Africa M	S Asia F
32	-2.1 ± 0.3	-2.91 ± 0.10	-2.4 ± 0.1	-4.2 ± 0.1	-2.4 ± 0.2	-1.3 ± 0.3	0.2 ± 0.2	-0.2 ± 0.1	-0.1 ± 0.2	0.10 ± 0.09	0.3 ± 0.2	-0.8 ± 0.2	S E Asia M	S Asia F
33	-2.5 ± 0.3	-3.0 ± 0.1	-2.8 ± 0.1	-4.5 ± 0.1	-2.8 ± 0.2	-1.3 ± 0.3	0.1 ± 0.2	-0.3 ± 0.1	-0.1 ± 0.2	-0.20 ± 0.09	0.1 ± 0.2	-1.1 ± 0.2	S E Asia M	S Asia F
34	-2.9 ± 0.3	-3.1 ± 0.1	-3.0 ± 0.2	-4.7 ± 0.1	-2.9 ± 0.2	-1.9 ± 0.3	-0.3 ± 0.3	-0.5 ± 0.1	-0.3 ± 0.2	-0.3 ± 0.1	-0.0 ± 0.2	-1.3 ± 0.2	S E Asia M	S Asia F
35	-2.8 ± 0.3	-3.5 ± 0.1	-3.1 ± 0.2	-5.0 ± 0.1	-3.1 ± 0.2	-2.1 ± 0.3	-0.5 ± 0.3	-0.7 ± 0.1	-0.4 ± 0.2	-0.6 ± 0.1	-0.2 ± 0.2	-1.7 ± 0.2	S E Asia M	S Asia F
36	-2.8 ± 0.4	-3.5 ± 0.1	-3.1 ± 0.2	-5.3 ± 0.1	-3.0 ± 0.2	-2.2 ± 0.3	-0.5 ± 0.3	-0.8 ± 0.1	-0.3 ± 0.2	-0.8 ± 0.1	-0.4 ± 0.2	-2.0 ± 0.2	E Europe M	S Asia F
37	-3.1 ± 0.4	-3.6 ± 0.1	-3.3 ± 0.2	-5.2 ± 0.1	-3.3 ± 0.2	-2.6 ± 0.4	-0.6 ± 0.3	-1.1 ± 0.1	-0.6 ± 0.2	-0.9 ± 0.1	-0.5 ± 0.3	-2.3 ± 0.2	S E Asia M	S Asia F
38	-2.9 ± 0.4	-3.8 ± 0.1	-3.4 ± 0.2	-5.3 ± 0.2	-3.1 ± 0.2	-2.7 ± 0.4	-0.9 ± 0.3	-1.2 ± 0.1	-0.7 ± 0.2	-1.1 ± 0.1	-0.3 ± 0.2	-2.7 ± 0.2	S E Asia M	S Asia F
39	-3.0 ± 0.5	-3.9 ± 0.1	-3.4 ± 0.2	-5.6 ± 0.2	-3.2 ± 0.2	-2.6 ± 0.4	-0.5 ± 0.3	-1.3 ± 0.1	-0.6 ± 0.2	-1.2 ± 0.1	-0.4 ± 0.2	-2.9 ± 0.3	S E Asia M	S Asia F
40	-3.2 ± 0.5	-4.0 ± 0.1	-3.0 ± 0.2	-5.4 ± 0.2	-3.5 ± 0.2	-3.3 ± 0.4	-0.6 ± 0.4	-1.5 ± 0.1	-0.5 ± 0.2	-1.4 ± 0.1	-0.6 ± 0.2	-3.0 ± 0.3	E Europe M	S Asia F
41	-3.5 ± 0.5	-4.0 ± 0.1	-3.1 ± 0.2	-5.6 ± 0.2	-3.4 ± 0.2	-3.6 ± 0.4	-0.7 ± 0.4	-1.5 ± 0.1	-0.6 ± 0.2	-1.5 ± 0.1	-0.8 ± 0.2	-3.2 ± 0.3	E Europe M	S Asia F
42	-3.1 ± 0.5	-3.9 ± 0.1	-2.8 ± 0.3	-5.1 ± 0.2	-3.5 ± 0.2	-3.1 ± 0.5	-0.7 ± 0.4	-1.6 ± 0.1	-0.2 ± 0.3	-1.7 ± 0.1	-0.5 ± 0.2	-3.4 ± 0.3	E Europe M	S Asia F
43	-3.1 ± 0.6	-4.1 ± 0.1	-2.8 ± 0.3	-5.4 ± 0.2	-3.5 ± 0.2	-3.5 ± 0.5	-0.4 ± 0.4	-1.6 ± 0.1	-0.3 ± 0.3	-1.6 ± 0.2	-0.8 ± 0.3	-3.7 ± 0.3	E Europe M	S Asia F
44	-2.8 ± 0.6	-4.2 ± 0.1	-3.0 ± 0.3	-5.1 ± 0.3	-3.1 ± 0.3	-3.5 ± 0.5	-1.1 ± 0.4	-1.7 ± 0.1	-0.1 ± 0.3	-1.8 ± 0.2	-0.6 ± 0.3	-3.5 ± 0.3	E Europe M	S Asia F
45	-3.1 ± 0.6	-4.1 ± 0.1	-2.8 ± 0.3	-5.1 ± 0.3	-3.2 ± 0.3	-3.4 ± 0.5	-1.0 ± 0.4	-1.9 ± 0.1	-0.1 ± 0.3	-1.8 ± 0.2	-0.8 ± 0.3	-3.9 ± 0.4	E Europe M	S Asia F
46	-2.0 ± 0.7	-4.2 ± 0.1	-2.6 ± 0.3	-4.6 ± 0.3	-3.3 ± 0.3	-3.4 ± 0.5	-0.9 ± 0.5	-2.0 ± 0.1	0.1 ± 0.3	-1.6 ± 0.2	-0.7 ± 0.3	-4.1 ± 0.4	E Europe M	S Asia F
47	-1.7 ± 0.7	-4.0 ± 0.1	-2.4 ± 0.3	-4.6 ± 0.3	-2.9 ± 0.3	-3.1 ± 0.5	-0.6 ± 0.4	-2.0 ± 0.1	0.1 ± 0.3	-1.7 ± 0.2	-0.6 ± 0.3	-3.7 ± 0.4	E Europe M	S Asia F
48	-2.4 ± 0.7	-3.9 ± 0.2	-2.2 ± 0.3	-4.3 ± 0.3	-2.9 ± 0.3	-3.2 ± 0.5	-1.3 ± 0.5	-2.1 ± 0.1	0.1 ± 0.3	-1.8 ± 0.2	-1.0 ± 0.3	-4.2 ± 0.4	E Europe M	S Asia F
49	-1.7 ± 0.7	-4.0 ± 0.2	-2.4 ± 0.3	-4.2 ± 0.3	-2.6 ± 0.3	-3.6 ± 0.6	-1.5 ± 0.5	-2.4 ± 0.1	-0.0 ± 0.3	-1.8 ± 0.2	-1.0 ± 0.3	-4.3 ± 0.4	E Europe M	W Africa M
50	-2.5 ± 0.8	-3.9 ± 0.2	-1.8 ± 0.3	-4.1 ± 0.3	-2.7 ± 0.3	-3.3 ± 0.6	-1.4 ± 0.5	-2.5 ± 0.1	-0.2 ± 0.3	-2.0 ± 0.2	-0.9 ± 0.3	-4.4 ± 0.4	E Europe M	W Africa M
51	-2.1 ± 0.7	-3.9 ± 0.2	-2.1 ± 0.3	-4.0 ± 0.3	-2.8 ± 0.3	-3.2 ± 0.6	-1.7 ± 0.6	-2.7 ± 0.1	-0.1 ± 0.3	-2.1 ± 0.2	-1.2 ± 0.3	-4.4 ± 0.4	E Europe M	W Africa M
52	-2.0 ± 0.8	-3.8 ± 0.2	-1.5 ± 0.3	-4.0 ± 0.3	-2.3 ± 0.3	-3.9 ± 0.6	-1.5 ± 0.5	-2.9 ± 0.1	-0.3 ± 0.3	-2.3 ± 0.2	-1.6 ± 0.3	-4.7 ± 0.5	E Europe M	W Africa M

Table 39. *Mean raw error for Application-type images for algorithm daon-000. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	1.7 ± 0.4	0.4 ± 0.2	0.8 ± 0.2	1.2 ± 0.2	0.3 ± 0.4	1.1 ± 0.6	2.8 ± 0.4	3.6 ± 0.2	1.5 ± 0.2	3.7 ± 0.2	3.1 ± 0.4	1.6 ± 0.4	S Asia M	S E Asia F
15	1.9 ± 0.5	0.7 ± 0.2	0.7 ± 0.2	1.8 ± 0.3	0.3 ± 0.5	1.4 ± 0.6	2.9 ± 0.4	4.3 ± 0.2	1.7 ± 0.3	4.2 ± 0.2	4.2 ± 0.4	2.3 ± 0.5	E Asia M	S E Asia F
16	2.2 ± 0.5	0.7 ± 0.2	1.1 ± 0.3	1.3 ± 0.3	0.8 ± 0.5	1.9 ± 0.8	4.3 ± 0.4	4.2 ± 0.2	2.1 ± 0.3	4.7 ± 0.2	4.5 ± 0.4	2.3 ± 0.5	S Asia M	E Asia F
17	2.8 ± 0.6	0.6 ± 0.2	1.0 ± 0.3	1.4 ± 0.3	0.8 ± 0.5	2.6 ± 0.7	4.9 ± 0.4	4.1 ± 0.2	1.8 ± 0.3	4.9 ± 0.2	4.1 ± 0.4	3.3 ± 0.5	S Asia M	E Asia F
18	1.8 ± 0.4	-0.0 ± 0.2	0.4 ± 0.3	0.9 ± 0.2	-0.1 ± 0.3	1.9 ± 0.6	4.5 ± 0.4	3.3 ± 0.2	1.4 ± 0.2	4.4 ± 0.2	3.5 ± 0.3	3.2 ± 0.4	E Africa M	S E Asia F
19	2.7 ± 0.5	-0.1 ± 0.2	-0.0 ± 0.3	1.0 ± 0.2	-0.0 ± 0.3	2.5 ± 0.6	5.0 ± 0.4	3.1 ± 0.2	1.4 ± 0.2	4.6 ± 0.2	3.2 ± 0.3	3.4 ± 0.4	E Africa M	E Asia F
20	2.6 ± 0.5	-0.1 ± 0.2	-0.1 ± 0.2	0.6 ± 0.2	-0.3 ± 0.3	2.9 ± 0.6	5.1 ± 0.4	2.8 ± 0.2	1.4 ± 0.3	4.6 ± 0.2	2.7 ± 0.3	3.6 ± 0.4	E Africa M	S E Asia F
21	2.3 ± 0.4	-0.4 ± 0.2	-0.3 ± 0.2	0.2 ± 0.2	-0.3 ± 0.3	3.1 ± 0.6	5.2 ± 0.3	2.4 ± 0.2	1.2 ± 0.2	4.1 ± 0.2	2.6 ± 0.3	3.4 ± 0.4	E Africa M	E Asia F
22	2.3 ± 0.4	-0.6 ± 0.2	-0.4 ± 0.2	-0.3 ± 0.2	-0.3 ± 0.3	2.5 ± 0.5	5.4 ± 0.3	2.1 ± 0.2	1.2 ± 0.2	4.0 ± 0.2	1.9 ± 0.2	3.4 ± 0.4	E Africa M	E Asia F
23	1.8 ± 0.4	-0.7 ± 0.2	-0.5 ± 0.2	-0.5 ± 0.2	-0.5 ± 0.2	2.6 ± 0.5	5.1 ± 0.3	1.8 ± 0.2	0.9 ± 0.2	3.7 ± 0.2	1.7 ± 0.3	2.9 ± 0.3	E Africa M	E Asia F
24	1.9 ± 0.4	-1.0 ± 0.2	-0.7 ± 0.2	-0.9 ± 0.1	-0.6 ± 0.2	2.3 ± 0.5	4.8 ± 0.3	1.5 ± 0.2	1.0 ± 0.2	3.5 ± 0.1	1.4 ± 0.2	2.8 ± 0.3	E Africa M	E Asia F
25	1.6 ± 0.3	-1.1 ± 0.2	-0.8 ± 0.2	-1.4 ± 0.1	-0.7 ± 0.2	2.0 ± 0.5	4.7 ± 0.3	1.3 ± 0.2	0.9 ± 0.2	3.2 ± 0.1	1.5 ± 0.2	2.7 ± 0.3	E Africa M	S Asia F
26	1.2 ± 0.3	-1.3 ± 0.2	-0.8 ± 0.2	-1.9 ± 0.1	-0.7 ± 0.2	2.1 ± 0.4	4.3 ± 0.3	1.0 ± 0.2	0.7 ± 0.2	2.9 ± 0.1	1.2 ± 0.2	2.4 ± 0.3	E Africa M	S Asia F
27	1.0 ± 0.3	-1.5 ± 0.2	-0.8 ± 0.2	-2.3 ± 0.1	-0.9 ± 0.2	1.8 ± 0.4	3.9 ± 0.3	0.9 ± 0.2	0.8 ± 0.2	2.5 ± 0.1	1.3 ± 0.2	2.1 ± 0.3	E Africa M	S Asia F
28	0.3 ± 0.3	-1.6 ± 0.2	-1.0 ± 0.2	-2.8 ± 0.1	-1.1 ± 0.2	1.4 ± 0.4	3.8 ± 0.3	0.8 ± 0.2	0.8 ± 0.2	2.1 ± 0.1	1.1 ± 0.2	1.8 ± 0.3	E Africa M	S Asia F
29	0.3 ± 0.3	-1.5 ± 0.1	-0.9 ± 0.2	-3.0 ± 0.1	-1.1 ± 0.2	1.0 ± 0.4	3.6 ± 0.3	0.7 ± 0.2	0.7 ± 0.2	1.7 ± 0.1	1.0 ± 0.3	2.0 ± 0.3	E Africa M	S Asia F
30	-0.1 ± 0.3	-1.8 ± 0.1	-1.0 ± 0.2	-3.4 ± 0.1	-1.0 ± 0.2	0.7 ± 0.4	3.3 ± 0.3	0.4 ± 0.2	0.5 ± 0.2	1.3 ± 0.1	0.9 ± 0.3	1.5 ± 0.3	E Africa M	S Asia F
31	-0.4 ± 0.3	-1.9 ± 0.1	-0.9 ± 0.2	-3.9 ± 0.1	-1.4 ± 0.2	0.3 ± 0.4	3.2 ± 0.3	0.4 ± 0.2	0.6 ± 0.2	1.0 ± 0.1	0.9 ± 0.3	1.3 ± 0.3	E Africa M	S Asia F
32	-0.4 ± 0.3	-1.8 ± 0.1	-1.1 ± 0.2	-4.1 ± 0.1	-1.3 ± 0.2	0.3 ± 0.4	2.5 ± 0.3	0.5 ± 0.2	0.6 ± 0.2	0.8 ± 0.1	1.1 ± 0.3	1.1 ± 0.3	E Africa M	S Asia F
33	-0.8 ± 0.4	-1.9 ± 0.2	-1.0 ± 0.2	-4.3 ± 0.1	-1.6 ± 0.2	-0.1 ± 0.4	2.5 ± 0.3	0.2 ± 0.2	0.8 ± 0.2	0.4 ± 0.1	0.8 ± 0.3	0.9 ± 0.3	E Africa M	S Asia F
34	-1.2 ± 0.4	-1.8 ± 0.1	-1.0 ± 0.2	-4.5 ± 0.1	-1.7 ± 0.2	-0.6 ± 0.4	1.9 ± 0.3	0.2 ± 0.2	0.6 ± 0.2	0.3 ± 0.1	0.7 ± 0.3	0.6 ± 0.3	E Africa M	S Asia F
35	-1.1 ± 0.4	-2.1 ± 0.2	-1.0 ± 0.2	-4.9 ± 0.2	-1.8 ± 0.2	-0.7 ± 0.4	2.0 ± 0.3	0.3 ± 0.2	0.7 ± 0.2	-0.0 ± 0.1	1.0 ± 0.3	0.5 ± 0.3	E Africa M	S Asia F
36	-1.3 ± 0.4	-2.1 ± 0.2	-0.9 ± 0.2	-5.1 ± 0.2	-1.5 ± 0.2	-0.8 ± 0.4	1.6 ± 0.3	0.3 ± 0.2	0.8 ± 0.2	-0.2 ± 0.1	0.8 ± 0.3	0.1 ± 0.3	E Africa M	S Asia F
37	-1.9 ± 0.4	-2.0 ± 0.2	-0.9 ± 0.2	-5.1 ± 0.2	-1.7 ± 0.2	-0.8 ± 0.4	1.3 ± 0.3	0.1 ± 0.2	0.5 ± 0.2	-0.4 ± 0.1	0.6 ± 0.3	-0.1 ± 0.3	E Africa M	S Asia F
38	-1.4 ± 0.4	-2.2 ± 0.2	-0.6 ± 0.3	-5.2 ± 0.2	-1.7 ± 0.3	-1.6 ± 0.5	1.1 ± 0.3	0.1 ± 0.2	0.6 ± 0.2	-0.7 ± 0.1	1.0 ± 0.3	-0.3 ± 0.3	E Africa M	S Asia F
39	-1.7 ± 0.4	-2.2 ± 0.2	-0.8 ± 0.2	-5.5 ± 0.2	-1.5 ± 0.3	-1.3 ± 0.4	1.4 ± 0.3	0.1 ± 0.2	0.7 ± 0.2	-0.6 ± 0.1	1.1 ± 0.3	-0.4 ± 0.3	E Africa M	S Asia F
40	-2.1 ± 0.5	-2.3 ± 0.2	-0.6 ± 0.3	-5.4 ± 0.2	-1.7 ± 0.2	-2.0 ± 0.5	0.9 ± 0.3	-0.1 ± 0.2	0.8 ± 0.2	-0.9 ± 0.1	1.3 ± 0.3	-0.9 ± 0.3	S E Asia M	S Asia F
41	-2.4 ± 0.5	-2.3 ± 0.2	-0.6 ± 0.3	-5.4 ± 0.2	-2.0 ± 0.3	-2.2 ± 0.5	1.2 ± 0.4	0.1 ± 0.2	0.8 ± 0.2	-0.9 ± 0.1	1.1 ± 0.3	-1.1 ± 0.3	E Africa M	S Asia F
42	-2.4 ± 0.5	-2.2 ± 0.1	-0.2 ± 0.3	-4.8 ± 0.2	-1.7 ± 0.3	-2.3 ± 0.5	0.8 ± 0.4	0.2 ± 0.2	1.0 ± 0.2	-1.1 ± 0.2	1.3 ± 0.3	-1.3 ± 0.3	S E Asia M	S Asia F
43	-2.1 ± 0.6	-2.4 ± 0.1	-0.3 ± 0.3	-5.2 ± 0.3	-2.0 ± 0.3	-2.8 ± 0.5	0.9 ± 0.4	0.1 ± 0.2	0.8 ± 0.3	-0.9 ± 0.2	1.2 ± 0.3	-1.8 ± 0.3	S E Asia M	S Asia F
44	-2.1 ± 0.6	-2.6 ± 0.1	-0.5 ± 0.3	-4.9 ± 0.3	-1.8 ± 0.3	-2.9 ± 0.6	0.1 ± 0.4	0.1 ± 0.2	1.2 ± 0.3	-1.1 ± 0.2	1.2 ± 0.3	-1.6 ± 0.3	S E Asia M	S Asia F
45	-2.7 ± 0.6	-2.7 ± 0.2	-0.6 ± 0.3	-4.8 ± 0.3	-2.0 ± 0.3	-2.6 ± 0.5	-0.2 ± 0.4	-0.1 ± 0.2	0.6 ± 0.3	-0.9 ± 0.2	1.2 ± 0.3	-2.1 ± 0.4	S E Asia M	S Asia F
46	-1.9 ± 0.6	-3.0 ± 0.1	-0.5 ± 0.3	-4.4 ± 0.3	-2.3 ± 0.3	-2.8 ± 0.5	0.0 ± 0.4	-0.3 ± 0.2	0.8 ± 0.3	-0.8 ± 0.2	1.2 ± 0.3	-2.4 ± 0.3	S E Asia M	S Asia F
47	-1.8 ± 0.6	-2.8 ± 0.2	-0.5 ± 0.3	-4.4 ± 0.3	-2.3 ± 0.3	-3.0 ± 0.6	0.2 ± 0.4	-0.3 ± 0.2	0.9 ± 0.3	-0.7 ± 0.2	1.1 ± 0.3	-2.1 ± 0.4	S E Asia M	S Asia F
48	-2.4 ± 0.7	-3.0 ± 0.2	-0.5 ± 0.3	-4.1 ± 0.3	-2.3 ± 0.3	-3.2 ± 0.5	-0.7 ± 0.5	-0.4 ± 0.2	0.9 ± 0.3	-0.7 ± 0.2	0.9 ± 0.3	-3.0 ± 0.4	E Europe M	S Asia F
49	-2.0 ± 0.7	-3.1 ± 0.2	-0.6 ± 0.3	-4.0 ± 0.3	-2.2 ± 0.3	-3.4 ± 0.6	-1.0 ± 0.5	-0.5 ± 0.2	0.7 ± 0.3	-0.8 ± 0.2	1.0 ± 0.3	-2.8 ± 0.4	S E Asia M	S Asia F
50	-2.7 ± 0.8	-3.2 ± 0.2	-0.5 ± 0.3	-3.4 ± 0.3	-2.6 ± 0.3	-3.3 ± 0.5	-1.3 ± 0.5	-0.7 ± 0.2	0.6 ± 0.3	-0.8 ± 0.2	1.0 ± 0.3	-3.5 ± 0.4	S E Asia M	W Africa M
51	-2.3 ± 0.6	-3.2 ± 0.2	-0.6 ± 0.3	-3.8 ± 0.3	-2.6 ± 0.3	-3.5 ± 0.6	-1.6 ± 0.6	-0.9 ± 0.2	0.8 ± 0.3	-0.9 ± 0.2	0.7 ± 0.3	-3.6 ± 0.4	E Europe M	S Asia F
52	-2.7 ± 0.7	-3.4 ± 0.2	-0.4 ± 0.3	-3.6 ± 0.3	-2.4 ± 0.3	-4.0 ± 0.6	-1.5 ± 0.5	-1.2 ± 0.2	0.7 ± 0.3	-0.9 ± 0.2	0.3 ± 0.3	-3.7 ± 0.4	E Europe M	W Africa F

Table 40. *Mean raw error for Application-type images for algorithm daon-001. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	0.8 ± 0.3	-0.3 ± 0.2	0.3 ± 0.2	0.1 ± 0.2	-0.8 ± 0.3	0.4 ± 0.4	1.4 ± 0.3	2.3 ± 0.2	0.7 ± 0.2	1.8 ± 0.2	1.6 ± 0.3	0.8 ± 0.3	E Asia M	S E Asia F
15	0.9 ± 0.4	0.1 ± 0.2	0.3 ± 0.2	0.7 ± 0.2	-0.4 ± 0.4	0.7 ± 0.5	1.4 ± 0.4	3.1 ± 0.2	1.1 ± 0.2	2.7 ± 0.2	2.7 ± 0.3	1.5 ± 0.4	E Asia M	S E Asia F
16	1.3 ± 0.5	0.1 ± 0.2	0.7 ± 0.3	0.5 ± 0.2	0.1 ± 0.4	1.4 ± 0.7	2.9 ± 0.4	3.3 ± 0.2	1.7 ± 0.3	3.4 ± 0.2	3.1 ± 0.3	1.9 ± 0.4	S Asia M	S E Asia F
17	1.9 ± 0.5	0.2 ± 0.2	0.5 ± 0.3	0.6 ± 0.2	0.2 ± 0.4	2.0 ± 0.6	3.6 ± 0.4	3.4 ± 0.2	1.5 ± 0.2	3.8 ± 0.2	3.4 ± 0.3	2.9 ± 0.5	S Asia M	S E Asia F
18	1.3 ± 0.4	-0.4 ± 0.2	0.0 ± 0.3	0.2 ± 0.2	-0.5 ± 0.3	1.6 ± 0.6	3.4 ± 0.3	2.8 ± 0.1	1.3 ± 0.2	3.6 ± 0.2	2.7 ± 0.3	2.6 ± 0.4	S Asia M	S E Asia F
19	2.0 ± 0.4	-0.3 ± 0.2	-0.3 ± 0.3	0.3 ± 0.2	-0.5 ± 0.3	2.3 ± 0.6	4.1 ± 0.3	2.7 ± 0.1	1.2 ± 0.2	3.9 ± 0.2	2.5 ± 0.2	3.1 ± 0.4	E Africa M	S E Asia F
20	1.9 ± 0.4	-0.3 ± 0.2	-0.2 ± 0.2	0.1 ± 0.2	-0.6 ± 0.3	2.7 ± 0.5	4.7 ± 0.3	2.5 ± 0.1	1.5 ± 0.2	4.0 ± 0.1	2.3 ± 0.2	3.6 ± 0.4	E Africa M	S E Asia F
21	1.9 ± 0.4	-0.4 ± 0.2	-0.4 ± 0.2	-0.2 ± 0.2	-0.6 ± 0.2	2.8 ± 0.5	4.8 ± 0.3	2.2 ± 0.1	1.1 ± 0.2	3.8 ± 0.1	2.2 ± 0.2	3.4 ± 0.4	E Africa M	S E Asia F
22	2.1 ± 0.4	-0.6 ± 0.2	-0.4 ± 0.2	-0.6 ± 0.2	-0.6 ± 0.2	2.5 ± 0.5	5.2 ± 0.3	2.0 ± 0.1	1.2 ± 0.2	3.7 ± 0.1	1.7 ± 0.2	3.5 ± 0.3	E Africa M	E Asia F
23	1.8 ± 0.3	-0.7 ± 0.2	-0.4 ± 0.2	-0.8 ± 0.1	-0.6 ± 0.2	2.7 ± 0.4	5.0 ± 0.3	1.8 ± 0.1	1.0 ± 0.2	3.6 ± 0.1	1.6 ± 0.2	3.3 ± 0.3	E Africa M	S Asia F
24	1.8 ± 0.3	-0.9 ± 0.2	-0.5 ± 0.2	-1.1 ± 0.1	-0.8 ± 0.2	2.3 ± 0.4	5.0 ± 0.3	1.5 ± 0.1	1.1 ± 0.2	3.4 ± 0.1	1.4 ± 0.2	3.2 ± 0.3	E Africa M	S Asia F
25	1.6 ± 0.3	-0.9 ± 0.1	-0.6 ± 0.2	-1.5 ± 0.1	-0.9 ± 0.2	2.4 ± 0.4	4.8 ± 0.3	1.4 ± 0.1	1.0 ± 0.2	3.2 ± 0.1	1.4 ± 0.2	3.1 ± 0.3	E Africa M	S Asia F
26	1.4 ± 0.3	-1.1 ± 0.1	-0.5 ± 0.1	-1.9 ± 0.1	-0.9 ± 0.2	2.4 ± 0.3	4.5 ± 0.2	1.1 ± 0.1	0.8 ± 0.2	2.9 ± 0.1	1.3 ± 0.2	2.9 ± 0.3	E Africa M	S Asia F
27	1.3 ± 0.3	-1.1 ± 0.1	-0.5 ± 0.1	-2.3 ± 0.1	-1.0 ± 0.2	2.2 ± 0.3	4.3 ± 0.2	1.1 ± 0.1	1.0 ± 0.2	2.6 ± 0.1	1.4 ± 0.2	2.7 ± 0.2	E Africa M	S Asia F
28	0.9 ± 0.3	-1.3 ± 0.1	-0.6 ± 0.1	-2.6 ± 0.1	-1.1 ± 0.2	1.9 ± 0.3	4.1 ± 0.2	1.0 ± 0.1	1.0 ± 0.2	2.3 ± 0.1	1.3 ± 0.2	2.4 ± 0.2	E Africa M	S Asia F
29	1.0 ± 0.3	-1.3 ± 0.1	-0.4 ± 0.1	-2.8 ± 0.1	-1.1 ± 0.2	1.6 ± 0.3	4.0 ± 0.2	0.9 ± 0.1	0.8 ± 0.2	1.93 ± 0.10	1.2 ± 0.2	2.6 ± 0.2	E Africa M	S Asia F
30	0.7 ± 0.3	-1.3 ± 0.1	-0.5 ± 0.2	-3.1 ± 0.1	-1.1 ± 0.2	1.3 ± 0.3	3.8 ± 0.2	0.8 ± 0.1	0.7 ± 0.2	1.63 ± 0.09	1.2 ± 0.2	2.2 ± 0.2	E Africa M	S Asia F
31	0.4 ± 0.3	-1.4 ± 0.1	-0.3 ± 0.2	-3.5 ± 0.1	-1.3 ± 0.2	1.1 ± 0.3	3.7 ± 0.2	0.8 ± 0.1	0.8 ± 0.2	1.42 ± 0.10	1.1 ± 0.2	2.0 ± 0.2	E Africa M	S Asia F
32	0.6 ± 0.3	-1.4 ± 0.1	-0.4 ± 0.2	-3.6 ± 0.1	-1.4 ± 0.2	1.0 ± 0.3	3.3 ± 0.2	0.9 ± 0.1	0.8 ± 0.2	1.24 ± 0.10	1.3 ± 0.2	1.8 ± 0.2	E Africa M	S Asia F
33	0.2 ± 0.3	-1.5 ± 0.1	-0.4 ± 0.2	-3.8 ± 0.1	-1.5 ± 0.2	0.8 ± 0.3	3.2 ± 0.2	0.6 ± 0.1	1.0 ± 0.2	0.95 ± 0.09	1.0 ± 0.2	1.6 ± 0.2	E Africa M	S Asia F
34	-0.1 ± 0.3	-1.4 ± 0.1	-0.3 ± 0.2	-3.9 ± 0.1	-1.6 ± 0.2	0.5 ± 0.3	2.7 ± 0.3	0.6 ± 0.1	0.8 ± 0.2	0.8 ± 0.1	1.0 ± 0.3	1.4 ± 0.2	E Africa M	S Asia F
35	0.0 ± 0.3	-1.6 ± 0.1	-0.2 ± 0.2	-4.2 ± 0.1	-1.7 ± 0.2	0.3 ± 0.3	2.7 ± 0.2	0.7 ± 0.1	0.9 ± 0.2	0.6 ± 0.1	1.0 ± 0.3	1.2 ± 0.2	E Africa M	S Asia F
36	-0.0 ± 0.4	-1.6 ± 0.1	0.0 ± 0.2	-4.3 ± 0.1	-1.5 ± 0.2	0.3 ± 0.3	2.4 ± 0.3	0.6 ± 0.1	1.0 ± 0.2	0.4 ± 0.1	1.0 ± 0.3	0.8 ± 0.2	E Africa M	S Asia F
37	-0.3 ± 0.4	-1.5 ± 0.1	0.0 ± 0.2	-4.2 ± 0.2	-1.6 ± 0.2	0.3 ± 0.4	2.2 ± 0.3	0.5 ± 0.1	0.8 ± 0.2	0.4 ± 0.1	0.8 ± 0.2	0.5 ± 0.2	E Africa M	S Asia F
38	0.2 ± 0.4	-1.7 ± 0.1	0.2 ± 0.2	-4.2 ± 0.2	-1.5 ± 0.2	-0.3 ± 0.4	1.8 ± 0.3	0.5 ± 0.1	0.8 ± 0.2	0.1 ± 0.1	1.3 ± 0.3	0.3 ± 0.2	E Africa M	S Asia F
39	-0.1 ± 0.4	-1.6 ± 0.1	0.2 ± 0.2	-4.4 ± 0.2	-1.3 ± 0.2	-0.0 ± 0.4	2.1 ± 0.3	0.5 ± 0.1	0.9 ± 0.2	0.1 ± 0.1	1.2 ± 0.2	0.1 ± 0.2	E Africa M	S Asia F
40	-0.4 ± 0.4	-1.7 ± 0.1	0.4 ± 0.2	-4.2 ± 0.2	-1.5 ± 0.2	-0.5 ± 0.4	1.7 ± 0.3	0.4 ± 0.1	1.0 ± 0.2	-0.1 ± 0.1	1.2 ± 0.2	-0.2 ± 0.3	E Africa M	S Asia F
41	-0.7 ± 0.4	-1.6 ± 0.1	0.5 ± 0.2	-4.1 ± 0.2	-1.6 ± 0.2	-1.0 ± 0.4	1.9 ± 0.3	0.4 ± 0.1	1.0 ± 0.2	-0.1 ± 0.1	1.0 ± 0.2	-0.4 ± 0.3	E Africa M	S Asia F
42	-0.5 ± 0.4	-1.5 ± 0.1	0.7 ± 0.2	-3.5 ± 0.2	-1.4 ± 0.2	-0.8 ± 0.4	1.5 ± 0.3	0.5 ± 0.1	1.1 ± 0.2	-0.3 ± 0.1	1.3 ± 0.2	-0.6 ± 0.3	E Africa M	S Asia F
43	-0.1 ± 0.5	-1.7 ± 0.1	0.7 ± 0.2	-3.7 ± 0.2	-1.6 ± 0.2	-1.1 ± 0.4	1.5 ± 0.3	0.3 ± 0.1	0.9 ± 0.2	-0.2 ± 0.1	1.2 ± 0.2	-1.1 ± 0.3	E Africa M	S Asia F
44	-0.4 ± 0.5	-1.8 ± 0.1	0.4 ± 0.2	-3.5 ± 0.2	-1.3 ± 0.2	-1.3 ± 0.4	0.9 ± 0.3	0.3 ± 0.1	1.3 ± 0.2	-0.3 ± 0.2	1.2 ± 0.3	-1.0 ± 0.3	E Europe M	S Asia F
45	-0.7 ± 0.5	-1.8 ± 0.1	0.4 ± 0.2	-3.3 ± 0.2	-1.5 ± 0.2	-1.0 ± 0.4	0.6 ± 0.4	0.1 ± 0.1	0.9 ± 0.2	-0.2 ± 0.2	1.1 ± 0.2	-1.5 ± 0.3	S E Asia M	S Asia F
46	0.2 ± 0.5	-2.1 ± 0.1	0.5 ± 0.3	-2.9 ± 0.2	-1.7 ± 0.2	-1.1 ± 0.4	0.8 ± 0.4	-0.0 ± 0.1	1.0 ± 0.3	-0.1 ± 0.2	1.0 ± 0.2	-1.7 ± 0.3	S E Asia M	S Asia F
47	0.0 ± 0.5	-2.0 ± 0.1	0.5 ± 0.3	-2.9 ± 0.3	-1.7 ± 0.2	-1.4 ± 0.4	1.0 ± 0.4	-0.2 ± 0.1	1.1 ± 0.3	-0.0 ± 0.2	1.0 ± 0.2	-1.6 ± 0.3	E Europe M	S Asia F
48	-0.5 ± 0.6	-2.1 ± 0.1	0.6 ± 0.2	-2.6 ± 0.3	-1.7 ± 0.2	-1.5 ± 0.4	0.2 ± 0.4	-0.2 ± 0.1	1.1 ± 0.3	-0.1 ± 0.2	0.9 ± 0.3	-2.3 ± 0.3	E Europe M	S Asia F
49	-0.0 ± 0.6	-2.3 ± 0.1	0.4 ± 0.2	-2.4 ± 0.3	-1.7 ± 0.2	-2.1 ± 0.5	-0.0 ± 0.4	-0.3 ± 0.1	0.9 ± 0.3	-0.2 ± 0.2	0.9 ± 0.2	-2.2 ± 0.3	E Europe M	S Asia F
50	-0.6 ± 0.7	-2.3 ± 0.1	0.6 ± 0.3	-2.2 ± 0.2	-1.8 ± 0.2	-1.6 ± 0.4	-0.2 ± 0.4	-0.5 ± 0.1	0.9 ± 0.3	-0.2 ± 0.2	1.0 ± 0.3	-2.7 ± 0.3	S E Asia M	W Africa M
51	-0.3 ± 0.5	-2.4 ± 0.1	0.5 ± 0.3	-2.3 ± 0.2	-1.9 ± 0.2	-1.8 ± 0.5	-0.8 ± 0.5	-0.6 ± 0.1	1.1 ± 0.3	-0.2 ± 0.2	0.7 ± 0.3	-3.0 ± 0.3	E Europe M	W Africa M
52	-0.7 ± 0.6	-2.5 ± 0.1	0.7 ± 0.3	-2.4 ± 0.2	-1.7 ± 0.2	-2.4 ± 0.5	-0.5 ± 0.5	-0.9 ± 0.1	1.0 ± 0.3	-0.3 ± 0.2	0.4 ± 0.3	-3.1 ± 0.4	E Europe M	W Africa M

Table 41. *Mean raw error for Application-type images for algorithm dermalog-001. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	2.2 ± 0.4	4.4 ± 0.2	5.0 ± 0.3	4.1 ± 0.2	4.9 ± 0.4	3.0 ± 0.4	1.8 ± 0.3	3.3 ± 0.1	2.4 ± 0.3	2.6 ± 0.2	3.1 ± 0.3	2.4 ± 0.3	E Europe F	E Africa M
15	2.7 ± 0.5	4.4 ± 0.2	5.3 ± 0.3	5.0 ± 0.3	4.9 ± 0.4	2.7 ± 0.4	1.3 ± 0.3	3.6 ± 0.1	2.6 ± 0.3	3.5 ± 0.2	3.6 ± 0.3	2.7 ± 0.3	E Europe F	E Africa M
16	2.0 ± 0.5	4.3 ± 0.2	5.2 ± 0.3	4.7 ± 0.3	5.1 ± 0.4	2.6 ± 0.5	2.2 ± 0.3	3.6 ± 0.1	2.9 ± 0.3	3.9 ± 0.2	4.1 ± 0.3	3.0 ± 0.4	E Europe F	E Africa F
17	2.1 ± 0.5	3.9 ± 0.2	5.4 ± 0.4	4.8 ± 0.3	4.6 ± 0.3	2.2 ± 0.4	2.2 ± 0.4	3.2 ± 0.1	2.4 ± 0.3	3.9 ± 0.2	3.6 ± 0.3	3.2 ± 0.4	E Europe F	E Africa F
18	1.0 ± 0.4	3.2 ± 0.1	4.3 ± 0.3	4.0 ± 0.2	3.8 ± 0.2	1.5 ± 0.4	2.3 ± 0.3	2.4 ± 0.1	1.9 ± 0.2	3.5 ± 0.2	3.0 ± 0.2	2.8 ± 0.3	E Europe F	E Africa F
19	1.5 ± 0.4	2.7 ± 0.1	4.1 ± 0.3	3.8 ± 0.2	3.3 ± 0.2	1.5 ± 0.3	2.8 ± 0.3	2.0 ± 0.1	1.7 ± 0.2	3.5 ± 0.2	2.5 ± 0.2	2.8 ± 0.3	E Europe F	E Africa F
20	1.0 ± 0.4	2.4 ± 0.2	3.8 ± 0.3	3.5 ± 0.2	2.9 ± 0.2	1.0 ± 0.3	2.8 ± 0.4	1.7 ± 0.1	1.6 ± 0.2	3.5 ± 0.1	2.2 ± 0.2	2.7 ± 0.3	E Europe F	E Africa F
21	0.6 ± 0.4	1.9 ± 0.1	3.3 ± 0.2	3.2 ± 0.2	2.5 ± 0.2	0.7 ± 0.4	2.7 ± 0.3	1.1 ± 0.1	1.0 ± 0.2	3.1 ± 0.1	1.8 ± 0.2	2.6 ± 0.3	E Europe F	E Africa F
22	0.7 ± 0.4	1.2 ± 0.1	3.1 ± 0.2	2.8 ± 0.1	1.8 ± 0.2	0.0 ± 0.3	3.2 ± 0.3	0.7 ± 0.1	1.0 ± 0.2	2.8 ± 0.1	1.4 ± 0.2	2.3 ± 0.3	E Africa M	W Africa F
23	0.2 ± 0.3	0.9 ± 0.1	2.7 ± 0.2	2.6 ± 0.1	1.5 ± 0.2	-0.5 ± 0.3	2.9 ± 0.3	0.1 ± 0.1	0.6 ± 0.2	2.5 ± 0.1	0.9 ± 0.2	2.3 ± 0.3	E Africa M	W Africa F
24	0.0 ± 0.3	0.4 ± 0.1	2.3 ± 0.2	2.2 ± 0.1	1.1 ± 0.1	-1.0 ± 0.3	2.7 ± 0.3	-0.2 ± 0.1	0.4 ± 0.2	2.3 ± 0.1	0.4 ± 0.2	2.0 ± 0.3	E Africa M	W Africa F
25	-0.7 ± 0.3	-0.0 ± 0.1	1.9 ± 0.2	1.9 ± 0.1	0.5 ± 0.1	-1.4 ± 0.3	2.8 ± 0.3	-0.7 ± 0.1	-0.1 ± 0.2	1.9 ± 0.1	0.4 ± 0.2	1.5 ± 0.3	E Africa M	W Africa F
26	-0.7 ± 0.3	-0.4 ± 0.1	1.7 ± 0.2	1.3 ± 0.1	0.4 ± 0.1	-1.7 ± 0.3	2.3 ± 0.3	-1.0 ± 0.1	-0.2 ± 0.2	1.6 ± 0.1	-0.1 ± 0.2	1.1 ± 0.2	E Africa M	W Africa F
27	-1.0 ± 0.3	-0.7 ± 0.1	1.4 ± 0.1	0.8 ± 0.1	-0.1 ± 0.1	-2.1 ± 0.3	2.1 ± 0.3	-1.3 ± 0.1	-0.2 ± 0.2	1.2 ± 0.1	-0.1 ± 0.2	0.8 ± 0.2	E Africa M	W Africa F
28	-1.2 ± 0.3	-1.1 ± 0.1	1.2 ± 0.1	0.5 ± 0.1	-0.5 ± 0.2	-2.4 ± 0.3	1.6 ± 0.3	-1.6 ± 0.1	-0.4 ± 0.2	0.8 ± 0.1	-0.5 ± 0.2	0.4 ± 0.2	E Africa M	W Africa F
29	-1.7 ± 0.3	-1.4 ± 0.1	0.9 ± 0.2	0.2 ± 0.1	-0.8 ± 0.2	-2.7 ± 0.3	1.5 ± 0.3	-1.8 ± 0.1	-0.8 ± 0.2	0.46 ± 0.10	-0.9 ± 0.2	0.2 ± 0.2	E Africa M	W Africa F
30	-1.9 ± 0.3	-1.6 ± 0.1	0.4 ± 0.2	-0.3 ± 0.1	-1.0 ± 0.2	-3.1 ± 0.3	1.4 ± 0.3	-2.1 ± 0.1	-1.0 ± 0.2	0.04 ± 0.10	-1.1 ± 0.2	-0.1 ± 0.2	E Africa M	W Africa F
31	-2.4 ± 0.3	-1.9 ± 0.1	0.3 ± 0.2	-0.7 ± 0.1	-1.4 ± 0.2	-3.5 ± 0.3	0.9 ± 0.3	-2.2 ± 0.1	-1.2 ± 0.2	-0.31 ± 0.10	-1.4 ± 0.2	-0.4 ± 0.2	E Africa M	W Africa F
32	-2.4 ± 0.4	-2.1 ± 0.1	0.1 ± 0.2	-1.1 ± 0.1	-1.6 ± 0.2	-3.5 ± 0.3	0.5 ± 0.3	-2.4 ± 0.1	-1.4 ± 0.2	-0.5 ± 0.1	-1.4 ± 0.2	-0.8 ± 0.2	E Africa M	W Africa F
33	-3.0 ± 0.4	-2.3 ± 0.1	-0.0 ± 0.2	-1.4 ± 0.1	-1.8 ± 0.2	-3.9 ± 0.3	0.7 ± 0.3	-2.7 ± 0.1	-1.3 ± 0.2	-1.0 ± 0.1	-1.6 ± 0.3	-0.8 ± 0.2	E Africa M	W Africa F
34	-2.8 ± 0.4	-2.4 ± 0.1	-0.4 ± 0.2	-1.7 ± 0.1	-1.9 ± 0.2	-4.2 ± 0.3	0.0 ± 0.3	-2.8 ± 0.1	-1.7 ± 0.2	-1.3 ± 0.1	-1.6 ± 0.3	-1.2 ± 0.2	E Africa M	W Africa F
35	-3.0 ± 0.4	-2.6 ± 0.1	-0.7 ± 0.2	-2.1 ± 0.1	-2.3 ± 0.2	-4.3 ± 0.3	0.1 ± 0.3	-3.0 ± 0.2	-1.8 ± 0.2	-1.6 ± 0.1	-2.1 ± 0.3	-1.4 ± 0.3	E Africa M	W Africa F
36	-2.9 ± 0.4	-2.7 ± 0.1	-0.6 ± 0.2	-2.4 ± 0.1	-2.4 ± 0.2	-4.4 ± 0.4	-0.3 ± 0.3	-3.2 ± 0.1	-1.7 ± 0.3	-2.0 ± 0.1	-2.0 ± 0.3	-1.6 ± 0.3	E Africa M	W Africa F
37	-3.4 ± 0.4	-2.9 ± 0.1	-0.9 ± 0.2	-2.7 ± 0.1	-2.5 ± 0.2	-4.5 ± 0.4	-0.1 ± 0.3	-3.1 ± 0.2	-1.9 ± 0.3	-2.3 ± 0.1	-2.3 ± 0.3	-1.8 ± 0.3	E Africa M	W Africa F
38	-3.1 ± 0.5	-3.1 ± 0.1	-1.0 ± 0.2	-2.9 ± 0.1	-2.4 ± 0.2	-4.7 ± 0.4	-0.5 ± 0.4	-3.3 ± 0.2	-1.9 ± 0.3	-2.6 ± 0.1	-1.5 ± 0.3	-1.7 ± 0.3	E Africa M	W Africa F
39	-3.3 ± 0.5	-3.3 ± 0.1	-1.3 ± 0.2	-3.2 ± 0.2	-2.6 ± 0.2	-4.5 ± 0.4	-0.4 ± 0.4	-3.4 ± 0.2	-1.6 ± 0.3	-2.7 ± 0.1	-1.8 ± 0.3	-2.2 ± 0.3	E Africa M	W Africa F
40	-3.1 ± 0.5	-3.4 ± 0.1	-1.2 ± 0.2	-3.2 ± 0.2	-2.8 ± 0.2	-5.0 ± 0.4	-0.4 ± 0.4	-3.5 ± 0.2	-1.9 ± 0.3	-2.9 ± 0.1	-1.8 ± 0.3	-2.5 ± 0.3	E Africa M	W Africa F
41	-3.8 ± 0.5	-3.5 ± 0.1	-1.4 ± 0.2	-3.5 ± 0.2	-2.9 ± 0.2	-5.2 ± 0.5	-0.6 ± 0.4	-3.3 ± 0.2	-1.6 ± 0.3	-2.9 ± 0.2	-1.7 ± 0.3	-2.2 ± 0.4	E Africa M	W Africa F
42	-2.9 ± 0.5	-3.5 ± 0.1	-1.4 ± 0.3	-3.3 ± 0.2	-3.0 ± 0.2	-5.0 ± 0.5	-0.5 ± 0.4	-3.3 ± 0.2	-1.3 ± 0.3	-3.1 ± 0.2	-1.4 ± 0.3	-2.3 ± 0.3	E Africa M	W Africa F
43	-3.2 ± 0.5	-3.7 ± 0.1	-1.3 ± 0.3	-3.8 ± 0.2	-3.2 ± 0.2	-5.2 ± 0.5	-0.3 ± 0.4	-3.0 ± 0.2	-1.5 ± 0.3	-3.1 ± 0.2	-1.2 ± 0.3	-2.8 ± 0.4	E Africa M	W Africa F
44	-2.9 ± 0.6	-4.0 ± 0.1	-1.8 ± 0.3	-3.6 ± 0.2	-2.7 ± 0.2	-5.2 ± 0.5	-1.1 ± 0.4	-2.9 ± 0.2	-1.0 ± 0.3	-3.2 ± 0.2	-1.0 ± 0.3	-2.6 ± 0.4	E Europe M	W Africa F
45	-3.6 ± 0.6	-3.9 ± 0.1	-1.9 ± 0.3	-3.8 ± 0.2	-3.0 ± 0.3	-5.4 ± 0.5	-1.3 ± 0.5	-2.9 ± 0.2	-0.9 ± 0.4	-2.9 ± 0.2	-1.1 ± 0.3	-2.9 ± 0.4	E Europe M	W Africa F
46	-2.8 ± 0.6	-4.1 ± 0.1	-2.0 ± 0.3	-3.6 ± 0.2	-3.3 ± 0.3	-5.0 ± 0.5	-1.2 ± 0.5	-2.8 ± 0.2	-0.8 ± 0.4	-2.8 ± 0.2	-1.1 ± 0.3	-3.2 ± 0.4	E Europe M	W Africa F
47	-2.7 ± 0.7	-4.0 ± 0.1	-1.9 ± 0.3	-3.6 ± 0.2	-3.1 ± 0.3	-5.1 ± 0.5	-0.7 ± 0.5	-2.4 ± 0.2	-0.8 ± 0.3	-2.9 ± 0.2	-0.6 ± 0.3	-2.7 ± 0.4	S E Asia M	W Africa F
48	-3.0 ± 0.7	-4.1 ± 0.1	-2.0 ± 0.3	-3.7 ± 0.3	-3.2 ± 0.3	-5.0 ± 0.5	-1.2 ± 0.5	-2.5 ± 0.2	-0.8 ± 0.4	-2.9 ± 0.2	-0.9 ± 0.3	-3.1 ± 0.5	E Europe M	W Africa F
49	-3.1 ± 0.7	-4.2 ± 0.2	-2.1 ± 0.3	-3.7 ± 0.2	-3.0 ± 0.3	-5.4 ± 0.6	-1.6 ± 0.6	-2.4 ± 0.2	-0.7 ± 0.3	-2.8 ± 0.2	-1.0 ± 0.3	-3.4 ± 0.4	E Europe M	W Africa F
50	-3.5 ± 0.8	-4.3 ± 0.2	-2.1 ± 0.3	-3.7 ± 0.2	-3.3 ± 0.3	-5.0 ± 0.6	-1.9 ± 0.5	-2.2 ± 0.2	-0.9 ± 0.4	-2.9 ± 0.3	-0.5 ± 0.3	-3.2 ± 0.4	S E Asia M	W Africa F
51	-2.9 ± 0.6	-4.5 ± 0.2	-2.2 ± 0.3	-3.9 ± 0.2	-3.3 ± 0.3	-5.2 ± 0.6	-1.7 ± 0.6	-2.2 ± 0.2	-0.8 ± 0.3	-2.8 ± 0.3	-0.8 ± 0.3	-3.4 ± 0.5	S E Asia M	W Africa F
52	-3.0 ± 0.7	-4.4 ± 0.2	-2.2 ± 0.3	-4.3 ± 0.2	-3.1 ± 0.3	-5.8 ± 0.6	-1.8 ± 0.6	-2.2 ± 0.2	-1.1 ± 0.4	-2.9 ± 0.3	-1.1 ± 0.3	-3.6 ± 0.5	S E Asia M	W Africa F

Table 42. *Mean raw error for Application-type images for algorithm dermalog-002. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	1.2 ± 0.4	4.7 ± 0.2	4.5 ± 0.4	3.2 ± 0.3	4.3 ± 0.4	2.7 ± 0.5	1.1 ± 0.3	1.6 ± 0.2	0.3 ± 0.3	1.2 ± 0.2	1.7 ± 0.3	2.3 ± 0.4	E Asia F	E Europe M
15	1.0 ± 0.5	5.1 ± 0.2	5.3 ± 0.4	3.8 ± 0.3	4.9 ± 0.5	2.6 ± 0.6	1.2 ± 0.3	2.2 ± 0.2	0.8 ± 0.4	2.0 ± 0.2	2.1 ± 0.3	2.5 ± 0.4	E Europe F	E Europe M
16	0.7 ± 0.5	5.3 ± 0.2	5.3 ± 0.4	4.0 ± 0.3	5.2 ± 0.4	2.6 ± 0.5	2.2 ± 0.3	2.4 ± 0.2	1.5 ± 0.4	2.4 ± 0.2	2.8 ± 0.3	2.7 ± 0.4	E Asia F	E Africa F
17	0.9 ± 0.5	5.1 ± 0.2	4.9 ± 0.5	4.1 ± 0.3	5.1 ± 0.4	2.4 ± 0.5	2.0 ± 0.3	2.4 ± 0.2	1.7 ± 0.3	2.7 ± 0.2	2.8 ± 0.3	2.7 ± 0.4	E Asia F	E Africa F
18	0.3 ± 0.4	4.6 ± 0.2	4.8 ± 0.4	3.4 ± 0.2	4.5 ± 0.3	1.7 ± 0.4	2.0 ± 0.3	1.8 ± 0.1	1.7 ± 0.3	2.4 ± 0.2	2.3 ± 0.3	2.4 ± 0.3	E Europe F	E Africa F
19	0.3 ± 0.4	4.1 ± 0.2	4.5 ± 0.3	3.5 ± 0.2	4.3 ± 0.2	1.5 ± 0.4	2.2 ± 0.3	1.7 ± 0.1	1.5 ± 0.3	2.5 ± 0.2	2.0 ± 0.2	2.3 ± 0.3	E Europe F	E Africa F
20	-0.4 ± 0.4	4.0 ± 0.1	4.1 ± 0.3	2.9 ± 0.2	4.1 ± 0.2	1.5 ± 0.4	2.2 ± 0.3	1.4 ± 0.1	1.7 ± 0.3	2.5 ± 0.2	1.9 ± 0.2	2.0 ± 0.3	E Europe F	E Africa F
21	-0.7 ± 0.4	3.5 ± 0.1	3.8 ± 0.3	2.5 ± 0.2	3.5 ± 0.2	0.9 ± 0.4	1.8 ± 0.3	1.1 ± 0.1	1.6 ± 0.3	2.4 ± 0.2	1.5 ± 0.2	2.0 ± 0.3	E Europe F	E Africa F
22	-0.8 ± 0.4	3.0 ± 0.1	3.4 ± 0.2	1.7 ± 0.2	3.0 ± 0.2	0.3 ± 0.4	2.0 ± 0.3	0.6 ± 0.1	1.8 ± 0.3	1.9 ± 0.2	1.0 ± 0.2	1.5 ± 0.3	E Europe F	E Africa F
23	-1.6 ± 0.4	2.5 ± 0.1	3.3 ± 0.2	1.7 ± 0.2	2.6 ± 0.2	-0.2 ± 0.3	1.4 ± 0.3	0.3 ± 0.1	1.3 ± 0.3	1.7 ± 0.2	0.5 ± 0.2	1.3 ± 0.3	E Europe F	E Africa F
24	-1.8 ± 0.4	2.1 ± 0.1	2.9 ± 0.2	1.1 ± 0.1	2.1 ± 0.1	-0.9 ± 0.3	1.2 ± 0.3	-0.1 ± 0.1	1.2 ± 0.2	1.5 ± 0.2	0.2 ± 0.2	1.0 ± 0.3	E Europe F	E Africa F
25	-2.3 ± 0.3	1.57 ± 0.10	2.5 ± 0.2	0.5 ± 0.1	1.5 ± 0.1	-1.5 ± 0.3	0.9 ± 0.3	-0.4 ± 0.1	1.0 ± 0.2	1.1 ± 0.1	-0.1 ± 0.2	0.4 ± 0.3	E Europe F	E Africa F
26	-2.7 ± 0.3	1.05 ± 0.09	2.1 ± 0.2	-0.1 ± 0.1	1.1 ± 0.1	-1.9 ± 0.3	0.6 ± 0.3	-0.8 ± 0.1	0.6 ± 0.2	0.5 ± 0.1	-0.6 ± 0.2	-0.1 ± 0.2	E Europe F	E Africa F
27	-2.9 ± 0.3	0.60 ± 0.09	1.8 ± 0.2	-0.7 ± 0.1	0.6 ± 0.1	-2.3 ± 0.3	0.1 ± 0.3	-0.9 ± 0.1	0.8 ± 0.2	0.1 ± 0.1	-0.4 ± 0.2	-0.5 ± 0.2	E Europe F	E Africa F
28	-3.3 ± 0.3	0.11 ± 0.09	1.6 ± 0.2	-1.2 ± 0.1	0.2 ± 0.1	-2.8 ± 0.3	-0.4 ± 0.2	-1.3 ± 0.2	0.6 ± 0.2	-0.4 ± 0.1	-0.8 ± 0.2	-0.9 ± 0.2	E Europe F	E Africa F
29	-3.6 ± 0.3	-0.27 ± 0.09	1.3 ± 0.2	-1.7 ± 0.1	-0.2 ± 0.1	-3.0 ± 0.3	-0.8 ± 0.3	-1.5 ± 0.1	0.2 ± 0.2	-1.0 ± 0.1	-1.2 ± 0.2	-1.2 ± 0.2	E Europe F	E Africa F
30	-3.9 ± 0.3	-0.67 ± 0.09	1.1 ± 0.2	-2.2 ± 0.1	-0.6 ± 0.2	-3.8 ± 0.3	-1.1 ± 0.3	-1.9 ± 0.1	0.0 ± 0.2	-1.4 ± 0.1	-1.5 ± 0.2	-1.7 ± 0.2	E Europe F	E Africa F
31	-4.4 ± 0.3	-1.1 ± 0.1	0.8 ± 0.2	-2.7 ± 0.1	-0.9 ± 0.2	-4.4 ± 0.3	-1.5 ± 0.3	-2.0 ± 0.1	-0.4 ± 0.2	-1.8 ± 0.1	-2.0 ± 0.3	-2.1 ± 0.2	E Europe F	E Africa F
32	-4.6 ± 0.4	-1.4 ± 0.1	0.6 ± 0.2	-3.1 ± 0.1	-1.3 ± 0.2	-4.5 ± 0.3	-2.0 ± 0.3	-2.4 ± 0.1	-0.4 ± 0.2	-2.2 ± 0.1	-1.8 ± 0.3	-2.6 ± 0.3	E Europe F	E Africa F
33	-5.0 ± 0.4	-1.8 ± 0.1	0.5 ± 0.2	-3.5 ± 0.1	-1.7 ± 0.2	-4.8 ± 0.3	-2.1 ± 0.3	-2.8 ± 0.2	-0.3 ± 0.2	-2.8 ± 0.1	-2.0 ± 0.3	-2.8 ± 0.3	E Europe F	E Africa F
34	-5.4 ± 0.4	-1.9 ± 0.1	0.0 ± 0.2	-3.8 ± 0.1	-1.6 ± 0.2	-5.4 ± 0.3	-2.7 ± 0.3	-2.9 ± 0.2	-0.8 ± 0.2	-3.1 ± 0.1	-2.5 ± 0.3	-3.2 ± 0.3	E Europe F	W Africa F
35	-5.3 ± 0.4	-2.3 ± 0.1	-0.1 ± 0.2	-4.2 ± 0.1	-2.1 ± 0.2	-5.8 ± 0.4	-2.9 ± 0.3	-3.1 ± 0.2	-1.0 ± 0.2	-3.5 ± 0.1	-2.7 ± 0.3	-3.7 ± 0.3	E Europe F	W Africa F
36	-5.7 ± 0.4	-2.3 ± 0.1	-0.2 ± 0.2	-4.7 ± 0.1	-2.2 ± 0.2	-6.0 ± 0.4	-3.3 ± 0.4	-3.4 ± 0.2	-0.9 ± 0.2	-3.9 ± 0.1	-2.9 ± 0.3	-4.1 ± 0.3	E Europe F	W Africa F
37	-6.1 ± 0.5	-2.7 ± 0.1	-0.4 ± 0.2	-4.9 ± 0.2	-2.5 ± 0.2	-6.4 ± 0.4	-3.4 ± 0.4	-3.4 ± 0.2	-1.3 ± 0.3	-4.3 ± 0.1	-3.1 ± 0.3	-4.2 ± 0.3	E Europe F	W Africa F
38	-5.6 ± 0.5	-2.9 ± 0.1	-0.3 ± 0.2	-5.2 ± 0.2	-2.4 ± 0.2	-6.4 ± 0.4	-3.7 ± 0.4	-3.7 ± 0.2	-1.3 ± 0.2	-4.6 ± 0.1	-2.7 ± 0.3	-4.5 ± 0.3	E Europe F	W Africa F
39	-6.0 ± 0.5	-3.0 ± 0.1	-0.6 ± 0.3	-5.5 ± 0.2	-2.5 ± 0.2	-6.7 ± 0.4	-3.8 ± 0.4	-3.8 ± 0.2	-1.4 ± 0.3	-4.8 ± 0.2	-2.9 ± 0.3	-4.9 ± 0.3	E Europe F	W Africa F
40	-6.5 ± 0.6	-3.1 ± 0.1	-0.8 ± 0.3	-5.5 ± 0.2	-2.6 ± 0.3	-7.2 ± 0.4	-3.8 ± 0.4	-3.9 ± 0.2	-1.6 ± 0.3	-5.1 ± 0.2	-3.1 ± 0.3	-5.4 ± 0.3	E Europe F	W Africa F
41	-6.6 ± 0.6	-3.2 ± 0.1	-0.9 ± 0.3	-5.6 ± 0.2	-3.0 ± 0.3	-7.5 ± 0.5	-4.5 ± 0.4	-3.9 ± 0.2	-1.9 ± 0.3	-5.3 ± 0.2	-3.3 ± 0.3	-5.3 ± 0.4	E Europe F	W Africa F
42	-5.9 ± 0.6	-3.2 ± 0.1	-0.9 ± 0.3	-5.5 ± 0.2	-2.7 ± 0.3	-7.3 ± 0.5	-4.3 ± 0.5	-3.9 ± 0.2	-1.7 ± 0.3	-5.5 ± 0.2	-3.0 ± 0.3	-5.6 ± 0.4	E Europe F	W Africa F
43	-6.4 ± 0.6	-3.4 ± 0.1	-0.9 ± 0.3	-5.8 ± 0.3	-3.0 ± 0.3	-7.5 ± 0.5	-4.1 ± 0.5	-3.7 ± 0.2	-2.0 ± 0.3	-5.5 ± 0.2	-3.2 ± 0.3	-6.1 ± 0.4	E Europe F	W Africa F
44	-6.4 ± 0.7	-3.6 ± 0.1	-1.3 ± 0.3	-5.6 ± 0.3	-2.4 ± 0.3	-7.6 ± 0.5	-4.9 ± 0.5	-3.8 ± 0.2	-1.7 ± 0.3	-5.7 ± 0.2	-3.0 ± 0.3	-5.9 ± 0.4	E Europe F	W Africa F
45	-6.6 ± 0.7	-3.5 ± 0.2	-1.2 ± 0.3	-5.6 ± 0.3	-2.8 ± 0.3	-7.7 ± 0.6	-4.8 ± 0.5	-4.0 ± 0.2	-1.9 ± 0.3	-5.7 ± 0.2	-3.0 ± 0.4	-6.3 ± 0.4	E Europe F	W Africa F
46	-5.6 ± 0.7	-3.7 ± 0.2	-1.7 ± 0.3	-5.4 ± 0.3	-3.2 ± 0.3	-7.9 ± 0.6	-4.8 ± 0.5	-4.0 ± 0.2	-2.0 ± 0.3	-5.3 ± 0.2	-2.8 ± 0.4	-6.5 ± 0.5	E Europe F	W Africa F
47	-5.6 ± 0.8	-3.5 ± 0.2	-1.4 ± 0.4	-5.4 ± 0.3	-2.8 ± 0.3	-7.6 ± 0.6	-4.4 ± 0.5	-3.6 ± 0.2	-2.3 ± 0.3	-5.5 ± 0.2	-2.9 ± 0.4	-6.3 ± 0.5	E Europe F	W Africa F
48	-6.0 ± 0.9	-3.5 ± 0.2	-1.5 ± 0.3	-5.4 ± 0.3	-3.0 ± 0.3	-7.5 ± 0.6	-5.5 ± 0.6	-3.9 ± 0.2	-2.2 ± 0.4	-5.5 ± 0.3	-2.8 ± 0.4	-6.8 ± 0.5	E Europe F	W Africa F
49	-6.0 ± 0.9	-3.7 ± 0.2	-1.5 ± 0.3	-5.2 ± 0.3	-2.8 ± 0.3	-7.8 ± 0.7	-5.1 ± 0.6	-3.7 ± 0.2	-2.2 ± 0.4	-5.5 ± 0.3	-2.8 ± 0.4	-6.8 ± 0.5	E Europe F	W Africa F
50	-6.1 ± 0.9	-3.7 ± 0.2	-1.5 ± 0.3	-5.3 ± 0.3	-3.1 ± 0.3	-7.5 ± 0.6	-6.0 ± 0.7	-3.8 ± 0.2	-2.5 ± 0.4	-5.8 ± 0.3	-2.3 ± 0.4	-7.1 ± 0.5	E Europe F	W Africa F
51	-5.8 ± 0.8	-3.8 ± 0.2	-1.7 ± 0.3	-5.2 ± 0.3	-3.1 ± 0.3	-8.0 ± 0.7	-5.9 ± 0.7	-3.6 ± 0.2	-2.3 ± 0.4	-6.0 ± 0.3	-2.3 ± 0.4	-6.5 ± 0.6	E Europe F	W Africa F
52	-5.9 ± 0.9	-3.9 ± 0.2	-1.7 ± 0.3	-5.6 ± 0.3	-2.6 ± 0.3	-8.4 ± 0.7	-5.7 ± 0.7	-3.6 ± 0.2	-2.7 ± 0.4	-6.0 ± 0.3	-2.9 ± 0.4	-7.6 ± 0.6	E Europe F	W Africa F

Table 43. *Mean raw error for Application-type images for algorithm hzailu-001. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	5.1 ± 0.5	5.4 ± 0.3	8.1 ± 0.5	6.2 ± 0.3	5.5 ± 0.5	7.9 ± 0.7	4.5 ± 0.6	5.5 ± 0.2	4.8 ± 0.5	7.1 ± 0.2	5.6 ± 0.4	6.3 ± 1.0	E Europe F	E Africa M
15	5.1 ± 0.7	5.8 ± 0.3	8.4 ± 0.5	6.8 ± 0.3	5.8 ± 0.5	7.8 ± 0.8	5.0 ± 0.6	5.9 ± 0.2	5.9 ± 0.5	8.0 ± 0.3	6.5 ± 0.4	7.3 ± 0.9	E Europe F	E Africa M
16	4.8 ± 0.6	5.8 ± 0.3	8.2 ± 0.5	6.5 ± 0.3	6.5 ± 0.5	7.8 ± 0.8	7.6 ± 0.6	5.8 ± 0.2	6.5 ± 0.5	8.2 ± 0.2	7.2 ± 0.4	8.7 ± 0.9	W Africa M	E Africa F
17	5.0 ± 0.6	5.7 ± 0.2	8.3 ± 0.5	6.6 ± 0.3	6.1 ± 0.5	8.0 ± 0.7	7.8 ± 0.6	5.7 ± 0.2	6.4 ± 0.4	8.4 ± 0.2	7.3 ± 0.4	9.3 ± 0.7	W Africa M	E Africa F
18	4.9 ± 0.5	5.2 ± 0.2	7.8 ± 0.4	5.8 ± 0.2	5.7 ± 0.3	7.2 ± 0.6	8.2 ± 0.5	5.0 ± 0.1	6.0 ± 0.4	8.2 ± 0.2	6.4 ± 0.3	9.5 ± 0.6	W Africa M	E Africa F
19	4.6 ± 0.5	4.8 ± 0.2	7.4 ± 0.3	6.0 ± 0.2	5.6 ± 0.3	7.0 ± 0.6	8.6 ± 0.4	4.7 ± 0.1	5.9 ± 0.3	8.1 ± 0.2	5.8 ± 0.3	9.8 ± 0.6	W Africa M	E Africa F
20	4.0 ± 0.5	4.6 ± 0.2	7.1 ± 0.3	5.3 ± 0.2	5.1 ± 0.3	6.9 ± 0.5	8.8 ± 0.4	4.2 ± 0.1	6.2 ± 0.3	7.8 ± 0.2	5.8 ± 0.2	9.5 ± 0.5	W Africa M	E Africa F
21	3.7 ± 0.5	4.3 ± 0.2	6.7 ± 0.2	4.9 ± 0.2	4.9 ± 0.2	6.6 ± 0.5	8.4 ± 0.4	3.8 ± 0.1	6.2 ± 0.3	7.5 ± 0.2	5.3 ± 0.2	9.7 ± 0.5	W Africa M	E Africa F
22	3.4 ± 0.4	3.7 ± 0.2	6.3 ± 0.2	4.2 ± 0.2	4.3 ± 0.2	5.9 ± 0.5	8.6 ± 0.4	3.2 ± 0.1	6.0 ± 0.3	7.0 ± 0.2	4.6 ± 0.2	9.2 ± 0.4	W Africa M	E Asia M
23	2.7 ± 0.4	3.5 ± 0.1	5.9 ± 0.2	3.9 ± 0.2	4.0 ± 0.2	5.6 ± 0.4	7.7 ± 0.3	2.7 ± 0.1	5.6 ± 0.3	6.5 ± 0.1	4.1 ± 0.2	8.9 ± 0.4	W Africa M	E Asia M
24	2.0 ± 0.4	2.8 ± 0.1	5.4 ± 0.2	3.3 ± 0.1	3.5 ± 0.2	4.9 ± 0.4	7.4 ± 0.3	2.2 ± 0.1	5.3 ± 0.2	6.2 ± 0.1	3.5 ± 0.2	8.7 ± 0.3	W Africa M	E Africa F
25	1.9 ± 0.3	2.4 ± 0.1	4.8 ± 0.2	2.6 ± 0.1	2.9 ± 0.2	4.5 ± 0.4	7.2 ± 0.3	1.8 ± 0.1	5.0 ± 0.2	5.6 ± 0.1	3.1 ± 0.2	7.9 ± 0.3	W Africa M	E Asia M
26	1.3 ± 0.3	1.9 ± 0.1	4.3 ± 0.1	1.9 ± 0.1	2.5 ± 0.1	3.9 ± 0.4	6.8 ± 0.3	1.3 ± 0.1	4.6 ± 0.2	5.1 ± 0.1	2.5 ± 0.2	7.5 ± 0.3	W Africa M	E Asia M
27	1.2 ± 0.3	1.39 ± 0.10	3.8 ± 0.1	1.3 ± 0.1	2.0 ± 0.1	3.4 ± 0.3	6.2 ± 0.3	0.8 ± 0.1	4.5 ± 0.2	4.4 ± 0.1	2.5 ± 0.2	6.9 ± 0.3	W Africa M	E Asia M
28	0.5 ± 0.3	0.9 ± 0.1	3.2 ± 0.1	0.5 ± 0.1	1.5 ± 0.1	3.0 ± 0.4	5.5 ± 0.3	0.4 ± 0.1	4.1 ± 0.2	3.8 ± 0.1	1.8 ± 0.2	6.2 ± 0.3	W Africa M	E Asia M
29	0.3 ± 0.3	0.4 ± 0.1	2.7 ± 0.1	0.1 ± 0.1	1.0 ± 0.2	2.5 ± 0.3	5.3 ± 0.3	0.1 ± 0.1	3.5 ± 0.2	3.1 ± 0.1	1.3 ± 0.2	5.9 ± 0.2	W Africa M	S Asia F
30	-0.1 ± 0.3	-0.08 ± 0.10	2.1 ± 0.2	-0.7 ± 0.1	0.7 ± 0.2	1.9 ± 0.3	4.7 ± 0.3	-0.5 ± 0.1	3.1 ± 0.2	2.41 ± 0.10	1.1 ± 0.2	5.3 ± 0.2	W Africa M	S Asia F
31	-0.7 ± 0.3	-0.5 ± 0.1	1.8 ± 0.2	-1.3 ± 0.1	0.1 ± 0.2	1.3 ± 0.3	4.1 ± 0.3	-0.8 ± 0.1	2.6 ± 0.2	1.79 ± 0.10	0.4 ± 0.3	4.8 ± 0.2	W Africa M	S Asia F
32	-1.0 ± 0.4	-1.0 ± 0.1	1.2 ± 0.2	-1.9 ± 0.1	-0.5 ± 0.2	0.9 ± 0.3	3.4 ± 0.3	-1.2 ± 0.1	2.8 ± 0.2	1.4 ± 0.1	0.5 ± 0.3	4.2 ± 0.2	W Africa M	S Asia F
33	-1.8 ± 0.4	-1.3 ± 0.1	0.9 ± 0.2	-2.4 ± 0.1	-0.7 ± 0.2	0.5 ± 0.4	3.4 ± 0.3	-1.5 ± 0.2	2.3 ± 0.2	0.9 ± 0.1	0.2 ± 0.3	3.5 ± 0.2	W Africa M	S Asia F
34	-1.9 ± 0.4	-1.6 ± 0.1	0.3 ± 0.2	-2.9 ± 0.1	-1.2 ± 0.2	-0.1 ± 0.4	2.3 ± 0.3	-1.7 ± 0.2	1.7 ± 0.3	0.4 ± 0.1	-0.2 ± 0.3	3.0 ± 0.3	W Africa M	S Asia F
35	-2.2 ± 0.4	-2.2 ± 0.1	-0.1 ± 0.2	-3.6 ± 0.1	-1.8 ± 0.2	-0.8 ± 0.4	2.1 ± 0.3	-2.0 ± 0.2	1.5 ± 0.3	-0.0 ± 0.1	-0.4 ± 0.3	2.4 ± 0.3	W Africa M	S Asia F
36	-2.5 ± 0.4	-2.4 ± 0.1	-0.4 ± 0.3	-4.0 ± 0.2	-1.9 ± 0.2	-0.9 ± 0.4	1.5 ± 0.3	-2.0 ± 0.2	1.5 ± 0.3	-0.4 ± 0.1	-0.4 ± 0.3	1.8 ± 0.3	W Africa M	S Asia F
37	-3.1 ± 0.5	-2.7 ± 0.1	-0.7 ± 0.3	-4.3 ± 0.2	-2.4 ± 0.2	-1.5 ± 0.4	1.3 ± 0.3	-2.0 ± 0.2	1.4 ± 0.3	-0.8 ± 0.1	-0.7 ± 0.4	1.3 ± 0.3	E Europe M	S Asia F
38	-2.8 ± 0.5	-3.1 ± 0.1	-0.7 ± 0.3	-4.7 ± 0.2	-2.5 ± 0.2	-2.0 ± 0.4	0.6 ± 0.3	-2.2 ± 0.2	1.1 ± 0.3	-1.2 ± 0.1	-0.4 ± 0.3	1.0 ± 0.3	E Europe M	S Asia F
39	-3.3 ± 0.5	-3.4 ± 0.1	-1.5 ± 0.3	-5.3 ± 0.2	-2.9 ± 0.2	-2.2 ± 0.4	0.6 ± 0.4	-2.3 ± 0.2	1.3 ± 0.3	-1.4 ± 0.1	-0.4 ± 0.3	0.3 ± 0.3	E Europe M	S Asia F
40	-3.8 ± 0.6	-3.6 ± 0.1	-1.1 ± 0.3	-5.3 ± 0.2	-3.2 ± 0.3	-2.7 ± 0.4	0.0 ± 0.4	-2.3 ± 0.2	1.1 ± 0.4	-1.8 ± 0.2	-0.7 ± 0.3	-0.1 ± 0.3	E Europe M	S Asia F
41	-4.4 ± 0.6	-3.9 ± 0.1	-1.7 ± 0.3	-5.7 ± 0.2	-3.3 ± 0.3	-3.4 ± 0.5	-0.1 ± 0.4	-2.2 ± 0.2	1.1 ± 0.4	-1.9 ± 0.2	-0.4 ± 0.4	-0.7 ± 0.3	E Europe M	S Asia F
42	-3.6 ± 0.6	-4.0 ± 0.1	-1.4 ± 0.4	-5.6 ± 0.3	-3.6 ± 0.3	-3.5 ± 0.5	-0.8 ± 0.4	-2.2 ± 0.2	1.4 ± 0.4	-2.3 ± 0.2	-0.3 ± 0.4	-1.0 ± 0.3	E Europe M	S Asia F
43	-4.7 ± 0.7	-4.2 ± 0.2	-1.3 ± 0.4	-6.0 ± 0.3	-4.0 ± 0.3	-4.0 ± 0.5	-0.6 ± 0.4	-2.0 ± 0.2	1.3 ± 0.4	-2.4 ± 0.2	-0.6 ± 0.4	-1.9 ± 0.3	E Europe M	S Asia F
44	-4.3 ± 0.7	-4.5 ± 0.2	-1.9 ± 0.4	-6.1 ± 0.3	-3.7 ± 0.3	-4.1 ± 0.5	-0.8 ± 0.5	-2.0 ± 0.2	1.6 ± 0.4	-2.6 ± 0.2	-0.4 ± 0.4	-1.9 ± 0.4	E Europe M	S Asia F
45	-5.2 ± 0.7	-4.6 ± 0.2	-1.8 ± 0.4	-6.1 ± 0.3	-4.2 ± 0.3	-4.4 ± 0.5	-1.9 ± 0.5	-2.0 ± 0.2	1.3 ± 0.4	-2.4 ± 0.2	-0.5 ± 0.4	-2.9 ± 0.4	E Europe M	S Asia F
46	-4.0 ± 0.8	-4.8 ± 0.2	-2.0 ± 0.4	-6.1 ± 0.3	-4.7 ± 0.3	-5.0 ± 0.5	-1.9 ± 0.5	-2.0 ± 0.2	1.7 ± 0.4	-2.3 ± 0.3	-0.4 ± 0.4	-2.9 ± 0.4	E Europe M	S Asia F
47	-3.7 ± 0.8	-4.9 ± 0.2	-1.3 ± 0.5	-6.1 ± 0.3	-4.5 ± 0.3	-5.0 ± 0.5	-1.8 ± 0.5	-1.7 ± 0.2	1.2 ± 0.4	-2.5 ± 0.3	0.1 ± 0.4	-3.2 ± 0.4	E Europe M	S Asia F
48	-5.1 ± 0.8	-4.9 ± 0.2	-1.5 ± 0.4	-5.7 ± 0.4	-4.5 ± 0.3	-5.8 ± 0.6	-2.3 ± 0.6	-1.8 ± 0.2	1.4 ± 0.5	-2.4 ± 0.3	-0.0 ± 0.4	-3.5 ± 0.4	E Europe M	W Africa F
49	-4.9 ± 0.9	-5.1 ± 0.2	-1.6 ± 0.5	-5.9 ± 0.4	-4.5 ± 0.3	-5.9 ± 0.6	-2.5 ± 0.7	-1.9 ± 0.2	1.8 ± 0.4	-2.5 ± 0.3	-0.2 ± 0.4	-4.1 ± 0.4	E Europe M	W Africa F
50	-5.5 ± 0.9	-5.2 ± 0.2	-1.1 ± 0.4	-6.0 ± 0.4	-4.8 ± 0.3	-5.8 ± 0.6	-2.8 ± 0.7	-1.7 ± 0.2	1.3 ± 0.5	-2.7 ± 0.3	0.1 ± 0.4	-4.6 ± 0.4	E Europe M	S Asia F
51	-4.6 ± 0.8	-5.3 ± 0.2	-1.3 ± 0.5	-5.8 ± 0.4	-4.8 ± 0.3	-6.4 ± 0.6	-3.0 ± 0.8	-1.6 ± 0.2	1.5 ± 0.4	-2.6 ± 0.3	0.4 ± 0.4	-4.6 ± 0.5	E Europe M	W Africa F
52	-4.5 ± 1.0	-5.5 ± 0.2	-1.2 ± 0.4	-5.7 ± 0.4	-4.7 ± 0.3	-7.4 ± 0.6	-2.4 ± 0.8	-1.7 ± 0.2	1.4 ± 0.5	-2.5 ± 0.3	-0.3 ± 0.4	-5.3 ± 0.5	E Europe M	W Africa F

Table 44. *Mean raw error for Application-type images for algorithm idemia-001. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	0.8 ± 0.3	1.6 ± 0.1	0.3 ± 0.2	1.0 ± 0.2	1.3 ± 0.3	2.3 ± 0.3	0.1 ± 0.3	0.5 ± 0.1	-0.7 ± 0.2	-0.5 ± 0.1	-0.3 ± 0.2	0.6 ± 0.3	W Africa F	E Europe M
15	1.0 ± 0.3	1.9 ± 0.1	0.1 ± 0.2	1.3 ± 0.2	1.7 ± 0.3	2.4 ± 0.4	0.0 ± 0.3	0.9 ± 0.1	-0.6 ± 0.2	-0.2 ± 0.1	0.4 ± 0.2	0.8 ± 0.4	W Africa F	E Europe M
16	1.2 ± 0.3	1.9 ± 0.1	0.2 ± 0.2	1.3 ± 0.2	2.1 ± 0.3	2.7 ± 0.5	0.8 ± 0.3	1.1 ± 0.1	-0.7 ± 0.2	0.1 ± 0.2	0.6 ± 0.2	0.8 ± 0.4	W Africa F	E Europe M
17	1.6 ± 0.3	1.7 ± 0.1	-0.0 ± 0.3	1.4 ± 0.2	2.1 ± 0.3	2.6 ± 0.4	1.0 ± 0.3	1.1 ± 0.1	-0.8 ± 0.2	0.4 ± 0.2	1.0 ± 0.2	1.4 ± 0.4	W Africa F	E Europe M
18	1.0 ± 0.3	1.2 ± 0.1	-0.8 ± 0.3	0.6 ± 0.1	1.7 ± 0.2	2.2 ± 0.4	1.0 ± 0.3	0.8 ± 0.1	-1.1 ± 0.2	0.4 ± 0.1	1.0 ± 0.2	0.8 ± 0.3	W Africa F	E Europe M
19	1.2 ± 0.3	1.1 ± 0.1	-1.1 ± 0.2	0.7 ± 0.2	1.7 ± 0.2	2.3 ± 0.3	1.6 ± 0.3	1.1 ± 0.1	-1.0 ± 0.2	1.0 ± 0.1	0.9 ± 0.2	1.2 ± 0.4	W Africa F	E Europe F
20	1.1 ± 0.3	1.0 ± 0.1	-1.3 ± 0.2	0.6 ± 0.2	1.6 ± 0.2	2.2 ± 0.3	1.8 ± 0.3	1.0 ± 0.1	-0.6 ± 0.2	1.3 ± 0.1	1.2 ± 0.2	1.6 ± 0.4	W Africa F	E Europe F
21	0.9 ± 0.3	0.9 ± 0.1	-1.6 ± 0.2	0.3 ± 0.1	1.4 ± 0.2	1.7 ± 0.3	2.0 ± 0.3	1.0 ± 0.1	-0.7 ± 0.2	1.6 ± 0.1	1.3 ± 0.2	1.4 ± 0.3	E Africa M	E Europe F
22	0.9 ± 0.3	0.5 ± 0.1	-1.9 ± 0.2	0.0 ± 0.1	1.3 ± 0.2	1.4 ± 0.3	2.6 ± 0.3	0.9 ± 0.1	-0.5 ± 0.2	1.6 ± 0.1	1.2 ± 0.2	1.3 ± 0.3	E Africa M	E Europe F
23	0.8 ± 0.3	0.4 ± 0.1	-2.2 ± 0.2	-0.0 ± 0.1	1.1 ± 0.1	1.3 ± 0.3	2.5 ± 0.3	0.8 ± 0.1	-0.6 ± 0.2	1.8 ± 0.1	1.1 ± 0.2	1.7 ± 0.3	E Africa M	E Europe F
24	0.6 ± 0.3	0.09 ± 0.10	-2.6 ± 0.1	-0.3 ± 0.1	0.9 ± 0.1	1.0 ± 0.3	2.6 ± 0.3	0.7 ± 0.1	-0.4 ± 0.2	2.0 ± 0.1	1.1 ± 0.2	1.5 ± 0.3	E Africa M	E Europe F
25	0.3 ± 0.2	-0.13 ± 0.09	-2.7 ± 0.1	-0.63 ± 0.10	0.6 ± 0.1	0.8 ± 0.3	2.6 ± 0.3	0.7 ± 0.1	-0.4 ± 0.2	2.0 ± 0.1	1.1 ± 0.2	1.6 ± 0.3	E Africa M	E Europe F
26	0.0 ± 0.2	-0.37 ± 0.09	-3.0 ± 0.1	-0.91 ± 0.10	0.6 ± 0.1	0.5 ± 0.2	2.4 ± 0.2	0.6 ± 0.1	-0.4 ± 0.2	2.0 ± 0.1	1.1 ± 0.2	1.3 ± 0.2	E Africa M	E Europe F
27	0.0 ± 0.2	-0.57 ± 0.08	-3.1 ± 0.1	-1.18 ± 0.09	0.3 ± 0.1	0.4 ± 0.2	2.2 ± 0.2	0.5 ± 0.1	-0.2 ± 0.2	1.9 ± 0.1	1.2 ± 0.2	1.2 ± 0.2	E Africa M	E Europe F
28	-0.2 ± 0.2	-0.75 ± 0.08	-3.3 ± 0.1	-1.34 ± 0.10	0.1 ± 0.1	0.1 ± 0.2	2.1 ± 0.2	0.5 ± 0.1	-0.2 ± 0.2	1.86 ± 0.10	1.1 ± 0.2	1.1 ± 0.2	E Africa M	E Europe F
29	-0.1 ± 0.2	-0.88 ± 0.08	-3.4 ± 0.1	-1.51 ± 0.09	-0.0 ± 0.1	-0.1 ± 0.2	2.1 ± 0.2	0.5 ± 0.1	-0.2 ± 0.2	1.78 ± 0.09	0.8 ± 0.2	1.4 ± 0.2	E Africa M	E Europe F
30	-0.5 ± 0.2	-0.97 ± 0.08	-3.4 ± 0.1	-1.76 ± 0.10	-0.1 ± 0.1	-0.5 ± 0.2	2.1 ± 0.2	0.3 ± 0.1	-0.1 ± 0.2	1.66 ± 0.08	0.9 ± 0.2	1.1 ± 0.2	E Africa M	E Europe F
31	-0.7 ± 0.2	-1.13 ± 0.08	-3.4 ± 0.1	-2.0 ± 0.1	-0.3 ± 0.1	-0.6 ± 0.2	2.0 ± 0.2	0.2 ± 0.1	-0.1 ± 0.2	1.53 ± 0.09	0.8 ± 0.2	1.0 ± 0.2	E Africa M	E Europe F
32	-0.4 ± 0.3	-1.19 ± 0.09	-3.3 ± 0.1	-2.2 ± 0.1	-0.4 ± 0.1	-0.7 ± 0.2	1.8 ± 0.2	0.0 ± 0.1	-0.0 ± 0.2	1.54 ± 0.09	0.7 ± 0.2	1.1 ± 0.2	E Africa M	E Europe F
33	-0.8 ± 0.3	-1.27 ± 0.09	-3.3 ± 0.2	-2.2 ± 0.1	-0.5 ± 0.1	-0.9 ± 0.2	1.8 ± 0.2	-0.1 ± 0.1	0.2 ± 0.2	1.42 ± 0.09	0.6 ± 0.2	0.8 ± 0.2	E Africa M	E Europe F
34	-0.9 ± 0.3	-1.30 ± 0.09	-3.3 ± 0.2	-2.3 ± 0.1	-0.6 ± 0.1	-1.0 ± 0.2	1.4 ± 0.2	-0.2 ± 0.1	0.1 ± 0.2	1.34 ± 0.09	0.6 ± 0.2	0.9 ± 0.2	E Africa M	E Europe F
35	-0.8 ± 0.3	-1.48 ± 0.09	-3.3 ± 0.2	-2.5 ± 0.1	-0.8 ± 0.2	-1.3 ± 0.3	1.5 ± 0.2	-0.2 ± 0.1	0.2 ± 0.2	1.26 ± 0.09	0.4 ± 0.2	0.7 ± 0.2	E Africa M	E Europe F
36	-0.9 ± 0.3	-1.50 ± 0.09	-3.0 ± 0.2	-2.7 ± 0.1	-0.7 ± 0.2	-1.2 ± 0.3	1.4 ± 0.3	-0.2 ± 0.1	0.4 ± 0.2	1.08 ± 0.09	0.6 ± 0.2	0.6 ± 0.2	E Africa M	E Europe F
37	-1.0 ± 0.3	-1.56 ± 0.09	-3.0 ± 0.2	-2.6 ± 0.1	-0.9 ± 0.2	-1.4 ± 0.3	1.4 ± 0.3	-0.3 ± 0.1	0.3 ± 0.2	0.99 ± 0.10	0.4 ± 0.2	0.5 ± 0.2	E Africa M	E Europe F
38	-0.6 ± 0.3	-1.66 ± 0.09	-2.8 ± 0.2	-2.6 ± 0.1	-0.7 ± 0.2	-1.5 ± 0.3	1.1 ± 0.3	-0.4 ± 0.1	0.3 ± 0.2	0.84 ± 0.10	0.7 ± 0.2	0.4 ± 0.2	E Africa M	E Europe F
39	-1.1 ± 0.3	-1.76 ± 0.09	-2.8 ± 0.2	-2.7 ± 0.1	-0.8 ± 0.2	-1.1 ± 0.3	1.3 ± 0.3	-0.5 ± 0.1	0.3 ± 0.2	0.81 ± 0.10	0.7 ± 0.2	0.2 ± 0.2	E Africa M	E Europe F
40	-1.1 ± 0.4	-1.90 ± 0.09	-2.3 ± 0.2	-2.5 ± 0.1	-1.0 ± 0.2	-1.7 ± 0.3	1.2 ± 0.3	-0.5 ± 0.1	0.4 ± 0.2	0.8 ± 0.1	0.6 ± 0.2	-0.0 ± 0.2	E Africa M	S Asia F
41	-1.3 ± 0.4	-1.90 ± 0.09	-2.3 ± 0.2	-2.6 ± 0.2	-0.9 ± 0.2	-2.1 ± 0.3	1.2 ± 0.3	-0.6 ± 0.1	0.4 ± 0.2	0.7 ± 0.1	0.5 ± 0.2	-0.1 ± 0.2	E Africa M	S Asia F
42	-0.9 ± 0.4	-1.95 ± 0.09	-2.2 ± 0.2	-2.2 ± 0.2	-1.0 ± 0.2	-1.8 ± 0.3	1.2 ± 0.3	-0.6 ± 0.1	0.4 ± 0.2	0.5 ± 0.1	0.9 ± 0.2	-0.2 ± 0.2	E Africa M	E Europe F
43	-0.9 ± 0.4	-2.18 ± 0.09	-2.2 ± 0.2	-2.3 ± 0.2	-1.1 ± 0.2	-2.1 ± 0.3	1.3 ± 0.3	-0.7 ± 0.1	0.3 ± 0.2	0.6 ± 0.1	0.8 ± 0.2	-0.5 ± 0.3	E Africa M	S Asia F
44	-0.9 ± 0.5	-2.32 ± 0.09	-2.4 ± 0.2	-2.2 ± 0.2	-0.7 ± 0.2	-2.1 ± 0.3	0.8 ± 0.3	-0.8 ± 0.1	0.6 ± 0.2	0.5 ± 0.1	0.9 ± 0.2	-0.5 ± 0.3	S E Asia M	E Europe F
45	-1.2 ± 0.4	-2.36 ± 0.09	-2.1 ± 0.2	-2.2 ± 0.2	-1.1 ± 0.2	-2.3 ± 0.3	0.6 ± 0.3	-0.9 ± 0.1	0.3 ± 0.2	0.5 ± 0.1	0.7 ± 0.2	-0.7 ± 0.3	S E Asia M	E Asia F
46	-0.4 ± 0.5	-2.53 ± 0.10	-2.0 ± 0.2	-1.9 ± 0.2	-1.2 ± 0.2	-2.2 ± 0.3	0.5 ± 0.4	-1.0 ± 0.1	0.6 ± 0.2	0.6 ± 0.2	0.8 ± 0.2	-1.0 ± 0.3	S E Asia M	E Asia F
47	-0.5 ± 0.5	-2.5 ± 0.1	-1.9 ± 0.3	-2.0 ± 0.2	-1.1 ± 0.2	-2.3 ± 0.3	0.7 ± 0.4	-0.9 ± 0.1	0.4 ± 0.2	0.6 ± 0.2	1.0 ± 0.3	-0.9 ± 0.3	S E Asia M	E Asia F
48	-0.9 ± 0.5	-2.6 ± 0.1	-1.9 ± 0.2	-1.7 ± 0.2	-1.2 ± 0.2	-2.5 ± 0.4	0.1 ± 0.4	-0.9 ± 0.1	0.5 ± 0.3	0.6 ± 0.2	0.8 ± 0.3	-1.4 ± 0.3	S E Asia M	E Asia F
49	-0.6 ± 0.5	-2.7 ± 0.1	-2.0 ± 0.2	-1.6 ± 0.2	-0.9 ± 0.2	-2.8 ± 0.4	-0.0 ± 0.4	-1.0 ± 0.1	0.4 ± 0.2	0.5 ± 0.2	0.9 ± 0.3	-1.4 ± 0.3	S E Asia M	W Africa F
50	-1.0 ± 0.6	-2.8 ± 0.1	-1.5 ± 0.2	-1.5 ± 0.2	-1.3 ± 0.2	-2.7 ± 0.4	-0.0 ± 0.4	-0.9 ± 0.1	0.2 ± 0.3	0.5 ± 0.2	1.1 ± 0.3	-1.9 ± 0.3	S E Asia M	E Asia F
51	-0.9 ± 0.5	-2.8 ± 0.1	-1.8 ± 0.3	-1.5 ± 0.2	-1.3 ± 0.2	-2.8 ± 0.4	-0.5 ± 0.5	-1.0 ± 0.1	0.4 ± 0.2	0.5 ± 0.2	1.1 ± 0.3	-2.0 ± 0.3	S E Asia M	W Africa F
52	-1.0 ± 0.6	-2.9 ± 0.1	-1.5 ± 0.2	-1.6 ± 0.2	-1.1 ± 0.2	-3.3 ± 0.4	-0.3 ± 0.5	-1.0 ± 0.1	0.3 ± 0.3	0.3 ± 0.2	0.8 ± 0.3	-2.1 ± 0.4	S E Asia M	W Africa F

Table 45. *Mean raw error for Application-type images for algorithm idemia-002. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	0.2 ± 0.2	0.53 ± 0.09	0.4 ± 0.2	0.4 ± 0.1	0.4 ± 0.2	1.1 ± 0.3	0.7 ± 0.2	0.4 ± 0.1	0.0 ± 0.2	-0.04 ± 0.10	-0.2 ± 0.2	1.1 ± 0.3	W Africa F	S E Asia M
15	0.1 ± 0.3	0.5 ± 0.1	0.2 ± 0.2	0.5 ± 0.2	0.5 ± 0.3	1.2 ± 0.4	0.5 ± 0.2	0.6 ± 0.1	0.1 ± 0.2	-0.0 ± 0.1	0.2 ± 0.2	1.1 ± 0.3	W Africa F	S Asia M
16	0.3 ± 0.3	0.4 ± 0.1	0.5 ± 0.3	0.4 ± 0.2	0.7 ± 0.3	1.4 ± 0.5	1.0 ± 0.3	0.64 ± 0.10	0.2 ± 0.2	0.1 ± 0.1	0.3 ± 0.2	0.9 ± 0.3	W Africa F	S Asia M
17	0.4 ± 0.3	0.2 ± 0.1	0.4 ± 0.3	0.3 ± 0.2	0.6 ± 0.3	1.4 ± 0.4	1.0 ± 0.2	0.5 ± 0.1	-0.0 ± 0.2	0.2 ± 0.1	0.5 ± 0.2	1.1 ± 0.4	W Africa F	E Europe M
18	-0.1 ± 0.3	-0.3 ± 0.1	-0.3 ± 0.3	-0.3 ± 0.2	0.3 ± 0.2	1.0 ± 0.4	0.7 ± 0.2	0.2 ± 0.1	-0.2 ± 0.2	0.0 ± 0.1	0.4 ± 0.2	0.4 ± 0.3	W Africa F	E Asia F
19	0.2 ± 0.3	-0.5 ± 0.1	-0.5 ± 0.3	-0.2 ± 0.2	0.2 ± 0.2	1.1 ± 0.3	1.0 ± 0.2	0.3 ± 0.1	-0.1 ± 0.2	0.3 ± 0.1	0.3 ± 0.2	0.5 ± 0.3	W Africa F	E Europe F
20	0.2 ± 0.4	-0.5 ± 0.1	-0.5 ± 0.3	-0.2 ± 0.2	0.3 ± 0.2	1.1 ± 0.4	1.1 ± 0.3	0.2 ± 0.1	0.2 ± 0.2	0.4 ± 0.1	0.4 ± 0.2	0.6 ± 0.3	W Africa F	E Europe F
21	0.2 ± 0.3	-0.5 ± 0.1	-0.6 ± 0.2	-0.3 ± 0.2	0.1 ± 0.2	0.7 ± 0.4	1.1 ± 0.3	0.2 ± 0.1	0.1 ± 0.2	0.5 ± 0.1	0.5 ± 0.2	0.4 ± 0.3	E Africa M	E Europe F
22	0.3 ± 0.3	-0.8 ± 0.1	-0.6 ± 0.2	-0.5 ± 0.2	0.1 ± 0.2	0.5 ± 0.3	1.5 ± 0.3	0.1 ± 0.1	0.2 ± 0.2	0.4 ± 0.1	0.4 ± 0.2	0.1 ± 0.3	E Africa M	E Asia F
23	0.3 ± 0.3	-0.9 ± 0.1	-0.7 ± 0.2	-0.3 ± 0.1	-0.0 ± 0.1	0.5 ± 0.3	1.3 ± 0.3	0.0 ± 0.1	0.1 ± 0.2	0.5 ± 0.1	0.4 ± 0.2	0.3 ± 0.3	E Africa M	E Asia F
24	0.2 ± 0.3	-1.0 ± 0.1	-0.8 ± 0.2	-0.4 ± 0.1	-0.1 ± 0.1	0.3 ± 0.3	1.3 ± 0.3	-0.1 ± 0.1	0.3 ± 0.2	0.6 ± 0.1	0.3 ± 0.2	0.1 ± 0.3	E Africa M	E Asia F
25	-0.1 ± 0.3	-1.2 ± 0.1	-0.8 ± 0.1	-0.6 ± 0.1	-0.3 ± 0.1	0.3 ± 0.3	1.4 ± 0.3	-0.0 ± 0.1	0.2 ± 0.2	0.5 ± 0.1	0.4 ± 0.2	0.2 ± 0.3	E Africa M	E Asia F
26	-0.2 ± 0.3	-1.3 ± 0.1	-0.9 ± 0.1	-0.7 ± 0.1	-0.1 ± 0.1	0.1 ± 0.3	1.2 ± 0.2	-0.0 ± 0.1	0.2 ± 0.2	0.6 ± 0.1	0.4 ± 0.2	-0.2 ± 0.2	E Africa M	E Asia F
27	0.0 ± 0.3	-1.40 ± 0.09	-0.9 ± 0.1	-0.8 ± 0.1	-0.3 ± 0.1	0.1 ± 0.3	1.0 ± 0.3	-0.1 ± 0.1	0.3 ± 0.1	0.5 ± 0.1	0.6 ± 0.2	-0.2 ± 0.2	E Africa M	E Asia F
28	-0.1 ± 0.3	-1.47 ± 0.09	-0.8 ± 0.1	-0.7 ± 0.1	-0.4 ± 0.1	-0.0 ± 0.3	1.0 ± 0.2	-0.0 ± 0.1	0.2 ± 0.1	0.5 ± 0.1	0.5 ± 0.2	-0.3 ± 0.2	E Africa M	E Asia F
29	0.1 ± 0.3	-1.48 ± 0.09	-0.8 ± 0.1	-0.7 ± 0.1	-0.4 ± 0.1	-0.2 ± 0.3	1.0 ± 0.2	-0.1 ± 0.1	0.2 ± 0.1	0.45 ± 0.10	0.3 ± 0.2	0.1 ± 0.2	E Africa M	E Asia F
30	-0.2 ± 0.3	-1.46 ± 0.09	-0.8 ± 0.1	-0.8 ± 0.1	-0.4 ± 0.2	-0.4 ± 0.3	1.1 ± 0.2	-0.2 ± 0.1	0.2 ± 0.1	0.37 ± 0.09	0.4 ± 0.2	-0.1 ± 0.2	E Africa M	E Asia F
31	-0.2 ± 0.3	-1.51 ± 0.09	-0.7 ± 0.2	-0.9 ± 0.1	-0.5 ± 0.1	-0.4 ± 0.3	1.1 ± 0.2	-0.2 ± 0.1	0.2 ± 0.1	0.27 ± 0.09	0.4 ± 0.2	-0.1 ± 0.2	E Africa M	E Asia F
32	0.2 ± 0.3	-1.44 ± 0.10	-0.6 ± 0.2	-0.9 ± 0.1	-0.5 ± 0.2	-0.2 ± 0.3	0.9 ± 0.2	-0.3 ± 0.1	0.2 ± 0.2	0.36 ± 0.09	0.3 ± 0.2	0.0 ± 0.2	E Africa M	E Asia F
33	-0.1 ± 0.3	-1.41 ± 0.10	-0.6 ± 0.2	-0.7 ± 0.1	-0.4 ± 0.2	-0.4 ± 0.3	1.0 ± 0.3	-0.4 ± 0.1	0.3 ± 0.2	0.29 ± 0.09	0.3 ± 0.2	-0.1 ± 0.2	E Africa M	E Asia F
34	0.0 ± 0.3	-1.30 ± 0.10	-0.6 ± 0.2	-0.7 ± 0.1	-0.4 ± 0.2	-0.3 ± 0.3	0.7 ± 0.3	-0.4 ± 0.1	0.2 ± 0.2	0.27 ± 0.10	0.4 ± 0.2	0.0 ± 0.2	E Africa M	E Asia F
35	0.2 ± 0.3	-1.4 ± 0.1	-0.6 ± 0.2	-0.8 ± 0.1	-0.5 ± 0.2	-0.5 ± 0.3	0.9 ± 0.3	-0.3 ± 0.1	0.2 ± 0.2	0.26 ± 0.10	0.2 ± 0.2	-0.0 ± 0.2	E Africa M	E Asia F
36	0.2 ± 0.4	-1.3 ± 0.1	-0.4 ± 0.2	-0.8 ± 0.1	-0.3 ± 0.2	-0.3 ± 0.3	0.8 ± 0.3	-0.4 ± 0.1	0.4 ± 0.2	0.13 ± 0.10	0.4 ± 0.2	0.0 ± 0.2	E Africa M	E Asia F
37	0.2 ± 0.4	-1.21 ± 0.10	-0.4 ± 0.2	-0.5 ± 0.1	-0.3 ± 0.2	-0.4 ± 0.3	0.9 ± 0.3	-0.4 ± 0.1	0.2 ± 0.2	0.1 ± 0.1	0.2 ± 0.2	-0.1 ± 0.2	E Africa M	E Asia F
38	0.8 ± 0.4	-1.2 ± 0.1	-0.3 ± 0.2	-0.5 ± 0.1	0.0 ± 0.2	-0.4 ± 0.4	0.8 ± 0.3	-0.4 ± 0.1	0.1 ± 0.2	-0.0 ± 0.1	0.6 ± 0.2	-0.0 ± 0.2	E Africa F	E Asia F
39	0.3 ± 0.4	-1.2 ± 0.1	-0.3 ± 0.2	-0.5 ± 0.1	0.0 ± 0.2	0.2 ± 0.3	1.0 ± 0.3	-0.5 ± 0.1	0.1 ± 0.2	0.0 ± 0.1	0.6 ± 0.2	-0.1 ± 0.2	E Africa M	E Asia F
40	0.4 ± 0.4	-1.2 ± 0.1	0.1 ± 0.2	-0.3 ± 0.2	-0.0 ± 0.2	-0.3 ± 0.3	1.0 ± 0.3	-0.6 ± 0.1	0.1 ± 0.2	0.0 ± 0.1	0.6 ± 0.2	-0.3 ± 0.2	E Africa M	E Asia F
41	0.3 ± 0.4	-1.1 ± 0.1	0.1 ± 0.2	-0.4 ± 0.2	0.1 ± 0.2	-0.6 ± 0.3	1.1 ± 0.3	-0.6 ± 0.1	0.1 ± 0.2	-0.0 ± 0.1	0.5 ± 0.2	-0.2 ± 0.3	E Africa M	E Asia F
42	0.8 ± 0.4	-1.0 ± 0.1	0.2 ± 0.2	0.0 ± 0.2	0.2 ± 0.2	-0.3 ± 0.3	1.2 ± 0.3	-0.6 ± 0.1	0.1 ± 0.2	-0.1 ± 0.1	0.8 ± 0.2	-0.3 ± 0.3	E Africa M	E Asia F
43	0.9 ± 0.4	-1.1 ± 0.1	0.2 ± 0.2	-0.1 ± 0.2	0.2 ± 0.2	-0.5 ± 0.3	1.4 ± 0.3	-0.7 ± 0.1	-0.1 ± 0.2	-0.0 ± 0.1	0.8 ± 0.2	-0.5 ± 0.3	E Africa M	E Asia F
44	0.9 ± 0.5	-1.2 ± 0.1	-0.1 ± 0.2	-0.1 ± 0.2	0.6 ± 0.2	-0.4 ± 0.4	1.0 ± 0.4	-0.8 ± 0.1	0.2 ± 0.2	-0.1 ± 0.1	0.8 ± 0.2	-0.4 ± 0.3	E Africa M	E Asia F
45	0.6 ± 0.5	-1.1 ± 0.1	0.1 ± 0.2	-0.1 ± 0.2	0.3 ± 0.2	-0.6 ± 0.4	0.9 ± 0.4	-0.9 ± 0.1	-0.1 ± 0.2	0.0 ± 0.1	0.7 ± 0.2	-0.6 ± 0.3	E Africa M	E Asia F
46	1.5 ± 0.5	-1.2 ± 0.1	0.2 ± 0.2	0.2 ± 0.2	0.3 ± 0.2	-0.4 ± 0.4	0.9 ± 0.4	-0.9 ± 0.1	0.2 ± 0.2	0.1 ± 0.2	0.8 ± 0.2	-0.7 ± 0.3	E Africa F	E Asia F
47	1.4 ± 0.5	-1.1 ± 0.1	0.3 ± 0.3	0.1 ± 0.2	0.5 ± 0.2	-0.5 ± 0.4	1.2 ± 0.4	-0.9 ± 0.1	-0.0 ± 0.2	0.1 ± 0.2	1.0 ± 0.3	-0.6 ± 0.3	E Africa F	E Asia F
48	1.0 ± 0.5	-1.1 ± 0.1	0.3 ± 0.2	0.2 ± 0.2	0.4 ± 0.2	-0.7 ± 0.4	0.6 ± 0.5	-0.9 ± 0.1	0.1 ± 0.3	0.2 ± 0.2	0.8 ± 0.3	-0.9 ± 0.3	E Africa F	E Asia F
49	1.3 ± 0.6	-1.2 ± 0.1	0.1 ± 0.2	0.3 ± 0.2	0.7 ± 0.2	-0.9 ± 0.4	0.5 ± 0.5	-1.0 ± 0.1	-0.0 ± 0.2	0.0 ± 0.2	0.9 ± 0.3	-0.9 ± 0.3	E Africa F	E Asia F
50	0.9 ± 0.6	-1.2 ± 0.1	0.5 ± 0.2	0.3 ± 0.2	0.4 ± 0.2	-0.8 ± 0.4	0.6 ± 0.4	-0.9 ± 0.1	-0.2 ± 0.3	0.1 ± 0.2	1.1 ± 0.3	-1.3 ± 0.3	S E Asia M	W Africa M
51	1.1 ± 0.5	-1.1 ± 0.1	0.2 ± 0.2	0.3 ± 0.2	0.3 ± 0.2	-0.9 ± 0.4	0.1 ± 0.5	-1.0 ± 0.1	0.0 ± 0.2	0.1 ± 0.2	1.1 ± 0.3	-1.4 ± 0.4	E Africa F	W Africa M
52	1.0 ± 0.6	-1.3 ± 0.1	0.4 ± 0.2	0.1 ± 0.2	0.6 ± 0.2	-1.4 ± 0.4	0.4 ± 0.5	-1.0 ± 0.1	-0.1 ± 0.3	-0.1 ± 0.2	0.8 ± 0.3	-1.4 ± 0.4	E Africa F	W Africa M

Table 46. *Mean raw error for Application-type images for algorithm inbut-000. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	6.7 ± 0.4	4.0 ± 0.1	5.1 ± 0.4	4.5 ± 0.2	4.0 ± 0.2	7.7 ± 0.5	6.5 ± 0.5	3.3 ± 0.1	2.9 ± 0.3	3.7 ± 0.2	3.5 ± 0.3	5.9 ± 0.5	W Africa F	E Europe M
15	7.1 ± 0.4	3.7 ± 0.1	5.4 ± 0.4	4.6 ± 0.2	3.9 ± 0.3	7.2 ± 0.5	6.2 ± 0.5	3.5 ± 0.2	3.7 ± 0.3	3.9 ± 0.2	3.5 ± 0.4	6.2 ± 0.5	W Africa F	E Asia M
16	6.7 ± 0.4	3.4 ± 0.1	5.6 ± 0.4	4.2 ± 0.2	3.7 ± 0.3	7.7 ± 0.6	6.4 ± 0.4	3.3 ± 0.2	4.1 ± 0.4	3.9 ± 0.2	3.8 ± 0.4	6.0 ± 0.5	W Africa F	E Asia M
17	6.9 ± 0.5	3.1 ± 0.1	5.2 ± 0.4	4.2 ± 0.2	3.5 ± 0.3	7.1 ± 0.4	6.0 ± 0.4	3.1 ± 0.2	3.8 ± 0.3	3.7 ± 0.2	3.5 ± 0.4	6.0 ± 0.5	W Africa F	E Asia F
18	6.1 ± 0.3	2.4 ± 0.1	4.3 ± 0.4	3.5 ± 0.2	2.5 ± 0.2	6.6 ± 0.4	5.3 ± 0.3	2.6 ± 0.1	3.5 ± 0.3	3.2 ± 0.2	2.3 ± 0.3	4.7 ± 0.4	W Africa F	S E Asia M
19	6.2 ± 0.4	2.2 ± 0.1	4.0 ± 0.3	3.5 ± 0.2	2.4 ± 0.2	6.5 ± 0.4	5.6 ± 0.4	2.7 ± 0.1	3.6 ± 0.3	3.6 ± 0.2	2.3 ± 0.3	5.4 ± 0.4	W Africa F	E Asia F
20	5.9 ± 0.3	2.1 ± 0.1	3.8 ± 0.3	3.4 ± 0.2	2.3 ± 0.2	6.6 ± 0.4	5.4 ± 0.4	2.5 ± 0.1	3.7 ± 0.3	3.4 ± 0.2	2.1 ± 0.2	5.1 ± 0.4	W Africa F	S E Asia M
21	5.7 ± 0.3	2.0 ± 0.1	3.7 ± 0.2	3.3 ± 0.1	2.2 ± 0.2	6.0 ± 0.3	5.7 ± 0.4	2.4 ± 0.1	3.2 ± 0.3	3.4 ± 0.2	2.3 ± 0.2	4.9 ± 0.3	W Africa F	E Asia F
22	5.7 ± 0.3	1.6 ± 0.1	3.2 ± 0.2	3.1 ± 0.1	1.8 ± 0.2	5.7 ± 0.3	6.4 ± 0.3	2.2 ± 0.1	3.5 ± 0.2	3.5 ± 0.2	2.1 ± 0.2	4.6 ± 0.3	E Africa M	E Asia F
23	5.4 ± 0.3	1.5 ± 0.1	3.0 ± 0.2	2.9 ± 0.1	1.6 ± 0.1	5.7 ± 0.3	5.9 ± 0.3	1.9 ± 0.1	3.3 ± 0.2	3.5 ± 0.2	1.9 ± 0.2	5.0 ± 0.3	E Africa M	E Asia F
24	5.0 ± 0.3	1.07 ± 0.10	2.8 ± 0.1	2.8 ± 0.1	1.2 ± 0.1	5.3 ± 0.3	5.8 ± 0.3	1.7 ± 0.1	3.2 ± 0.2	3.5 ± 0.1	1.8 ± 0.2	4.7 ± 0.3	E Africa M	E Asia F
25	4.4 ± 0.2	0.85 ± 0.08	2.3 ± 0.1	2.5 ± 0.1	0.9 ± 0.1	4.9 ± 0.3	5.5 ± 0.3	1.4 ± 0.1	3.2 ± 0.2	3.4 ± 0.1	1.7 ± 0.2	4.5 ± 0.3	E Africa M	E Asia F
26	4.0 ± 0.2	0.42 ± 0.08	2.0 ± 0.1	2.13 ± 0.10	0.7 ± 0.1	4.6 ± 0.2	5.3 ± 0.3	1.3 ± 0.1	2.7 ± 0.2	3.2 ± 0.1	1.7 ± 0.2	4.0 ± 0.2	E Africa M	E Asia F
27	3.9 ± 0.2	0.12 ± 0.07	1.7 ± 0.1	1.78 ± 0.10	0.4 ± 0.1	4.3 ± 0.2	5.1 ± 0.3	1.0 ± 0.1	2.8 ± 0.2	3.0 ± 0.1	1.7 ± 0.2	4.1 ± 0.2	E Africa M	E Asia F
28	3.8 ± 0.2	-0.28 ± 0.08	1.4 ± 0.1	1.48 ± 0.10	-0.0 ± 0.1	4.0 ± 0.2	4.8 ± 0.2	0.8 ± 0.1	2.7 ± 0.2	2.8 ± 0.1	1.5 ± 0.2	3.8 ± 0.2	E Africa M	E Asia F
29	3.4 ± 0.2	-0.53 ± 0.07	1.1 ± 0.1	1.08 ± 0.09	-0.3 ± 0.1	3.7 ± 0.2	4.7 ± 0.2	0.7 ± 0.1	2.7 ± 0.2	2.6 ± 0.1	1.1 ± 0.2	3.9 ± 0.2	E Africa M	E Asia F
30	3.0 ± 0.2	-0.85 ± 0.07	0.8 ± 0.1	0.58 ± 0.09	-0.6 ± 0.1	3.2 ± 0.2	4.9 ± 0.3	0.4 ± 0.1	2.4 ± 0.2	2.4 ± 0.1	1.1 ± 0.2	3.7 ± 0.2	E Africa M	E Asia F
31	2.6 ± 0.2	-1.12 ± 0.08	0.7 ± 0.1	0.15 ± 0.10	-0.9 ± 0.1	3.2 ± 0.2	4.6 ± 0.2	0.4 ± 0.1	2.3 ± 0.2	2.2 ± 0.1	1.0 ± 0.2	3.4 ± 0.2	E Africa M	E Asia F
32	2.6 ± 0.2	-1.34 ± 0.08	0.4 ± 0.1	-0.20 ± 0.10	-1.0 ± 0.1	3.0 ± 0.2	4.3 ± 0.3	0.3 ± 0.1	2.3 ± 0.2	1.9 ± 0.1	0.8 ± 0.2	3.3 ± 0.2	E Africa M	E Asia F
33	2.2 ± 0.2	-1.53 ± 0.09	0.2 ± 0.1	-0.51 ± 0.10	-1.3 ± 0.1	2.5 ± 0.2	4.5 ± 0.3	0.2 ± 0.1	2.4 ± 0.2	1.7 ± 0.1	0.5 ± 0.2	3.3 ± 0.2	E Africa M	E Asia F
34	1.9 ± 0.3	-1.66 ± 0.09	-0.0 ± 0.2	-0.9 ± 0.1	-1.5 ± 0.1	2.2 ± 0.2	4.1 ± 0.3	0.3 ± 0.1	2.0 ± 0.2	1.4 ± 0.1	0.7 ± 0.2	3.3 ± 0.2	E Africa M	E Asia F
35	2.0 ± 0.3	-1.92 ± 0.09	-0.2 ± 0.2	-1.3 ± 0.1	-1.6 ± 0.2	1.8 ± 0.2	4.2 ± 0.3	0.2 ± 0.1	2.0 ± 0.2	1.2 ± 0.1	0.4 ± 0.2	3.1 ± 0.2	E Africa M	E Asia F
36	1.7 ± 0.3	-1.95 ± 0.10	-0.4 ± 0.2	-1.5 ± 0.1	-1.7 ± 0.2	1.9 ± 0.3	4.1 ± 0.3	0.2 ± 0.1	1.9 ± 0.2	0.9 ± 0.1	0.5 ± 0.2	3.2 ± 0.2	E Africa M	E Asia F
37	1.4 ± 0.3	-2.11 ± 0.09	-0.6 ± 0.2	-1.6 ± 0.1	-1.9 ± 0.2	1.5 ± 0.3	4.2 ± 0.3	0.1 ± 0.1	1.7 ± 0.2	0.6 ± 0.1	0.2 ± 0.2	2.9 ± 0.2	E Africa M	E Asia F
38	1.8 ± 0.3	-2.30 ± 0.09	-0.7 ± 0.2	-1.7 ± 0.1	-1.9 ± 0.2	1.2 ± 0.3	3.7 ± 0.3	0.0 ± 0.1	1.6 ± 0.2	0.4 ± 0.1	0.3 ± 0.2	2.9 ± 0.2	E Africa M	E Asia F
39	1.2 ± 0.3	-2.29 ± 0.09	-0.8 ± 0.2	-1.9 ± 0.1	-1.9 ± 0.2	1.2 ± 0.3	3.9 ± 0.3	-0.2 ± 0.1	1.7 ± 0.2	0.3 ± 0.1	0.1 ± 0.2	2.9 ± 0.2	E Africa M	E Asia F
40	1.1 ± 0.4	-2.48 ± 0.10	-0.6 ± 0.2	-1.8 ± 0.1	-2.0 ± 0.2	0.7 ± 0.3	4.0 ± 0.3	-0.3 ± 0.1	1.5 ± 0.2	0.3 ± 0.1	-0.1 ± 0.2	2.6 ± 0.3	E Africa M	E Asia F
41	0.7 ± 0.4	-2.60 ± 0.10	-0.8 ± 0.2	-1.9 ± 0.2	-2.1 ± 0.2	0.4 ± 0.3	3.9 ± 0.3	-0.5 ± 0.1	1.6 ± 0.2	0.2 ± 0.1	-0.4 ± 0.2	2.7 ± 0.3	E Africa M	E Asia F
42	0.9 ± 0.4	-2.68 ± 0.09	-0.8 ± 0.2	-1.6 ± 0.2	-2.2 ± 0.2	0.3 ± 0.3	3.9 ± 0.4	-0.7 ± 0.1	1.8 ± 0.2	0.2 ± 0.1	-0.3 ± 0.2	2.4 ± 0.3	E Africa M	E Asia F
43	1.2 ± 0.4	-2.81 ± 0.10	-0.9 ± 0.2	-1.7 ± 0.2	-2.2 ± 0.2	0.1 ± 0.3	4.2 ± 0.4	-0.8 ± 0.1	1.6 ± 0.2	0.3 ± 0.1	-0.3 ± 0.2	2.2 ± 0.3	E Africa M	E Asia F
44	1.0 ± 0.5	-3.09 ± 0.10	-1.2 ± 0.2	-1.5 ± 0.2	-2.0 ± 0.2	-0.3 ± 0.4	3.7 ± 0.4	-0.9 ± 0.1	1.7 ± 0.2	0.1 ± 0.2	-0.5 ± 0.2	2.3 ± 0.3	E Africa M	E Asia F
45	0.8 ± 0.5	-3.14 ± 0.10	-1.1 ± 0.2	-1.5 ± 0.2	-2.2 ± 0.2	-0.2 ± 0.4	3.5 ± 0.4	-1.1 ± 0.1	1.7 ± 0.3	0.2 ± 0.2	-0.7 ± 0.2	2.1 ± 0.3	E Africa M	E Asia F
46	1.7 ± 0.5	-3.37 ± 0.10	-1.0 ± 0.3	-1.4 ± 0.2	-2.3 ± 0.2	-0.4 ± 0.4	3.5 ± 0.4	-1.2 ± 0.1	1.7 ± 0.3	0.3 ± 0.2	-0.6 ± 0.2	1.7 ± 0.3	E Africa M	E Asia F
47	1.2 ± 0.5	-3.3 ± 0.1	-1.1 ± 0.3	-1.3 ± 0.2	-2.3 ± 0.2	-0.4 ± 0.4	4.1 ± 0.4	-1.4 ± 0.1	1.5 ± 0.3	0.3 ± 0.2	-0.5 ± 0.2	1.9 ± 0.3	E Africa M	E Asia F
48	0.9 ± 0.6	-3.4 ± 0.1	-0.9 ± 0.3	-1.1 ± 0.2	-2.4 ± 0.2	-0.7 ± 0.4	3.5 ± 0.5	-1.3 ± 0.1	1.5 ± 0.3	0.4 ± 0.2	-0.5 ± 0.3	1.6 ± 0.3	E Africa M	E Asia F
49	1.7 ± 0.6	-3.5 ± 0.1	-1.4 ± 0.3	-0.9 ± 0.2	-2.2 ± 0.2	-0.8 ± 0.4	3.5 ± 0.5	-1.4 ± 0.1	1.3 ± 0.3	0.3 ± 0.2	-0.7 ± 0.2	1.7 ± 0.3	E Africa M	E Asia F
50	0.7 ± 0.6	-3.5 ± 0.1	-0.9 ± 0.2	-1.1 ± 0.2	-2.4 ± 0.2	-0.8 ± 0.4	3.2 ± 0.4	-1.5 ± 0.1	1.0 ± 0.3	0.1 ± 0.2	-0.3 ± 0.3	1.2 ± 0.3	E Africa M	E Asia F
51	1.0 ± 0.5	-3.5 ± 0.1	-1.2 ± 0.3	-1.0 ± 0.2	-2.5 ± 0.2	-0.8 ± 0.4	2.9 ± 0.5	-1.6 ± 0.1	1.0 ± 0.2	0.1 ± 0.2	-0.5 ± 0.2	1.2 ± 0.4	E Africa M	E Asia F
52	0.7 ± 0.6	-3.6 ± 0.1	-1.0 ± 0.3	-1.0 ± 0.2	-2.1 ± 0.2	-1.0 ± 0.5	2.9 ± 0.5	-1.5 ± 0.1	1.1 ± 0.3	-0.0 ± 0.2	-0.8 ± 0.3	1.2 ± 0.4	E Africa M	E Asia F

Table 47. *Mean raw error for Application-type images for algorithm incode-000. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	1.2 ± 0.3	0.7 ± 0.1	1.3 ± 0.3	0.9 ± 0.2	1.0 ± 0.3	2.3 ± 0.3	0.1 ± 0.3	-0.2 ± 0.1	-0.2 ± 0.2	-0.4 ± 0.1	-0.4 ± 0.2	0.4 ± 0.3	W Africa F	S Asia M
15	1.4 ± 0.4	0.9 ± 0.2	1.3 ± 0.3	1.3 ± 0.2	1.4 ± 0.4	2.0 ± 0.4	-0.2 ± 0.3	0.0 ± 0.1	-0.1 ± 0.2	-0.1 ± 0.1	0.2 ± 0.2	0.8 ± 0.3	W Africa F	E Africa M
16	1.3 ± 0.4	0.9 ± 0.2	1.8 ± 0.3	1.4 ± 0.2	1.6 ± 0.4	2.4 ± 0.5	0.7 ± 0.3	0.1 ± 0.1	0.1 ± 0.2	0.2 ± 0.1	0.3 ± 0.2	0.7 ± 0.3	W Africa F	E Asia M
17	1.8 ± 0.5	0.9 ± 0.2	1.6 ± 0.3	1.3 ± 0.2	1.4 ± 0.3	2.0 ± 0.4	0.3 ± 0.3	0.1 ± 0.1	-0.2 ± 0.2	0.5 ± 0.1	0.5 ± 0.2	1.0 ± 0.4	W Africa F	E Europe M
18	1.0 ± 0.4	0.5 ± 0.2	0.9 ± 0.3	0.9 ± 0.2	1.5 ± 0.2	1.3 ± 0.4	0.2 ± 0.3	-0.3 ± 0.1	-0.5 ± 0.2	0.2 ± 0.1	0.3 ± 0.2	0.3 ± 0.3	S E Asia F	E Europe M
19	1.6 ± 0.4	0.6 ± 0.2	1.0 ± 0.3	1.0 ± 0.2	1.4 ± 0.2	1.5 ± 0.4	0.8 ± 0.3	-0.3 ± 0.1	-0.5 ± 0.2	0.5 ± 0.1	0.1 ± 0.2	0.7 ± 0.4	E Africa F	E Europe M
20	1.6 ± 0.4	0.7 ± 0.2	1.0 ± 0.3	1.0 ± 0.2	1.3 ± 0.2	1.4 ± 0.4	1.0 ± 0.3	-0.5 ± 0.1	-0.2 ± 0.2	0.7 ± 0.1	0.3 ± 0.2	0.9 ± 0.4	E Africa F	E Asia M
21	1.8 ± 0.4	0.7 ± 0.2	1.0 ± 0.3	0.8 ± 0.2	1.4 ± 0.2	1.7 ± 0.4	1.4 ± 0.3	-0.4 ± 0.1	-0.3 ± 0.2	0.9 ± 0.1	0.4 ± 0.2	0.8 ± 0.4	E Africa F	E Asia M
22	1.8 ± 0.4	0.5 ± 0.1	1.1 ± 0.2	0.7 ± 0.2	1.1 ± 0.2	1.1 ± 0.4	2.2 ± 0.3	-0.4 ± 0.1	0.2 ± 0.2	1.0 ± 0.2	0.1 ± 0.2	0.6 ± 0.3	E Africa M	E Asia M
23	2.1 ± 0.3	0.3 ± 0.1	1.2 ± 0.2	0.7 ± 0.1	1.0 ± 0.2	1.3 ± 0.3	2.0 ± 0.3	-0.5 ± 0.1	0.2 ± 0.2	1.1 ± 0.1	0.2 ± 0.2	1.2 ± 0.3	E Africa F	E Asia M
24	2.3 ± 0.4	0.0 ± 0.1	1.3 ± 0.2	0.5 ± 0.1	0.8 ± 0.1	1.0 ± 0.3	2.0 ± 0.3	-0.5 ± 0.1	0.4 ± 0.2	1.1 ± 0.1	0.1 ± 0.2	1.1 ± 0.3	E Africa F	E Asia M
25	1.8 ± 0.3	0.0 ± 0.1	1.0 ± 0.2	0.3 ± 0.1	0.6 ± 0.1	1.2 ± 0.3	2.1 ± 0.3	-0.5 ± 0.1	0.4 ± 0.2	1.2 ± 0.1	0.1 ± 0.2	0.9 ± 0.3	E Africa M	E Asia M
26	2.0 ± 0.3	-0.3 ± 0.1	1.1 ± 0.1	0.1 ± 0.1	0.5 ± 0.1	1.1 ± 0.3	1.9 ± 0.3	-0.7 ± 0.1	0.3 ± 0.2	1.1 ± 0.1	0.1 ± 0.2	0.7 ± 0.2	E Africa F	E Asia M
27	1.9 ± 0.3	-0.54 ± 0.10	1.1 ± 0.2	-0.1 ± 0.1	0.3 ± 0.1	1.0 ± 0.3	1.8 ± 0.3	-0.7 ± 0.1	0.4 ± 0.2	0.8 ± 0.1	0.1 ± 0.2	0.5 ± 0.2	E Africa F	E Asia M
28	1.9 ± 0.3	-0.80 ± 0.09	1.0 ± 0.1	-0.3 ± 0.1	0.0 ± 0.1	0.9 ± 0.3	1.6 ± 0.2	-0.9 ± 0.1	0.5 ± 0.2	0.8 ± 0.1	-0.2 ± 0.2	0.2 ± 0.2	E Africa F	E Asia M
29	2.1 ± 0.3	-0.99 ± 0.09	1.0 ± 0.1	-0.5 ± 0.1	0.0 ± 0.1	0.7 ± 0.3	1.6 ± 0.2	-1.0 ± 0.1	0.3 ± 0.2	0.53 ± 0.10	-0.3 ± 0.2	0.6 ± 0.2	E Africa F	E Asia M
30	1.8 ± 0.3	-1.11 ± 0.09	0.9 ± 0.2	-0.7 ± 0.1	-0.1 ± 0.1	0.4 ± 0.3	1.5 ± 0.2	-1.2 ± 0.1	0.3 ± 0.2	0.38 ± 0.10	-0.2 ± 0.2	0.4 ± 0.2	E Africa F	E Asia M
31	1.5 ± 0.3	-1.27 ± 0.10	1.1 ± 0.2	-0.9 ± 0.1	-0.2 ± 0.1	0.3 ± 0.3	1.5 ± 0.3	-1.2 ± 0.1	0.3 ± 0.2	0.30 ± 0.10	-0.4 ± 0.2	0.4 ± 0.2	E Africa M	E Asia F
32	1.8 ± 0.3	-1.38 ± 0.10	1.0 ± 0.2	-0.9 ± 0.1	-0.3 ± 0.2	0.4 ± 0.3	1.2 ± 0.3	-1.3 ± 0.1	0.4 ± 0.2	0.2 ± 0.1	-0.3 ± 0.2	0.3 ± 0.2	E Africa F	E Asia F
33	1.7 ± 0.3	-1.5 ± 0.1	1.0 ± 0.2	-0.9 ± 0.1	-0.4 ± 0.2	0.5 ± 0.3	1.5 ± 0.3	-1.4 ± 0.1	0.7 ± 0.2	0.1 ± 0.1	-0.5 ± 0.2	0.2 ± 0.2	E Africa F	E Asia F
34	1.4 ± 0.3	-1.5 ± 0.1	1.1 ± 0.2	-1.0 ± 0.1	-0.3 ± 0.2	0.2 ± 0.3	1.0 ± 0.3	-1.4 ± 0.1	0.5 ± 0.2	0.1 ± 0.1	-0.2 ± 0.2	0.3 ± 0.2	E Africa F	E Asia F
35	1.7 ± 0.3	-1.6 ± 0.1	1.1 ± 0.2	-1.1 ± 0.1	-0.4 ± 0.2	-0.0 ± 0.3	1.3 ± 0.3	-1.2 ± 0.1	0.6 ± 0.2	0.1 ± 0.1	-0.4 ± 0.2	0.2 ± 0.3	E Africa F	E Asia F
36	1.5 ± 0.3	-1.5 ± 0.1	1.2 ± 0.2	-1.1 ± 0.1	-0.3 ± 0.2	0.3 ± 0.3	1.2 ± 0.3	-1.1 ± 0.1	0.8 ± 0.2	0.1 ± 0.1	-0.1 ± 0.3	0.2 ± 0.3	E Africa F	E Asia F
37	1.6 ± 0.3	-1.4 ± 0.1	1.4 ± 0.2	-0.9 ± 0.1	-0.2 ± 0.2	0.0 ± 0.4	1.1 ± 0.3	-1.1 ± 0.1	0.7 ± 0.2	0.1 ± 0.1	-0.3 ± 0.2	0.0 ± 0.2	E Africa F	E Asia F
38	1.7 ± 0.4	-1.5 ± 0.1	1.4 ± 0.2	-0.8 ± 0.1	-0.3 ± 0.2	0.1 ± 0.4	0.8 ± 0.3	-0.9 ± 0.1	0.8 ± 0.2	0.1 ± 0.1	0.2 ± 0.2	0.2 ± 0.3	E Africa F	E Asia F
39	1.4 ± 0.4	-1.4 ± 0.1	1.3 ± 0.2	-0.8 ± 0.1	-0.1 ± 0.2	0.2 ± 0.3	1.0 ± 0.3	-0.8 ± 0.1	1.0 ± 0.2	0.2 ± 0.1	0.1 ± 0.2	0.1 ± 0.3	E Africa F	E Asia F
40	1.4 ± 0.4	-1.3 ± 0.1	1.6 ± 0.2	-0.6 ± 0.1	-0.2 ± 0.2	-0.3 ± 0.4	0.7 ± 0.3	-0.7 ± 0.1	1.0 ± 0.2	0.1 ± 0.1	-0.0 ± 0.2	-0.2 ± 0.3	E Europe F	E Asia F
41	1.0 ± 0.4	-1.3 ± 0.1	1.5 ± 0.2	-0.7 ± 0.2	-0.3 ± 0.2	-0.6 ± 0.4	1.0 ± 0.3	-0.7 ± 0.1	1.0 ± 0.2	0.1 ± 0.1	-0.1 ± 0.2	-0.2 ± 0.3	E Europe F	E Asia F
42	1.4 ± 0.4	-1.1 ± 0.1	1.5 ± 0.2	-0.2 ± 0.2	-0.2 ± 0.2	-0.2 ± 0.4	0.9 ± 0.3	-0.6 ± 0.1	1.1 ± 0.2	0.0 ± 0.1	0.1 ± 0.2	-0.3 ± 0.3	E Europe F	E Asia F
43	1.6 ± 0.4	-1.2 ± 0.1	1.3 ± 0.2	-0.6 ± 0.2	-0.3 ± 0.2	-0.5 ± 0.4	0.8 ± 0.3	-0.5 ± 0.1	0.8 ± 0.2	0.0 ± 0.1	0.1 ± 0.2	-0.7 ± 0.3	E Africa F	E Asia F
44	1.4 ± 0.5	-1.4 ± 0.1	1.0 ± 0.2	-0.5 ± 0.2	-0.3 ± 0.2	-0.6 ± 0.4	0.4 ± 0.3	-0.6 ± 0.1	1.1 ± 0.2	0.0 ± 0.1	0.1 ± 0.2	-0.4 ± 0.3	E Africa F	E Asia F
45	1.1 ± 0.5	-1.3 ± 0.1	1.0 ± 0.2	-0.6 ± 0.2	-0.3 ± 0.2	-0.6 ± 0.4	0.3 ± 0.4	-0.7 ± 0.1	0.8 ± 0.2	0.1 ± 0.1	-0.2 ± 0.2	-0.8 ± 0.3	E Africa F	E Asia F
46	2.2 ± 0.5	-1.5 ± 0.1	0.9 ± 0.2	-0.5 ± 0.2	-0.6 ± 0.2	-0.5 ± 0.4	0.3 ± 0.4	-0.6 ± 0.1	0.8 ± 0.2	0.2 ± 0.2	-0.1 ± 0.2	-0.8 ± 0.3	E Africa F	E Asia F
47	1.9 ± 0.5	-1.4 ± 0.1	0.9 ± 0.2	-0.5 ± 0.2	-0.5 ± 0.2	-0.6 ± 0.4	0.8 ± 0.4	-0.7 ± 0.1	0.9 ± 0.2	0.2 ± 0.2	0.1 ± 0.3	-0.8 ± 0.3	E Africa F	E Asia F
48	1.1 ± 0.6	-1.4 ± 0.1	1.1 ± 0.2	-0.4 ± 0.2	-0.5 ± 0.2	-0.6 ± 0.4	0.3 ± 0.5	-0.7 ± 0.1	1.0 ± 0.3	0.4 ± 0.2	-0.0 ± 0.3	-1.1 ± 0.4	E Africa F	E Asia F
49	2.0 ± 0.6	-1.6 ± 0.1	0.8 ± 0.2	-0.4 ± 0.2	-0.3 ± 0.2	-0.5 ± 0.5	0.1 ± 0.5	-0.5 ± 0.1	0.9 ± 0.3	0.2 ± 0.2	0.1 ± 0.3	-0.8 ± 0.4	E Africa F	E Asia F
50	1.5 ± 0.7	-1.4 ± 0.1	1.0 ± 0.2	-0.4 ± 0.2	-0.3 ± 0.2	-0.5 ± 0.5	0.1 ± 0.5	-0.6 ± 0.1	0.9 ± 0.3	0.2 ± 0.2	0.4 ± 0.3	-1.2 ± 0.4	E Africa F	E Asia F
51	1.8 ± 0.6	-1.4 ± 0.1	0.7 ± 0.3	-0.2 ± 0.2	-0.2 ± 0.2	-0.2 ± 0.5	-0.3 ± 0.6	-0.5 ± 0.2	1.2 ± 0.3	0.5 ± 0.2	0.3 ± 0.3	-1.2 ± 0.4	E Africa F	E Asia F
52	1.7 ± 0.7	-1.3 ± 0.1	1.1 ± 0.3	-0.3 ± 0.2	0.2 ± 0.2	-0.8 ± 0.5	0.1 ± 0.6	-0.5 ± 0.2	1.2 ± 0.3	0.6 ± 0.2	0.4 ± 0.3	-1.0 ± 0.5	E Africa F	E Asia F

Table 48. *Mean raw error for Application-type images for algorithm incode-001. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	2.7 ± 0.3	1.7 ± 0.1	1.4 ± 0.3	1.5 ± 0.2	1.6 ± 0.3	3.4 ± 0.3	1.0 ± 0.3	0.7 ± 0.1	-0.0 ± 0.2	0.1 ± 0.1	0.5 ± 0.2	1.2 ± 0.3	W Africa F	E Europe M
15	2.9 ± 0.3	1.9 ± 0.2	1.7 ± 0.3	2.1 ± 0.2	2.2 ± 0.4	3.1 ± 0.4	0.8 ± 0.3	1.1 ± 0.1	0.2 ± 0.2	0.5 ± 0.1	1.0 ± 0.2	1.5 ± 0.3	W Africa F	E Europe M
16	2.7 ± 0.4	2.0 ± 0.2	2.1 ± 0.3	2.1 ± 0.2	2.4 ± 0.4	3.4 ± 0.5	1.5 ± 0.3	1.14 ± 0.10	0.4 ± 0.2	0.7 ± 0.1	1.0 ± 0.2	1.2 ± 0.3	W Africa F	E Europe M
17	3.1 ± 0.4	2.2 ± 0.2	1.9 ± 0.3	2.2 ± 0.2	2.3 ± 0.3	3.5 ± 0.4	1.2 ± 0.3	1.1 ± 0.1	0.1 ± 0.2	0.8 ± 0.1	1.0 ± 0.2	1.6 ± 0.4	W Africa F	E Europe M
18	2.3 ± 0.3	1.7 ± 0.2	1.3 ± 0.3	1.9 ± 0.2	2.4 ± 0.2	2.9 ± 0.4	0.9 ± 0.2	0.8 ± 0.1	-0.1 ± 0.2	0.5 ± 0.1	0.8 ± 0.2	0.9 ± 0.3	W Africa F	E Europe M
19	3.1 ± 0.4	2.1 ± 0.2	1.5 ± 0.3	2.0 ± 0.2	2.5 ± 0.2	3.2 ± 0.4	1.4 ± 0.3	1.1 ± 0.1	-0.3 ± 0.2	0.7 ± 0.1	0.9 ± 0.2	1.4 ± 0.4	W Africa F	E Europe M
20	3.2 ± 0.4	2.1 ± 0.2	1.5 ± 0.2	2.0 ± 0.2	2.5 ± 0.2	3.3 ± 0.4	1.9 ± 0.3	1.1 ± 0.1	0.2 ± 0.2	1.0 ± 0.1	1.1 ± 0.2	1.6 ± 0.4	W Africa F	E Europe M
21	3.4 ± 0.3	2.3 ± 0.2	1.5 ± 0.2	1.8 ± 0.1	2.6 ± 0.2	3.3 ± 0.4	2.4 ± 0.3	1.4 ± 0.1	0.0 ± 0.2	1.3 ± 0.1	1.3 ± 0.2	1.7 ± 0.4	E Africa F	E Europe M
22	3.6 ± 0.4	2.2 ± 0.1	1.4 ± 0.2	1.6 ± 0.1	2.5 ± 0.2	3.0 ± 0.4	3.3 ± 0.3	1.7 ± 0.1	0.5 ± 0.2	1.5 ± 0.2	1.3 ± 0.2	1.7 ± 0.4	E Africa F	E Europe M
23	3.7 ± 0.3	2.1 ± 0.1	1.6 ± 0.2	1.6 ± 0.1	2.5 ± 0.2	3.5 ± 0.3	3.3 ± 0.3	1.8 ± 0.1	0.5 ± 0.2	1.7 ± 0.1	1.6 ± 0.2	2.3 ± 0.3	E Africa F	E Europe M
24	3.9 ± 0.3	1.9 ± 0.1	1.5 ± 0.2	1.3 ± 0.1	2.4 ± 0.1	3.0 ± 0.3	3.5 ± 0.3	1.9 ± 0.1	0.7 ± 0.2	1.8 ± 0.1	1.8 ± 0.2	2.4 ± 0.3	E Africa F	E Europe M
25	3.6 ± 0.3	1.9 ± 0.1	1.4 ± 0.1	1.1 ± 0.1	2.3 ± 0.1	3.3 ± 0.3	3.6 ± 0.3	2.0 ± 0.1	0.8 ± 0.2	2.0 ± 0.1	1.9 ± 0.2	2.4 ± 0.3	E Africa M	E Europe M
26	3.7 ± 0.3	1.8 ± 0.1	1.4 ± 0.1	0.9 ± 0.1	2.3 ± 0.1	3.3 ± 0.3	3.5 ± 0.3	1.9 ± 0.1	0.8 ± 0.2	1.9 ± 0.1	2.0 ± 0.2	2.3 ± 0.2	E Africa F	E Europe M
27	3.8 ± 0.3	1.65 ± 0.09	1.4 ± 0.1	0.7 ± 0.1	2.1 ± 0.1	3.4 ± 0.3	3.4 ± 0.3	2.0 ± 0.1	0.9 ± 0.2	1.8 ± 0.1	2.1 ± 0.2	2.4 ± 0.2	E Africa F	S Asia F
28	3.7 ± 0.3	1.50 ± 0.09	1.3 ± 0.1	0.6 ± 0.1	2.0 ± 0.1	3.2 ± 0.3	3.3 ± 0.2	2.0 ± 0.1	1.0 ± 0.2	1.72 ± 0.10	2.0 ± 0.2	2.1 ± 0.2	E Africa F	S Asia F
29	4.0 ± 0.3	1.26 ± 0.09	1.3 ± 0.1	0.4 ± 0.1	2.0 ± 0.1	3.2 ± 0.3	3.3 ± 0.2	1.9 ± 0.1	0.8 ± 0.1	1.57 ± 0.09	1.7 ± 0.2	2.5 ± 0.2	E Africa F	S Asia F
30	4.0 ± 0.3	1.25 ± 0.09	1.1 ± 0.1	0.3 ± 0.1	1.9 ± 0.1	2.9 ± 0.3	3.2 ± 0.2	1.8 ± 0.1	0.9 ± 0.1	1.48 ± 0.09	1.9 ± 0.2	2.3 ± 0.2	E Africa F	S Asia F
31	3.7 ± 0.3	1.07 ± 0.09	1.2 ± 0.1	0.2 ± 0.1	1.8 ± 0.1	2.9 ± 0.3	3.3 ± 0.2	1.7 ± 0.1	0.9 ± 0.1	1.46 ± 0.09	1.7 ± 0.2	2.4 ± 0.2	E Africa F	S Asia F
32	4.0 ± 0.3	1.00 ± 0.09	1.1 ± 0.1	0.2 ± 0.1	1.7 ± 0.2	3.2 ± 0.3	3.0 ± 0.2	1.7 ± 0.1	0.9 ± 0.2	1.41 ± 0.09	1.7 ± 0.2	2.3 ± 0.2	E Africa F	S Asia F
33	3.9 ± 0.3	0.83 ± 0.09	1.0 ± 0.1	0.1 ± 0.1	1.7 ± 0.2	3.0 ± 0.3	3.1 ± 0.2	1.6 ± 0.1	1.1 ± 0.2	1.27 ± 0.09	1.5 ± 0.2	2.3 ± 0.2	E Africa F	S Asia F
34	3.6 ± 0.3	0.83 ± 0.09	1.1 ± 0.1	0.0 ± 0.1	1.6 ± 0.2	2.9 ± 0.3	2.7 ± 0.2	1.5 ± 0.1	0.9 ± 0.2	1.29 ± 0.10	1.6 ± 0.2	2.3 ± 0.2	E Africa F	S Asia F
35	4.0 ± 0.3	0.60 ± 0.10	1.0 ± 0.2	-0.0 ± 0.1	1.5 ± 0.2	2.6 ± 0.3	3.0 ± 0.2	1.6 ± 0.1	1.0 ± 0.2	1.27 ± 0.10	1.5 ± 0.2	2.0 ± 0.2	E Africa F	S Asia F
36	3.8 ± 0.3	0.63 ± 0.10	1.1 ± 0.2	-0.0 ± 0.1	1.5 ± 0.2	2.9 ± 0.3	2.8 ± 0.3	1.5 ± 0.1	1.2 ± 0.2	1.20 ± 0.10	1.5 ± 0.2	2.1 ± 0.2	E Africa F	S Asia F
37	3.9 ± 0.3	0.64 ± 0.10	1.2 ± 0.2	0.1 ± 0.1	1.5 ± 0.2	2.8 ± 0.3	2.8 ± 0.3	1.5 ± 0.1	1.0 ± 0.2	1.24 ± 0.10	1.3 ± 0.2	2.0 ± 0.2	E Africa F	S Asia F
38	4.2 ± 0.4	0.58 ± 0.10	1.2 ± 0.2	0.2 ± 0.1	1.4 ± 0.2	2.7 ± 0.3	2.6 ± 0.3	1.5 ± 0.1	1.1 ± 0.2	1.2 ± 0.1	1.6 ± 0.2	2.0 ± 0.2	E Africa F	S Asia F
39	3.9 ± 0.3	0.7 ± 0.1	1.2 ± 0.2	0.1 ± 0.1	1.5 ± 0.2	2.8 ± 0.3	2.8 ± 0.3	1.5 ± 0.1	1.3 ± 0.2	1.2 ± 0.1	1.6 ± 0.2	1.8 ± 0.2	E Africa F	S Asia F
40	3.7 ± 0.4	0.6 ± 0.1	1.6 ± 0.2	0.3 ± 0.1	1.4 ± 0.2	2.5 ± 0.3	2.7 ± 0.3	1.5 ± 0.1	1.2 ± 0.2	1.2 ± 0.1	1.4 ± 0.2	1.7 ± 0.2	E Africa F	S Asia F
41	3.5 ± 0.4	0.6 ± 0.1	1.5 ± 0.2	0.2 ± 0.1	1.3 ± 0.2	2.3 ± 0.3	2.9 ± 0.3	1.5 ± 0.1	1.3 ± 0.2	1.2 ± 0.1	1.4 ± 0.2	1.7 ± 0.3	E Africa F	S Asia F
42	3.9 ± 0.4	0.81 ± 0.10	1.6 ± 0.2	0.6 ± 0.2	1.3 ± 0.2	2.4 ± 0.3	2.7 ± 0.3	1.6 ± 0.1	1.4 ± 0.2	1.1 ± 0.1	1.6 ± 0.2	1.6 ± 0.3	E Africa F	S Asia F
43	4.1 ± 0.4	0.7 ± 0.1	1.4 ± 0.2	0.3 ± 0.2	1.3 ± 0.2	2.2 ± 0.3	3.1 ± 0.3	1.6 ± 0.1	1.3 ± 0.2	1.1 ± 0.1	1.6 ± 0.2	1.3 ± 0.3	E Africa F	S Asia F
44	3.9 ± 0.5	0.6 ± 0.1	1.3 ± 0.2	0.5 ± 0.2	1.4 ± 0.2	2.2 ± 0.4	2.5 ± 0.4	1.6 ± 0.1	1.6 ± 0.2	1.0 ± 0.1	1.7 ± 0.2	1.5 ± 0.3	E Africa F	S Asia F
45	3.9 ± 0.4	0.7 ± 0.1	1.4 ± 0.2	0.4 ± 0.2	1.3 ± 0.2	2.0 ± 0.3	2.6 ± 0.4	1.6 ± 0.1	1.4 ± 0.2	1.2 ± 0.1	1.5 ± 0.2	1.3 ± 0.3	E Africa F	S Asia F
46	4.7 ± 0.5	0.6 ± 0.1	1.4 ± 0.2	0.6 ± 0.2	1.2 ± 0.2	2.1 ± 0.4	2.7 ± 0.4	1.7 ± 0.1	1.5 ± 0.2	1.3 ± 0.2	1.7 ± 0.2	1.1 ± 0.3	E Africa F	S Asia F
47	4.5 ± 0.5	0.8 ± 0.1	1.5 ± 0.2	0.5 ± 0.2	1.2 ± 0.2	2.0 ± 0.4	3.3 ± 0.4	1.7 ± 0.1	1.6 ± 0.2	1.4 ± 0.2	1.8 ± 0.3	1.3 ± 0.3	E Africa F	S Asia F
48	3.8 ± 0.6	0.7 ± 0.1	1.6 ± 0.2	0.8 ± 0.2	1.2 ± 0.2	2.1 ± 0.4	2.8 ± 0.5	1.6 ± 0.1	1.6 ± 0.3	1.5 ± 0.2	1.9 ± 0.3	1.1 ± 0.3	E Africa F	E Asia F
49	4.5 ± 0.5	0.7 ± 0.1	1.5 ± 0.2	0.9 ± 0.2	1.5 ± 0.2	2.1 ± 0.4	2.7 ± 0.5	1.8 ± 0.1	1.6 ± 0.2	1.5 ± 0.2	1.9 ± 0.3	1.2 ± 0.3	E Africa F	E Asia F
50	3.9 ± 0.5	0.8 ± 0.1	1.7 ± 0.2	0.8 ± 0.2	1.4 ± 0.2	1.9 ± 0.4	2.9 ± 0.5	1.8 ± 0.1	1.5 ± 0.3	1.5 ± 0.2	2.3 ± 0.3	1.0 ± 0.3	E Africa F	E Asia F
51	4.2 ± 0.5	0.9 ± 0.1	1.6 ± 0.2	1.1 ± 0.2	1.5 ± 0.2	2.1 ± 0.4	2.5 ± 0.5	1.8 ± 0.1	1.9 ± 0.3	1.7 ± 0.2	2.2 ± 0.3	1.0 ± 0.4	E Africa F	E Asia F
52	4.0 ± 0.5	0.9 ± 0.1	1.9 ± 0.2	1.1 ± 0.2	1.8 ± 0.2	1.7 ± 0.4	2.8 ± 0.5	1.8 ± 0.1	2.0 ± 0.3	1.7 ± 0.2	2.1 ± 0.3	1.1 ± 0.4	E Africa F	E Asia F

Table 49. *Mean raw error for Application-type images for algorithm innovatrics-000. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	5.3 ± 0.2	3.13 ± 0.09	2.8 ± 0.2	3.7 ± 0.1	2.9 ± 0.2	5.8 ± 0.3	3.4 ± 0.2	2.06 ± 0.09	1.5 ± 0.2	2.41 ± 0.10	1.9 ± 0.2	3.4 ± 0.2	W Africa F	E Europe M
15	5.2 ± 0.3	2.99 ± 0.10	2.8 ± 0.2	3.8 ± 0.2	2.7 ± 0.2	5.7 ± 0.3	3.3 ± 0.2	2.15 ± 0.08	1.6 ± 0.2	2.5 ± 0.1	1.9 ± 0.1	3.5 ± 0.3	W Africa F	E Europe M
16	5.0 ± 0.3	2.8 ± 0.1	2.8 ± 0.2	3.5 ± 0.2	2.6 ± 0.2	5.8 ± 0.4	3.7 ± 0.2	2.02 ± 0.08	1.9 ± 0.2	2.4 ± 0.1	1.7 ± 0.1	3.4 ± 0.3	W Africa F	S E Asia M
17	5.3 ± 0.3	2.5 ± 0.1	2.6 ± 0.2	3.3 ± 0.2	2.2 ± 0.2	5.3 ± 0.3	3.4 ± 0.2	1.88 ± 0.09	1.7 ± 0.2	2.4 ± 0.1	1.6 ± 0.2	3.8 ± 0.4	W Africa F	S E Asia M
18	4.5 ± 0.2	1.9 ± 0.1	1.9 ± 0.2	2.9 ± 0.1	1.7 ± 0.1	4.8 ± 0.3	3.2 ± 0.2	1.37 ± 0.09	1.4 ± 0.2	2.3 ± 0.1	1.1 ± 0.2	3.3 ± 0.3	W Africa F	S E Asia M
19	4.5 ± 0.3	1.6 ± 0.1	1.7 ± 0.2	2.8 ± 0.1	1.4 ± 0.1	4.8 ± 0.2	3.4 ± 0.2	1.30 ± 0.10	1.4 ± 0.2	2.3 ± 0.1	0.7 ± 0.2	3.4 ± 0.3	W Africa F	S E Asia M
20	4.3 ± 0.2	1.4 ± 0.1	1.4 ± 0.2	2.4 ± 0.1	1.1 ± 0.1	4.6 ± 0.2	3.3 ± 0.2	1.06 ± 0.10	1.5 ± 0.2	2.4 ± 0.1	0.6 ± 0.1	3.3 ± 0.3	W Africa F	S E Asia M
21	3.9 ± 0.2	1.1 ± 0.1	1.0 ± 0.2	2.2 ± 0.1	0.9 ± 0.1	4.1 ± 0.2	3.2 ± 0.2	0.83 ± 0.09	1.2 ± 0.2	2.2 ± 0.1	0.4 ± 0.2	3.3 ± 0.3	W Africa F	S E Asia M
22	3.7 ± 0.2	0.7 ± 0.1	0.6 ± 0.1	1.8 ± 0.1	0.4 ± 0.1	3.7 ± 0.2	3.6 ± 0.2	0.53 ± 0.09	1.3 ± 0.2	2.1 ± 0.1	0.1 ± 0.1	3.0 ± 0.3	W Africa F	S E Asia M
23	3.3 ± 0.2	0.40 ± 0.09	0.4 ± 0.1	1.60 ± 0.10	0.1 ± 0.1	3.5 ± 0.2	3.2 ± 0.2	0.30 ± 0.10	0.9 ± 0.2	2.1 ± 0.1	-0.1 ± 0.1	3.2 ± 0.2	W Africa F	S E Asia M
24	3.0 ± 0.2	-0.04 ± 0.08	0.3 ± 0.1	1.16 ± 0.09	-0.2 ± 0.1	3.0 ± 0.2	3.1 ± 0.2	-0.07 ± 0.10	0.9 ± 0.1	2.0 ± 0.1	-0.3 ± 0.1	2.9 ± 0.2	E Africa M	S E Asia M
25	2.6 ± 0.2	-0.33 ± 0.08	-0.1 ± 0.1	0.71 ± 0.08	-0.6 ± 0.1	2.8 ± 0.2	2.9 ± 0.2	-0.26 ± 0.10	0.7 ± 0.1	1.77 ± 0.10	-0.6 ± 0.1	2.7 ± 0.2	E Africa M	S E Asia F
26	2.1 ± 0.2	-0.77 ± 0.07	-0.3 ± 0.1	0.24 ± 0.07	-0.8 ± 0.1	2.5 ± 0.2	2.6 ± 0.2	-0.53 ± 0.09	0.4 ± 0.1	1.51 ± 0.09	-0.7 ± 0.1	2.3 ± 0.2	E Africa M	S E Asia F
27	1.9 ± 0.2	-1.09 ± 0.07	-0.5 ± 0.1	-0.21 ± 0.08	-1.2 ± 0.1	2.2 ± 0.2	2.3 ± 0.2	-0.88 ± 0.10	0.4 ± 0.1	1.20 ± 0.09	-0.8 ± 0.1	2.1 ± 0.2	E Africa M	S E Asia F
28	1.6 ± 0.2	-1.50 ± 0.07	-0.7 ± 0.1	-0.56 ± 0.08	-1.6 ± 0.1	1.8 ± 0.2	2.0 ± 0.2	-1.1 ± 0.1	0.2 ± 0.1	0.86 ± 0.08	-1.1 ± 0.2	1.8 ± 0.2	E Africa M	S E Asia F
29	1.5 ± 0.2	-1.77 ± 0.07	-0.8 ± 0.1	-0.96 ± 0.08	-1.9 ± 0.1	1.5 ± 0.2	1.8 ± 0.2	-1.30 ± 0.09	-0.0 ± 0.1	0.50 ± 0.08	-1.4 ± 0.2	1.9 ± 0.2	W Africa M	S E Asia F
30	1.1 ± 0.2	-2.09 ± 0.07	-1.1 ± 0.1	-1.40 ± 0.08	-2.1 ± 0.1	1.0 ± 0.2	1.7 ± 0.2	-1.61 ± 0.09	-0.2 ± 0.1	0.16 ± 0.08	-1.6 ± 0.2	1.5 ± 0.2	E Africa M	E Asia F
31	0.8 ± 0.2	-2.41 ± 0.07	-1.2 ± 0.1	-1.80 ± 0.08	-2.3 ± 0.1	0.8 ± 0.2	1.5 ± 0.2	-1.9 ± 0.1	-0.4 ± 0.1	-0.10 ± 0.08	-1.7 ± 0.2	1.3 ± 0.2	E Africa M	E Asia F
32	0.7 ± 0.2	-2.62 ± 0.08	-1.3 ± 0.1	-2.08 ± 0.09	-2.5 ± 0.1	0.7 ± 0.2	1.2 ± 0.2	-2.0 ± 0.1	-0.4 ± 0.1	-0.37 ± 0.08	-1.8 ± 0.2	1.1 ± 0.2	E Africa M	E Asia F
33	0.5 ± 0.2	-2.84 ± 0.08	-1.6 ± 0.1	-2.34 ± 0.09	-2.7 ± 0.1	0.2 ± 0.2	1.3 ± 0.2	-2.2 ± 0.1	-0.5 ± 0.1	-0.66 ± 0.08	-2.0 ± 0.2	0.9 ± 0.2	E Africa M	E Asia F
34	0.1 ± 0.3	-2.99 ± 0.08	-1.7 ± 0.1	-2.59 ± 0.10	-2.9 ± 0.1	0.0 ± 0.2	0.8 ± 0.2	-2.3 ± 0.1	-0.7 ± 0.2	-0.83 ± 0.09	-2.0 ± 0.2	0.7 ± 0.2	E Africa M	E Asia F
35	0.3 ± 0.3	-3.27 ± 0.09	-1.9 ± 0.1	-2.9 ± 0.1	-3.1 ± 0.1	-0.5 ± 0.2	0.9 ± 0.2	-2.4 ± 0.1	-0.7 ± 0.2	-1.01 ± 0.09	-2.2 ± 0.2	0.4 ± 0.2	E Africa M	E Asia F
36	-0.1 ± 0.3	-3.37 ± 0.09	-1.9 ± 0.1	-3.1 ± 0.1	-3.1 ± 0.2	-0.5 ± 0.2	0.7 ± 0.3	-2.4 ± 0.1	-0.6 ± 0.2	-1.21 ± 0.09	-2.0 ± 0.2	0.3 ± 0.2	E Africa M	E Asia F
37	-0.3 ± 0.3	-3.51 ± 0.09	-2.0 ± 0.2	-3.1 ± 0.1	-3.2 ± 0.2	-1.0 ± 0.3	0.7 ± 0.3	-2.4 ± 0.1	-0.8 ± 0.2	-1.3 ± 0.1	-2.2 ± 0.2	0.0 ± 0.2	E Africa M	E Asia F
38	0.0 ± 0.3	-3.67 ± 0.09	-2.0 ± 0.2	-3.2 ± 0.1	-3.2 ± 0.2	-1.3 ± 0.3	0.5 ± 0.3	-2.5 ± 0.1	-0.9 ± 0.2	-1.48 ± 0.10	-2.0 ± 0.2	-0.1 ± 0.2	E Africa M	E Asia F
39	-0.5 ± 0.3	-3.73 ± 0.09	-2.2 ± 0.2	-3.4 ± 0.1	-3.2 ± 0.2	-1.3 ± 0.3	0.8 ± 0.3	-2.5 ± 0.1	-0.9 ± 0.2	-1.5 ± 0.1	-1.9 ± 0.2	-0.2 ± 0.2	E Africa M	E Asia F
40	-0.6 ± 0.3	-3.90 ± 0.09	-2.0 ± 0.2	-3.4 ± 0.1	-3.4 ± 0.2	-1.8 ± 0.3	0.9 ± 0.3	-2.7 ± 0.1	-0.9 ± 0.2	-1.5 ± 0.1	-1.9 ± 0.2	-0.3 ± 0.2	E Africa M	E Asia F
41	-1.1 ± 0.4	-3.95 ± 0.09	-2.2 ± 0.2	-3.4 ± 0.2	-3.5 ± 0.2	-2.1 ± 0.3	0.9 ± 0.3	-2.6 ± 0.1	-0.9 ± 0.2	-1.6 ± 0.1	-2.1 ± 0.2	-0.3 ± 0.3	E Africa M	E Asia F
42	-0.7 ± 0.4	-3.97 ± 0.09	-2.2 ± 0.2	-3.1 ± 0.2	-3.6 ± 0.2	-2.1 ± 0.3	0.8 ± 0.3	-2.5 ± 0.1	-0.8 ± 0.2	-1.7 ± 0.1	-1.7 ± 0.2	-0.4 ± 0.3	E Africa M	E Asia F
43	-0.6 ± 0.4	-4.18 ± 0.09	-2.3 ± 0.2	-3.3 ± 0.2	-3.5 ± 0.2	-2.3 ± 0.3	1.0 ± 0.4	-2.6 ± 0.1	-0.9 ± 0.2	-1.6 ± 0.1	-1.8 ± 0.2	-0.8 ± 0.3	E Africa M	E Asia F
44	-0.8 ± 0.4	-4.39 ± 0.10	-2.6 ± 0.2	-3.1 ± 0.2	-3.3 ± 0.2	-2.6 ± 0.3	0.6 ± 0.4	-2.6 ± 0.1	-0.8 ± 0.2	-1.7 ± 0.1	-1.7 ± 0.2	-0.5 ± 0.3	E Africa M	E Asia F
45	-1.0 ± 0.4	-4.39 ± 0.10	-2.6 ± 0.2	-3.1 ± 0.2	-3.5 ± 0.2	-2.7 ± 0.3	0.4 ± 0.4	-2.7 ± 0.1	-1.0 ± 0.2	-1.5 ± 0.1	-1.8 ± 0.2	-0.8 ± 0.3	E Africa M	E Asia F
46	-0.4 ± 0.5	-4.6 ± 0.1	-2.5 ± 0.2	-2.8 ± 0.2	-3.7 ± 0.2	-2.6 ± 0.3	0.5 ± 0.4	-2.7 ± 0.1	-0.8 ± 0.2	-1.5 ± 0.2	-1.6 ± 0.3	-1.0 ± 0.3	E Africa M	E Asia F
47	-0.9 ± 0.5	-4.5 ± 0.1	-2.7 ± 0.2	-2.9 ± 0.2	-3.6 ± 0.2	-2.7 ± 0.3	0.9 ± 0.4	-2.7 ± 0.1	-0.9 ± 0.2	-1.5 ± 0.2	-1.4 ± 0.3	-0.7 ± 0.3	E Africa M	E Asia F
48	-1.2 ± 0.5	-4.6 ± 0.1	-2.6 ± 0.2	-2.6 ± 0.2	-3.6 ± 0.2	-2.8 ± 0.4	0.4 ± 0.4	-2.7 ± 0.1	-0.9 ± 0.3	-1.5 ± 0.2	-1.5 ± 0.3	-1.0 ± 0.4	E Africa M	E Asia F
49	-0.8 ± 0.5	-4.7 ± 0.1	-3.0 ± 0.2	-2.4 ± 0.2	-3.3 ± 0.2	-3.3 ± 0.4	0.0 ± 0.5	-2.6 ± 0.1	-1.0 ± 0.2	-1.7 ± 0.2	-1.5 ± 0.2	-0.9 ± 0.3	E Africa M	E Asia F
50	-1.4 ± 0.5	-4.6 ± 0.1	-2.7 ± 0.2	-2.6 ± 0.2	-3.5 ± 0.2	-3.1 ± 0.4	0.1 ± 0.4	-2.6 ± 0.1	-1.2 ± 0.2	-1.7 ± 0.2	-1.2 ± 0.2	-1.3 ± 0.3	E Africa M	E Asia F
51	-1.3 ± 0.5	-4.6 ± 0.1	-3.1 ± 0.2	-2.5 ± 0.2	-3.5 ± 0.2	-3.2 ± 0.4	-0.3 ± 0.5	-2.6 ± 0.1	-1.1 ± 0.2	-1.6 ± 0.2	-1.3 ± 0.3	-1.4 ± 0.4	E Africa M	E Asia F
52	-1.6 ± 0.5	-4.6 ± 0.1	-2.8 ± 0.2	-2.7 ± 0.2	-3.2 ± 0.2	-3.5 ± 0.4	-0.2 ± 0.5	-2.7 ± 0.1	-1.2 ± 0.3	-1.8 ± 0.2	-1.6 ± 0.3	-1.3 ± 0.4	E Africa M	E Asia F

Table 50. *Mean raw error for Application-type images for algorithm innovatrics-001. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	5.2 ± 0.2	2.99 ± 0.08	2.9 ± 0.2	3.5 ± 0.1	2.9 ± 0.1	5.9 ± 0.3	3.5 ± 0.2	2.08 ± 0.09	1.5 ± 0.2	2.38 ± 0.09	1.9 ± 0.1	3.4 ± 0.3	W Africa F	E Europe M
15	5.1 ± 0.3	2.80 ± 0.09	2.8 ± 0.2	3.5 ± 0.1	2.6 ± 0.2	5.8 ± 0.3	3.3 ± 0.2	2.10 ± 0.08	1.6 ± 0.2	2.4 ± 0.1	1.9 ± 0.1	3.6 ± 0.3	W Africa F	E Europe M
16	4.8 ± 0.3	2.5 ± 0.1	2.8 ± 0.2	3.2 ± 0.1	2.5 ± 0.2	5.8 ± 0.4	3.7 ± 0.2	1.93 ± 0.07	1.8 ± 0.2	2.3 ± 0.1	1.7 ± 0.1	3.4 ± 0.3	W Africa F	S E Asia M
17	5.0 ± 0.3	2.2 ± 0.1	2.6 ± 0.2	3.0 ± 0.2	2.1 ± 0.2	5.4 ± 0.3	3.4 ± 0.2	1.70 ± 0.09	1.6 ± 0.2	2.3 ± 0.1	1.5 ± 0.1	3.8 ± 0.4	W Africa F	S E Asia M
18	4.4 ± 0.2	1.65 ± 0.10	1.9 ± 0.2	2.5 ± 0.1	1.5 ± 0.1	4.8 ± 0.3	3.2 ± 0.2	1.13 ± 0.08	1.2 ± 0.2	2.0 ± 0.1	1.0 ± 0.2	3.3 ± 0.3	W Africa F	S E Asia M
19	4.2 ± 0.2	1.4 ± 0.1	1.6 ± 0.2	2.4 ± 0.1	1.2 ± 0.1	4.8 ± 0.2	3.4 ± 0.2	1.02 ± 0.09	1.1 ± 0.2	2.1 ± 0.1	0.6 ± 0.1	3.4 ± 0.3	W Africa F	S E Asia M
20	4.0 ± 0.2	1.1 ± 0.1	1.2 ± 0.2	2.1 ± 0.1	0.9 ± 0.1	4.6 ± 0.2	3.2 ± 0.2	0.71 ± 0.09	1.2 ± 0.2	2.1 ± 0.1	0.3 ± 0.1	3.3 ± 0.3	W Africa F	S E Asia M
21	3.6 ± 0.2	0.8 ± 0.1	0.9 ± 0.1	1.8 ± 0.1	0.6 ± 0.1	4.1 ± 0.2	3.1 ± 0.2	0.48 ± 0.09	0.9 ± 0.2	1.9 ± 0.1	0.1 ± 0.1	3.2 ± 0.3	W Africa F	S E Asia M
22	3.4 ± 0.2	0.35 ± 0.09	0.5 ± 0.1	1.34 ± 0.10	0.2 ± 0.1	3.8 ± 0.2	3.4 ± 0.2	0.17 ± 0.09	0.9 ± 0.2	1.8 ± 0.1	-0.2 ± 0.1	2.9 ± 0.2	W Africa F	S E Asia M
23	2.9 ± 0.2	0.07 ± 0.08	0.2 ± 0.1	1.17 ± 0.09	-0.1 ± 0.1	3.5 ± 0.2	3.0 ± 0.2	-0.12 ± 0.09	0.6 ± 0.2	1.8 ± 0.1	-0.4 ± 0.1	3.0 ± 0.2	W Africa F	S E Asia M
24	2.7 ± 0.2	-0.43 ± 0.08	-0.0 ± 0.1	0.73 ± 0.09	-0.53 ± 0.10	3.0 ± 0.2	2.9 ± 0.2	-0.41 ± 0.10	0.5 ± 0.1	1.6 ± 0.1	-0.6 ± 0.1	2.7 ± 0.2	W Africa F	S E Asia M
25	2.2 ± 0.2	-0.70 ± 0.07	-0.36 ± 0.10	0.28 ± 0.08	-0.9 ± 0.1	2.6 ± 0.2	2.6 ± 0.2	-0.61 ± 0.09	0.4 ± 0.1	1.46 ± 0.09	-0.9 ± 0.1	2.5 ± 0.2	W Africa F	S E Asia M
26	1.7 ± 0.2	-1.15 ± 0.07	-0.61 ± 0.09	-0.18 ± 0.07	-1.15 ± 0.10	2.3 ± 0.2	2.3 ± 0.2	-0.92 ± 0.09	0.1 ± 0.1	1.19 ± 0.09	-1.0 ± 0.1	2.1 ± 0.2	E Africa M	E Asia F
27	1.6 ± 0.2	-1.51 ± 0.07	-0.89 ± 0.10	-0.67 ± 0.07	-1.60 ± 0.10	2.1 ± 0.2	2.0 ± 0.2	-1.19 ± 0.09	0.0 ± 0.1	0.86 ± 0.08	-1.2 ± 0.1	1.9 ± 0.2	W Africa F	S E Asia F
28	1.2 ± 0.2	-1.89 ± 0.07	-1.09 ± 0.10	-1.03 ± 0.08	-1.9 ± 0.1	1.7 ± 0.2	1.7 ± 0.2	-1.43 ± 0.10	-0.1 ± 0.1	0.56 ± 0.08	-1.5 ± 0.1	1.5 ± 0.2	W Africa F	S E Asia F
29	1.1 ± 0.2	-2.26 ± 0.07	-1.2 ± 0.1	-1.42 ± 0.08	-2.2 ± 0.1	1.3 ± 0.2	1.5 ± 0.2	-1.74 ± 0.08	-0.4 ± 0.1	0.22 ± 0.08	-1.9 ± 0.1	1.6 ± 0.2	W Africa M	E Asia F
30	0.7 ± 0.2	-2.56 ± 0.07	-1.5 ± 0.1	-1.86 ± 0.08	-2.4 ± 0.1	0.9 ± 0.2	1.4 ± 0.2	-2.12 ± 0.09	-0.6 ± 0.1	-0.19 ± 0.07	-2.0 ± 0.2	1.2 ± 0.2	E Africa M	E Asia F
31	0.3 ± 0.2	-2.93 ± 0.07	-1.6 ± 0.1	-2.29 ± 0.08	-2.7 ± 0.1	0.6 ± 0.2	1.2 ± 0.2	-2.36 ± 0.09	-0.9 ± 0.1	-0.44 ± 0.08	-2.1 ± 0.2	1.0 ± 0.2	E Africa M	E Asia F
32	0.4 ± 0.2	-3.21 ± 0.07	-1.8 ± 0.1	-2.58 ± 0.09	-3.0 ± 0.1	0.4 ± 0.2	0.9 ± 0.2	-2.61 ± 0.09	-0.9 ± 0.1	-0.73 ± 0.08	-2.4 ± 0.2	0.8 ± 0.2	E Africa M	E Asia F
33	-0.0 ± 0.2	-3.51 ± 0.07	-2.0 ± 0.1	-2.84 ± 0.09	-3.2 ± 0.1	0.0 ± 0.2	0.9 ± 0.2	-2.91 ± 0.10	-0.9 ± 0.1	-1.04 ± 0.08	-2.6 ± 0.2	0.6 ± 0.2	E Africa M	E Asia F
34	-0.4 ± 0.3	-3.71 ± 0.08	-2.2 ± 0.1	-3.13 ± 0.09	-3.3 ± 0.1	-0.3 ± 0.2	0.5 ± 0.2	-3.12 ± 0.10	-1.2 ± 0.1	-1.24 ± 0.09	-2.6 ± 0.2	0.4 ± 0.2	E Africa M	E Asia F
35	-0.2 ± 0.3	-4.01 ± 0.08	-2.4 ± 0.1	-3.41 ± 0.10	-3.6 ± 0.1	-0.8 ± 0.2	0.6 ± 0.3	-3.2 ± 0.1	-1.2 ± 0.2	-1.47 ± 0.09	-2.8 ± 0.2	0.1 ± 0.2	E Africa M	E Asia F
36	-0.6 ± 0.3	-4.11 ± 0.09	-2.4 ± 0.1	-3.68 ± 0.10	-3.6 ± 0.2	-0.8 ± 0.2	0.3 ± 0.3	-3.3 ± 0.1	-1.2 ± 0.2	-1.70 ± 0.09	-2.7 ± 0.2	0.1 ± 0.2	E Africa M	E Asia F
37	-0.8 ± 0.3	-4.28 ± 0.09	-2.5 ± 0.2	-3.8 ± 0.1	-3.7 ± 0.2	-1.3 ± 0.2	0.5 ± 0.3	-3.4 ± 0.1	-1.3 ± 0.2	-1.85 ± 0.10	-2.9 ± 0.2	-0.2 ± 0.2	E Africa M	E Asia F
38	-0.5 ± 0.3	-4.46 ± 0.09	-2.6 ± 0.2	-3.9 ± 0.1	-3.7 ± 0.2	-1.6 ± 0.3	0.1 ± 0.3	-3.4 ± 0.1	-1.4 ± 0.2	-2.02 ± 0.10	-2.6 ± 0.2	-0.3 ± 0.2	E Africa M	E Asia F
39	-1.0 ± 0.3	-4.55 ± 0.09	-2.7 ± 0.2	-4.1 ± 0.1	-3.8 ± 0.2	-1.7 ± 0.3	0.4 ± 0.3	-3.5 ± 0.1	-1.3 ± 0.2	-2.1 ± 0.1	-2.6 ± 0.2	-0.4 ± 0.2	E Africa M	E Asia F
40	-1.2 ± 0.3	-4.71 ± 0.09	-2.5 ± 0.2	-4.1 ± 0.1	-4.0 ± 0.2	-2.2 ± 0.3	0.5 ± 0.3	-3.6 ± 0.1	-1.4 ± 0.2	-2.1 ± 0.1	-2.6 ± 0.2	-0.6 ± 0.2	E Africa M	E Asia F
41	-1.6 ± 0.4	-4.83 ± 0.09	-2.7 ± 0.2	-4.3 ± 0.1	-4.1 ± 0.2	-2.6 ± 0.3	0.5 ± 0.3	-3.6 ± 0.1	-1.4 ± 0.2	-2.2 ± 0.1	-2.7 ± 0.2	-0.6 ± 0.3	E Africa M	E Asia F
42	-1.3 ± 0.4	-4.89 ± 0.09	-2.7 ± 0.2	-3.9 ± 0.2	-4.3 ± 0.2	-2.6 ± 0.3	0.6 ± 0.4	-3.6 ± 0.1	-1.2 ± 0.2	-2.3 ± 0.1	-2.5 ± 0.2	-0.8 ± 0.3	E Africa M	E Asia F
43	-1.2 ± 0.4	-5.16 ± 0.09	-2.8 ± 0.2	-4.2 ± 0.2	-4.3 ± 0.2	-2.8 ± 0.3	0.9 ± 0.4	-3.6 ± 0.1	-1.4 ± 0.2	-2.2 ± 0.1	-2.6 ± 0.2	-1.1 ± 0.3	E Africa M	E Asia F
44	-1.2 ± 0.5	-5.44 ± 0.09	-3.2 ± 0.2	-4.1 ± 0.2	-4.2 ± 0.2	-3.2 ± 0.3	0.4 ± 0.4	-3.6 ± 0.1	-1.2 ± 0.2	-2.3 ± 0.1	-2.4 ± 0.2	-0.9 ± 0.3	E Africa M	E Asia F
45	-1.4 ± 0.5	-5.52 ± 0.09	-3.1 ± 0.2	-4.0 ± 0.2	-4.4 ± 0.2	-3.2 ± 0.3	0.4 ± 0.4	-3.7 ± 0.1	-1.4 ± 0.2	-2.2 ± 0.2	-2.5 ± 0.2	-1.0 ± 0.3	E Africa M	E Asia F
46	-0.5 ± 0.6	-5.80 ± 0.10	-3.1 ± 0.2	-3.7 ± 0.2	-4.7 ± 0.2	-3.3 ± 0.4	0.7 ± 0.5	-3.8 ± 0.1	-1.2 ± 0.2	-2.0 ± 0.2	-2.4 ± 0.3	-1.3 ± 0.3	E Africa M	E Asia F
47	-0.7 ± 0.6	-5.7 ± 0.1	-3.2 ± 0.2	-3.7 ± 0.2	-4.5 ± 0.2	-3.3 ± 0.4	1.5 ± 0.5	-3.7 ± 0.1	-1.3 ± 0.2	-1.9 ± 0.2	-2.2 ± 0.3	-0.8 ± 0.4	E Africa M	E Asia F
48	-1.2 ± 0.6	-5.8 ± 0.1	-3.1 ± 0.2	-3.4 ± 0.2	-4.6 ± 0.2	-3.4 ± 0.4	0.9 ± 0.5	-3.7 ± 0.1	-1.2 ± 0.3	-1.8 ± 0.2	-2.2 ± 0.3	-1.2 ± 0.4	E Africa M	E Asia F
49	-0.3 ± 0.7	-6.0 ± 0.1	-3.4 ± 0.2	-3.2 ± 0.2	-4.4 ± 0.2	-3.7 ± 0.4	0.7 ± 0.5	-3.6 ± 0.1	-1.3 ± 0.3	-1.9 ± 0.2	-2.1 ± 0.3	-1.0 ± 0.3	E Africa M	E Asia F
50	-1.1 ± 0.7	-5.9 ± 0.1	-3.1 ± 0.2	-3.3 ± 0.2	-4.5 ± 0.2	-3.6 ± 0.4	0.9 ± 0.5	-3.5 ± 0.1	-1.4 ± 0.3	-1.9 ± 0.2	-1.7 ± 0.3	-1.2 ± 0.4	E Africa M	E Asia F
51	-0.3 ± 0.7	-5.9 ± 0.1	-3.4 ± 0.2	-3.0 ± 0.2	-4.4 ± 0.2	-3.5 ± 0.5	0.6 ± 0.6	-3.4 ± 0.2	-1.2 ± 0.3	-1.7 ± 0.2	-1.6 ± 0.3	-1.2 ± 0.4	E Africa M	E Asia F
52	-0.5 ± 0.7	-5.8 ± 0.1	-3.0 ± 0.3	-3.1 ± 0.2	-3.9 ± 0.3	-3.7 ± 0.5	1.1 ± 0.6	-3.4 ± 0.2	-1.2 ± 0.3	-1.7 ± 0.2	-1.7 ± 0.3	-0.9 ± 0.4	E Africa M	E Asia F

Table 51. *Mean raw error for Application-type images for algorithm innovatrics-002. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	4.2 ± 0.3	2.08 ± 0.07	1.9 ± 0.2	2.5 ± 0.1	1.9 ± 0.1	5.4 ± 0.4	2.3 ± 0.2	1.36 ± 0.07	0.82 ± 0.10	1.42 ± 0.07	1.2 ± 0.1	2.4 ± 0.3	W Africa F	E Europe M
15	4.3 ± 0.3	1.9 ± 0.1	1.8 ± 0.2	2.4 ± 0.2	1.6 ± 0.2	5.5 ± 0.4	2.0 ± 0.2	1.18 ± 0.08	0.5 ± 0.1	1.20 ± 0.10	0.9 ± 0.1	2.7 ± 0.3	W Africa F	E Europe M
16	4.3 ± 0.4	1.7 ± 0.1	1.9 ± 0.2	2.2 ± 0.2	1.5 ± 0.2	5.8 ± 0.5	2.8 ± 0.3	0.96 ± 0.09	0.6 ± 0.2	1.1 ± 0.1	0.6 ± 0.1	2.7 ± 0.3	W Africa F	S E Asia M
17	4.8 ± 0.3	1.5 ± 0.1	1.7 ± 0.3	2.1 ± 0.2	1.3 ± 0.2	5.7 ± 0.4	2.8 ± 0.3	0.9 ± 0.1	0.3 ± 0.2	1.3 ± 0.2	0.5 ± 0.2	3.5 ± 0.4	W Africa F	E Europe M
18	4.2 ± 0.3	1.1 ± 0.1	1.3 ± 0.3	1.8 ± 0.1	0.8 ± 0.2	5.1 ± 0.3	2.8 ± 0.2	0.51 ± 0.10	0.4 ± 0.2	1.4 ± 0.1	0.0 ± 0.2	3.1 ± 0.3	W Africa F	S E Asia M
19	4.2 ± 0.3	0.9 ± 0.1	1.0 ± 0.3	1.8 ± 0.1	0.7 ± 0.2	5.4 ± 0.3	3.3 ± 0.3	0.7 ± 0.1	0.5 ± 0.2	1.7 ± 0.1	-0.1 ± 0.2	3.6 ± 0.4	W Africa F	S E Asia M
20	4.1 ± 0.3	0.8 ± 0.1	0.8 ± 0.2	1.6 ± 0.2	0.5 ± 0.2	5.3 ± 0.3	3.4 ± 0.3	0.6 ± 0.1	0.8 ± 0.2	2.0 ± 0.1	-0.0 ± 0.2	3.6 ± 0.3	W Africa F	S E Asia M
21	3.8 ± 0.3	0.7 ± 0.1	0.7 ± 0.2	1.5 ± 0.1	0.4 ± 0.2	4.8 ± 0.3	3.5 ± 0.3	0.5 ± 0.1	0.7 ± 0.2	2.0 ± 0.1	-0.0 ± 0.2	3.6 ± 0.3	W Africa F	S E Asia M
22	3.8 ± 0.3	0.3 ± 0.1	0.4 ± 0.2	1.1 ± 0.1	0.0 ± 0.1	4.5 ± 0.3	4.0 ± 0.3	0.3 ± 0.1	1.1 ± 0.2	2.0 ± 0.1	-0.2 ± 0.2	3.5 ± 0.3	W Africa F	S E Asia M
23	3.3 ± 0.2	0.2 ± 0.1	0.3 ± 0.2	1.0 ± 0.1	-0.1 ± 0.1	4.4 ± 0.2	3.6 ± 0.3	0.3 ± 0.1	0.8 ± 0.2	2.1 ± 0.1	-0.3 ± 0.2	3.8 ± 0.3	W Africa F	S E Asia M
24	3.1 ± 0.2	-0.20 ± 0.10	0.2 ± 0.1	0.60 ± 0.10	-0.4 ± 0.1	3.9 ± 0.2	3.6 ± 0.3	0.0 ± 0.1	0.8 ± 0.2	2.0 ± 0.1	-0.3 ± 0.2	3.5 ± 0.2	W Africa F	S E Asia F
25	2.8 ± 0.2	-0.48 ± 0.09	0.0 ± 0.1	0.11 ± 0.09	-0.7 ± 0.1	3.6 ± 0.2	3.4 ± 0.2	-0.1 ± 0.1	0.8 ± 0.2	1.7 ± 0.1	-0.5 ± 0.2	3.3 ± 0.2	W Africa F	S E Asia F
26	2.2 ± 0.2	-0.90 ± 0.08	-0.2 ± 0.1	-0.32 ± 0.08	-0.9 ± 0.1	3.2 ± 0.2	3.3 ± 0.2	-0.2 ± 0.1	0.5 ± 0.2	1.54 ± 0.10	-0.5 ± 0.2	3.0 ± 0.2	E Africa M	S E Asia F
27	2.1 ± 0.2	-1.17 ± 0.08	-0.4 ± 0.1	-0.80 ± 0.08	-1.3 ± 0.1	2.9 ± 0.2	2.9 ± 0.2	-0.5 ± 0.1	0.5 ± 0.1	1.27 ± 0.09	-0.5 ± 0.2	2.8 ± 0.2	W Africa F	S E Asia F
28	1.8 ± 0.2	-1.51 ± 0.08	-0.5 ± 0.1	-1.12 ± 0.08	-1.6 ± 0.1	2.6 ± 0.2	2.7 ± 0.2	-0.6 ± 0.1	0.5 ± 0.1	0.91 ± 0.09	-0.7 ± 0.2	2.4 ± 0.2	E Africa M	S E Asia F
29	1.6 ± 0.2	-1.79 ± 0.08	-0.6 ± 0.1	-1.47 ± 0.09	-1.8 ± 0.1	2.1 ± 0.2	2.4 ± 0.2	-0.8 ± 0.1	0.1 ± 0.1	0.61 ± 0.08	-1.1 ± 0.2	2.5 ± 0.2	W Africa M	E Asia F
30	1.2 ± 0.2	-2.09 ± 0.08	-0.8 ± 0.1	-1.93 ± 0.09	-1.9 ± 0.1	1.7 ± 0.2	2.4 ± 0.2	-1.0 ± 0.1	0.0 ± 0.1	0.23 ± 0.08	-1.1 ± 0.2	2.1 ± 0.2	E Africa M	E Asia F
31	0.8 ± 0.2	-2.40 ± 0.08	-0.9 ± 0.1	-2.36 ± 0.09	-2.3 ± 0.1	1.4 ± 0.2	2.2 ± 0.2	-1.2 ± 0.1	-0.2 ± 0.1	-0.02 ± 0.08	-1.3 ± 0.2	1.8 ± 0.2	E Africa M	E Asia F
32	0.7 ± 0.2	-2.70 ± 0.08	-1.0 ± 0.1	-2.65 ± 0.10	-2.5 ± 0.1	1.1 ± 0.2	1.9 ± 0.2	-1.4 ± 0.1	-0.2 ± 0.2	-0.25 ± 0.08	-1.4 ± 0.2	1.6 ± 0.2	E Africa M	E Asia F
33	0.4 ± 0.2	-2.91 ± 0.08	-1.3 ± 0.1	-2.9 ± 0.1	-2.7 ± 0.1	0.8 ± 0.2	1.8 ± 0.2	-1.6 ± 0.1	-0.2 ± 0.2	-0.58 ± 0.09	-1.5 ± 0.2	1.4 ± 0.2	E Africa M	E Asia F
34	-0.0 ± 0.3	-3.11 ± 0.08	-1.5 ± 0.2	-3.2 ± 0.1	-2.8 ± 0.1	0.4 ± 0.2	1.4 ± 0.3	-1.8 ± 0.1	-0.5 ± 0.2	-0.76 ± 0.09	-1.6 ± 0.2	1.2 ± 0.2	E Africa M	S Asia F
35	0.1 ± 0.3	-3.44 ± 0.09	-1.6 ± 0.2	-3.5 ± 0.1	-3.2 ± 0.2	-0.1 ± 0.2	1.5 ± 0.3	-1.9 ± 0.1	-0.5 ± 0.2	-0.97 ± 0.10	-1.9 ± 0.2	0.9 ± 0.2	E Africa M	S Asia F
36	-0.2 ± 0.3	-3.53 ± 0.09	-1.6 ± 0.2	-3.7 ± 0.1	-3.1 ± 0.2	-0.3 ± 0.2	1.3 ± 0.3	-2.0 ± 0.1	-0.3 ± 0.2	-1.1 ± 0.1	-1.6 ± 0.2	0.8 ± 0.2	E Africa M	S Asia F
37	-0.5 ± 0.3	-3.79 ± 0.09	-1.6 ± 0.2	-3.7 ± 0.1	-3.3 ± 0.2	-0.7 ± 0.3	1.4 ± 0.3	-2.1 ± 0.1	-0.5 ± 0.2	-1.3 ± 0.1	-1.8 ± 0.2	0.5 ± 0.2	E Africa M	E Asia F
38	-0.1 ± 0.3	-3.99 ± 0.09	-1.7 ± 0.2	-3.8 ± 0.1	-3.2 ± 0.2	-0.9 ± 0.3	1.1 ± 0.3	-2.2 ± 0.1	-0.7 ± 0.2	-1.4 ± 0.1	-1.6 ± 0.2	0.4 ± 0.2	E Africa M	E Asia F
39	-0.8 ± 0.3	-4.10 ± 0.10	-1.8 ± 0.2	-4.0 ± 0.1	-3.4 ± 0.2	-1.0 ± 0.3	1.3 ± 0.3	-2.3 ± 0.1	-0.6 ± 0.2	-1.4 ± 0.1	-1.6 ± 0.2	0.3 ± 0.2	E Africa M	E Asia F
40	-0.9 ± 0.4	-4.29 ± 0.10	-1.7 ± 0.2	-3.8 ± 0.2	-3.5 ± 0.2	-1.6 ± 0.3	1.4 ± 0.4	-2.3 ± 0.1	-0.6 ± 0.2	-1.5 ± 0.1	-1.7 ± 0.2	0.2 ± 0.3	E Africa M	E Asia F
41	-1.3 ± 0.4	-4.37 ± 0.10	-1.8 ± 0.2	-3.9 ± 0.2	-3.6 ± 0.2	-2.0 ± 0.3	1.6 ± 0.4	-2.3 ± 0.1	-0.6 ± 0.2	-1.6 ± 0.1	-1.8 ± 0.2	0.2 ± 0.3	E Africa M	E Asia F
42	-0.9 ± 0.4	-4.4 ± 0.1	-1.7 ± 0.2	-3.5 ± 0.2	-3.6 ± 0.2	-2.0 ± 0.3	1.5 ± 0.4	-2.3 ± 0.1	-0.3 ± 0.2	-1.7 ± 0.1	-1.5 ± 0.3	0.2 ± 0.3	E Africa M	E Asia F
43	-0.9 ± 0.4	-4.5 ± 0.1	-1.9 ± 0.2	-3.8 ± 0.2	-3.8 ± 0.2	-2.2 ± 0.3	1.8 ± 0.4	-2.3 ± 0.1	-0.5 ± 0.2	-1.5 ± 0.1	-1.6 ± 0.3	-0.3 ± 0.3	E Africa M	E Asia F
44	-1.1 ± 0.5	-4.8 ± 0.1	-2.0 ± 0.2	-3.5 ± 0.2	-3.5 ± 0.2	-2.5 ± 0.4	1.5 ± 0.4	-2.3 ± 0.1	-0.3 ± 0.2	-1.6 ± 0.2	-1.4 ± 0.3	-0.0 ± 0.3	E Africa M	E Asia F
45	-1.4 ± 0.5	-4.8 ± 0.1	-2.2 ± 0.2	-3.4 ± 0.2	-3.7 ± 0.2	-2.6 ± 0.4	1.2 ± 0.5	-2.4 ± 0.1	-0.4 ± 0.2	-1.4 ± 0.2	-1.5 ± 0.3	-0.0 ± 0.4	E Africa M	E Asia F
46	-0.6 ± 0.6	-5.0 ± 0.1	-2.3 ± 0.2	-3.1 ± 0.2	-3.9 ± 0.2	-2.7 ± 0.3	1.7 ± 0.5	-2.3 ± 0.1	-0.1 ± 0.3	-1.3 ± 0.2	-1.2 ± 0.3	-0.3 ± 0.4	E Africa M	E Asia F
47	-0.8 ± 0.6	-4.8 ± 0.1	-2.3 ± 0.3	-3.1 ± 0.2	-3.7 ± 0.2	-2.8 ± 0.4	2.3 ± 0.5	-2.2 ± 0.2	-0.4 ± 0.3	-1.2 ± 0.2	-0.9 ± 0.3	0.1 ± 0.4	E Africa M	E Asia F
48	-1.0 ± 0.6	-4.9 ± 0.1	-2.4 ± 0.2	-2.8 ± 0.3	-3.8 ± 0.2	-2.9 ± 0.4	1.8 ± 0.5	-2.1 ± 0.2	-0.2 ± 0.3	-1.0 ± 0.2	-1.0 ± 0.3	-0.3 ± 0.4	E Africa M	E Asia F
49	-0.5 ± 0.6	-5.0 ± 0.1	-2.8 ± 0.3	-2.5 ± 0.3	-3.4 ± 0.3	-3.4 ± 0.4	1.5 ± 0.6	-1.9 ± 0.2	-0.3 ± 0.3	-1.1 ± 0.2	-0.9 ± 0.3	-0.2 ± 0.4	E Africa M	E Asia F
50	-1.0 ± 0.7	-4.8 ± 0.1	-2.3 ± 0.3	-2.6 ± 0.2	-3.7 ± 0.2	-3.1 ± 0.4	1.8 ± 0.6	-1.8 ± 0.2	-0.1 ± 0.3	-1.0 ± 0.2	-0.3 ± 0.3	-0.4 ± 0.4	E Africa M	E Asia F
51	-0.4 ± 0.7	-4.8 ± 0.1	-2.7 ± 0.3	-2.3 ± 0.3	-3.6 ± 0.3	-3.1 ± 0.5	1.5 ± 0.7	-1.6 ± 0.2	0.0 ± 0.3	-0.8 ± 0.3	-0.4 ± 0.3	-0.3 ± 0.5	E Africa M	E Asia F
52	-0.7 ± 0.7	-4.7 ± 0.2	-2.1 ± 0.3	-2.3 ± 0.3	-3.0 ± 0.3	-3.5 ± 0.4	2.3 ± 0.6	-1.5 ± 0.2	-0.1 ± 0.3	-0.8 ± 0.2	-0.5 ± 0.4	-0.0 ± 0.5	E Africa M	E Asia F

Table 52. *Mean raw error for Application-type images for algorithm jumio-000. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	5.4 ± 0.3	4.3 ± 0.1	4.2 ± 0.4	4.5 ± 0.2	4.7 ± 0.3	5.8 ± 0.4	3.8 ± 0.3	2.8 ± 0.1	3.2 ± 0.5	2.6 ± 0.1	2.7 ± 0.2	3.6 ± 0.3	W Africa F	S Asia M
15	5.7 ± 0.4	4.3 ± 0.2	4.4 ± 0.4	4.7 ± 0.2	4.7 ± 0.3	6.0 ± 0.4	3.1 ± 0.3	2.95 ± 0.10	3.6 ± 0.5	2.5 ± 0.1	2.9 ± 0.2	3.2 ± 0.3	W Africa F	S Asia M
16	5.2 ± 0.4	4.1 ± 0.1	4.5 ± 0.4	4.6 ± 0.2	4.7 ± 0.3	6.0 ± 0.5	2.9 ± 0.3	2.62 ± 0.09	3.6 ± 0.5	2.2 ± 0.1	2.6 ± 0.2	3.0 ± 0.3	W Africa F	S Asia M
17	5.3 ± 0.4	3.9 ± 0.2	4.3 ± 0.4	4.5 ± 0.2	4.6 ± 0.3	5.8 ± 0.4	2.4 ± 0.3	2.4 ± 0.1	3.2 ± 0.5	2.1 ± 0.1	2.5 ± 0.2	3.0 ± 0.4	W Africa F	S Asia M
18	4.7 ± 0.3	3.5 ± 0.1	3.6 ± 0.3	3.9 ± 0.1	4.1 ± 0.2	5.6 ± 0.4	2.3 ± 0.2	2.04 ± 0.09	2.8 ± 0.4	1.9 ± 0.1	2.0 ± 0.2	2.6 ± 0.3	W Africa F	S Asia M
19	5.0 ± 0.4	3.4 ± 0.1	3.4 ± 0.3	3.9 ± 0.2	4.0 ± 0.2	5.8 ± 0.4	2.5 ± 0.3	2.0 ± 0.1	2.2 ± 0.3	1.9 ± 0.1	2.0 ± 0.2	2.9 ± 0.3	W Africa F	S Asia M
20	5.1 ± 0.3	3.2 ± 0.1	3.1 ± 0.2	3.6 ± 0.2	3.9 ± 0.2	5.5 ± 0.4	2.8 ± 0.3	1.9 ± 0.1	2.2 ± 0.3	2.0 ± 0.1	2.0 ± 0.2	3.0 ± 0.3	W Africa F	E Asia M
21	4.8 ± 0.3	3.0 ± 0.1	2.8 ± 0.2	3.3 ± 0.1	3.7 ± 0.2	5.6 ± 0.4	2.9 ± 0.3	1.9 ± 0.1	1.7 ± 0.3	2.0 ± 0.1	2.0 ± 0.2	3.2 ± 0.3	W Africa F	E Europe M
22	4.9 ± 0.3	2.7 ± 0.1	2.5 ± 0.2	3.0 ± 0.1	3.5 ± 0.2	5.1 ± 0.4	3.5 ± 0.3	1.9 ± 0.1	1.7 ± 0.2	1.9 ± 0.1	1.9 ± 0.2	2.9 ± 0.3	W Africa F	E Europe M
23	4.7 ± 0.3	2.5 ± 0.1	2.3 ± 0.2	2.9 ± 0.1	3.2 ± 0.1	5.5 ± 0.3	3.0 ± 0.3	1.7 ± 0.1	1.3 ± 0.2	1.9 ± 0.1	1.8 ± 0.2	3.2 ± 0.3	W Africa F	E Europe M
24	4.7 ± 0.3	2.2 ± 0.1	2.2 ± 0.2	2.5 ± 0.1	3.0 ± 0.1	4.7 ± 0.3	3.2 ± 0.3	1.7 ± 0.1	1.3 ± 0.2	1.9 ± 0.1	1.7 ± 0.2	3.2 ± 0.3	W Africa F	E Europe M
25	4.3 ± 0.3	2.10 ± 0.10	1.9 ± 0.1	2.2 ± 0.1	2.9 ± 0.1	4.7 ± 0.3	3.1 ± 0.2	1.6 ± 0.1	1.4 ± 0.2	1.7 ± 0.1	1.7 ± 0.2	3.0 ± 0.2	W Africa F	E Europe M
26	4.3 ± 0.3	1.84 ± 0.10	1.7 ± 0.1	1.80 ± 0.10	2.8 ± 0.1	4.4 ± 0.3	3.0 ± 0.2	1.3 ± 0.1	1.1 ± 0.2	1.5 ± 0.1	1.6 ± 0.2	2.7 ± 0.2	W Africa F	E Europe M
27	4.1 ± 0.3	1.63 ± 0.10	1.6 ± 0.1	1.49 ± 0.10	2.5 ± 0.1	4.6 ± 0.3	2.7 ± 0.2	1.2 ± 0.1	1.1 ± 0.1	1.3 ± 0.1	1.6 ± 0.2	2.6 ± 0.2	W Africa F	E Europe M
28	3.8 ± 0.3	1.36 ± 0.09	1.4 ± 0.1	1.28 ± 0.09	2.3 ± 0.1	4.1 ± 0.3	2.3 ± 0.2	1.1 ± 0.1	1.0 ± 0.1	0.99 ± 0.10	1.4 ± 0.2	2.3 ± 0.2	W Africa F	S Asia M
29	3.9 ± 0.3	1.18 ± 0.09	1.3 ± 0.1	1.00 ± 0.10	2.2 ± 0.1	3.9 ± 0.2	2.4 ± 0.2	0.9 ± 0.1	0.7 ± 0.1	0.72 ± 0.09	1.1 ± 0.2	2.4 ± 0.2	W Africa F	E Europe M
30	3.5 ± 0.3	1.05 ± 0.09	1.1 ± 0.1	0.73 ± 0.10	2.1 ± 0.1	3.5 ± 0.3	2.2 ± 0.2	0.7 ± 0.1	0.6 ± 0.1	0.49 ± 0.09	1.1 ± 0.2	2.0 ± 0.2	E Africa F	S Asia M
31	3.2 ± 0.3	0.87 ± 0.09	1.0 ± 0.1	0.4 ± 0.1	1.9 ± 0.1	3.1 ± 0.2	2.0 ± 0.2	0.5 ± 0.1	0.5 ± 0.1	0.37 ± 0.09	0.9 ± 0.2	1.8 ± 0.2	E Africa F	S Asia M
32	3.5 ± 0.3	0.70 ± 0.09	0.8 ± 0.1	0.2 ± 0.1	1.7 ± 0.2	3.2 ± 0.3	1.6 ± 0.2	0.3 ± 0.1	0.3 ± 0.1	0.22 ± 0.09	0.8 ± 0.2	1.6 ± 0.2	E Africa F	S Asia F
33	3.1 ± 0.3	0.49 ± 0.09	0.7 ± 0.1	0.1 ± 0.1	1.7 ± 0.2	2.9 ± 0.3	1.7 ± 0.2	0.1 ± 0.1	0.4 ± 0.1	0.06 ± 0.09	0.6 ± 0.2	1.4 ± 0.2	E Africa F	S Asia M
34	3.0 ± 0.3	0.34 ± 0.09	0.5 ± 0.1	-0.1 ± 0.1	1.4 ± 0.1	2.7 ± 0.3	1.2 ± 0.2	-0.1 ± 0.1	0.1 ± 0.2	-0.06 ± 0.10	0.5 ± 0.2	1.5 ± 0.2	E Africa F	S Asia M
35	3.0 ± 0.3	0.14 ± 0.10	0.4 ± 0.2	-0.3 ± 0.1	1.0 ± 0.2	2.3 ± 0.3	1.4 ± 0.3	-0.2 ± 0.1	0.1 ± 0.2	-0.1 ± 0.1	0.3 ± 0.2	1.2 ± 0.2	E Africa F	S Asia F
36	2.7 ± 0.3	0.01 ± 0.10	0.4 ± 0.2	-0.5 ± 0.1	1.0 ± 0.2	2.4 ± 0.3	1.2 ± 0.3	-0.3 ± 0.1	0.1 ± 0.2	-0.2 ± 0.1	0.2 ± 0.2	1.1 ± 0.2	E Africa F	S Asia F
37	2.6 ± 0.3	-0.12 ± 0.09	0.3 ± 0.2	-0.4 ± 0.1	0.8 ± 0.2	2.1 ± 0.3	1.2 ± 0.3	-0.4 ± 0.1	0.0 ± 0.2	-0.3 ± 0.1	-0.0 ± 0.2	1.0 ± 0.2	E Africa F	S Asia F
38	3.1 ± 0.4	-0.36 ± 0.10	0.1 ± 0.2	-0.4 ± 0.1	0.7 ± 0.2	1.9 ± 0.3	0.9 ± 0.3	-0.5 ± 0.1	-0.1 ± 0.2	-0.4 ± 0.1	0.3 ± 0.2	0.8 ± 0.3	E Africa F	E Asia M
39	2.6 ± 0.3	-0.37 ± 0.10	0.0 ± 0.2	-0.5 ± 0.1	0.5 ± 0.2	1.7 ± 0.3	1.3 ± 0.3	-0.7 ± 0.1	0.1 ± 0.2	-0.3 ± 0.1	0.2 ± 0.2	0.7 ± 0.3	E Africa F	E Asia M
40	2.3 ± 0.4	-0.55 ± 0.10	0.5 ± 0.2	-0.4 ± 0.1	0.4 ± 0.2	1.4 ± 0.3	1.1 ± 0.3	-0.7 ± 0.1	0.0 ± 0.2	-0.3 ± 0.1	-0.1 ± 0.2	0.7 ± 0.3	E Africa F	E Asia M
41	1.9 ± 0.4	-0.69 ± 0.10	0.2 ± 0.2	-0.5 ± 0.2	0.2 ± 0.2	1.0 ± 0.3	1.3 ± 0.3	-0.8 ± 0.1	0.0 ± 0.2	-0.3 ± 0.1	-0.2 ± 0.2	0.8 ± 0.3	E Africa F	E Asia M
42	2.5 ± 0.4	-0.73 ± 0.10	0.3 ± 0.2	-0.1 ± 0.2	0.1 ± 0.2	1.3 ± 0.4	1.4 ± 0.4	-0.8 ± 0.1	0.2 ± 0.2	-0.3 ± 0.1	-0.1 ± 0.2	0.6 ± 0.3	E Africa F	E Asia M
43	2.6 ± 0.4	-0.9 ± 0.1	0.3 ± 0.2	-0.3 ± 0.2	-0.1 ± 0.2	1.1 ± 0.3	1.6 ± 0.4	-0.8 ± 0.1	0.0 ± 0.2	-0.1 ± 0.1	-0.0 ± 0.2	0.4 ± 0.3	E Africa F	E Asia F
44	2.3 ± 0.5	-1.2 ± 0.1	0.1 ± 0.2	-0.2 ± 0.2	-0.1 ± 0.2	0.6 ± 0.4	1.2 ± 0.4	-0.8 ± 0.1	0.4 ± 0.2	-0.2 ± 0.2	-0.0 ± 0.2	0.6 ± 0.3	E Africa F	E Asia F
45	2.3 ± 0.5	-1.1 ± 0.1	-0.0 ± 0.2	-0.2 ± 0.2	-0.2 ± 0.2	0.7 ± 0.4	1.2 ± 0.4	-0.9 ± 0.1	0.2 ± 0.2	0.1 ± 0.2	-0.2 ± 0.2	0.3 ± 0.3	E Africa F	E Asia F
46	3.0 ± 0.5	-1.4 ± 0.1	0.1 ± 0.2	-0.0 ± 0.2	-0.3 ± 0.2	1.0 ± 0.4	1.2 ± 0.4	-0.9 ± 0.1	0.3 ± 0.3	0.2 ± 0.2	-0.2 ± 0.3	0.4 ± 0.4	E Africa F	E Asia F
47	2.5 ± 0.5	-1.3 ± 0.1	0.2 ± 0.3	0.0 ± 0.2	-0.3 ± 0.2	0.7 ± 0.4	1.7 ± 0.4	-1.0 ± 0.1	0.3 ± 0.2	0.4 ± 0.2	-0.1 ± 0.3	0.5 ± 0.4	E Africa F	E Asia F
48	2.2 ± 0.5	-1.4 ± 0.1	0.3 ± 0.2	0.2 ± 0.2	-0.5 ± 0.2	0.4 ± 0.4	1.1 ± 0.5	-0.9 ± 0.1	0.4 ± 0.3	0.4 ± 0.2	0.1 ± 0.3	0.4 ± 0.4	E Africa F	E Asia F
49	2.7 ± 0.5	-1.6 ± 0.1	0.1 ± 0.3	0.2 ± 0.2	-0.1 ± 0.2	0.4 ± 0.4	1.3 ± 0.5	-0.9 ± 0.1	0.4 ± 0.3	0.4 ± 0.2	0.0 ± 0.3	0.4 ± 0.4	E Africa F	E Asia F
50	2.3 ± 0.6	-1.5 ± 0.1	0.2 ± 0.2	0.2 ± 0.2	-0.4 ± 0.2	0.4 ± 0.4	1.1 ± 0.5	-0.8 ± 0.1	0.2 ± 0.3	0.4 ± 0.2	0.3 ± 0.3	0.2 ± 0.4	E Africa F	E Asia F
51	2.0 ± 0.5	-1.5 ± 0.1	0.1 ± 0.2	0.2 ± 0.2	-0.4 ± 0.2	0.1 ± 0.4	0.9 ± 0.6	-0.9 ± 0.1	0.4 ± 0.2	0.5 ± 0.2	0.3 ± 0.3	0.2 ± 0.4	E Africa F	E Asia F
52	1.9 ± 0.6	-1.6 ± 0.1	0.2 ± 0.2	0.1 ± 0.2	-0.1 ± 0.2	-0.0 ± 0.4	0.8 ± 0.6	-1.0 ± 0.1	0.2 ± 0.3	0.4 ± 0.2	-0.1 ± 0.3	0.3 ± 0.4	E Africa F	E Asia F

Table 53. *Mean raw error for Application-type images for algorithm neurotechnology-000. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	5.7 ± 0.5	5.4 ± 0.2	3.8 ± 0.3	3.8 ± 0.2	3.9 ± 0.4	9.3 ± 0.5	8.6 ± 0.4	6.3 ± 0.2	3.3 ± 0.3	4.7 ± 0.2	5.1 ± 0.4	11.1 ± 0.5	W Africa M	E Europe M
15	4.9 ± 0.5	5.7 ± 0.2	3.4 ± 0.3	3.9 ± 0.2	4.1 ± 0.4	8.4 ± 0.5	8.7 ± 0.5	6.7 ± 0.2	3.4 ± 0.3	5.1 ± 0.2	5.7 ± 0.4	10.4 ± 0.5	W Africa M	E Europe M
16	5.0 ± 0.5	5.0 ± 0.2	3.5 ± 0.3	3.4 ± 0.3	4.4 ± 0.4	8.3 ± 0.5	9.3 ± 0.3	6.4 ± 0.1	3.7 ± 0.3	5.2 ± 0.2	5.8 ± 0.3	9.8 ± 0.4	W Africa M	S Asia F
17	5.3 ± 0.5	4.5 ± 0.2	3.2 ± 0.4	3.0 ± 0.2	3.9 ± 0.4	8.2 ± 0.4	9.2 ± 0.3	5.9 ± 0.1	3.3 ± 0.2	5.0 ± 0.2	5.4 ± 0.3	9.8 ± 0.4	W Africa M	S Asia F
18	4.2 ± 0.4	3.4 ± 0.2	2.4 ± 0.3	2.3 ± 0.2	3.0 ± 0.3	7.1 ± 0.4	8.5 ± 0.3	5.1 ± 0.1	2.8 ± 0.2	4.4 ± 0.1	4.9 ± 0.2	8.9 ± 0.3	W Africa M	S Asia F
19	3.9 ± 0.4	2.6 ± 0.2	2.0 ± 0.3	2.0 ± 0.2	2.2 ± 0.2	6.8 ± 0.4	8.3 ± 0.3	4.5 ± 0.1	2.1 ± 0.2	4.3 ± 0.1	4.1 ± 0.2	8.4 ± 0.3	W Africa M	S Asia F
20	3.2 ± 0.4	1.9 ± 0.2	1.6 ± 0.2	1.3 ± 0.2	1.5 ± 0.2	6.1 ± 0.3	7.9 ± 0.3	3.8 ± 0.1	2.0 ± 0.2	4.0 ± 0.1	3.4 ± 0.2	8.1 ± 0.3	W Africa M	S Asia F
21	2.7 ± 0.4	1.1 ± 0.2	1.1 ± 0.2	0.6 ± 0.1	1.1 ± 0.2	5.6 ± 0.3	7.3 ± 0.3	3.02 ± 0.10	1.7 ± 0.2	3.4 ± 0.1	2.9 ± 0.2	7.6 ± 0.3	W Africa M	S Asia F
22	2.6 ± 0.3	0.2 ± 0.1	0.7 ± 0.2	-0.0 ± 0.1	0.2 ± 0.2	5.1 ± 0.3	7.2 ± 0.2	2.30 ± 0.10	1.3 ± 0.2	2.8 ± 0.1	2.2 ± 0.2	7.0 ± 0.3	E Africa M	S Asia F
23	1.9 ± 0.3	-0.3 ± 0.1	0.4 ± 0.2	-0.4 ± 0.1	-0.3 ± 0.2	4.3 ± 0.3	6.3 ± 0.2	1.7 ± 0.1	0.8 ± 0.2	2.4 ± 0.1	1.4 ± 0.2	6.3 ± 0.2	W Africa M	S Asia F
24	1.3 ± 0.3	-1.2 ± 0.1	-0.1 ± 0.2	-1.1 ± 0.1	-0.8 ± 0.1	3.7 ± 0.3	6.0 ± 0.2	1.0 ± 0.1	0.5 ± 0.2	1.9 ± 0.1	0.9 ± 0.1	5.7 ± 0.2	E Africa M	E Asia F
25	0.9 ± 0.3	-1.8 ± 0.1	-0.4 ± 0.2	-1.7 ± 0.1	-1.7 ± 0.1	3.0 ± 0.3	5.3 ± 0.2	0.3 ± 0.1	0.2 ± 0.2	1.3 ± 0.1	0.2 ± 0.1	5.2 ± 0.2	E Africa M	E Asia F
26	0.3 ± 0.3	-2.6 ± 0.1	-0.8 ± 0.2	-2.4 ± 0.1	-2.2 ± 0.1	2.4 ± 0.2	4.7 ± 0.2	-0.37 ± 0.10	-0.2 ± 0.2	0.7 ± 0.1	-0.3 ± 0.2	4.4 ± 0.2	E Africa M	E Asia F
27	0.1 ± 0.3	-3.2 ± 0.1	-1.2 ± 0.2	-3.0 ± 0.1	-2.7 ± 0.1	1.7 ± 0.2	4.0 ± 0.2	-0.99 ± 0.10	-0.4 ± 0.2	0.1 ± 0.1	-0.8 ± 0.2	3.7 ± 0.2	E Africa M	E Asia F
28	-0.5 ± 0.3	-3.77 ± 0.09	-1.6 ± 0.2	-3.6 ± 0.1	-3.3 ± 0.1	1.2 ± 0.2	3.3 ± 0.2	-1.6 ± 0.1	-0.5 ± 0.2	-0.6 ± 0.1	-1.5 ± 0.2	3.0 ± 0.2	E Africa M	E Asia F
29	-0.9 ± 0.3	-4.35 ± 0.09	-1.8 ± 0.2	-4.2 ± 0.1	-4.0 ± 0.1	0.5 ± 0.2	2.7 ± 0.2	-2.15 ± 0.09	-1.1 ± 0.2	-1.19 ± 0.10	-1.9 ± 0.2	2.6 ± 0.2	E Africa M	E Asia F
30	-1.5 ± 0.3	-4.94 ± 0.09	-2.2 ± 0.2	-4.8 ± 0.1	-4.4 ± 0.1	-0.1 ± 0.2	2.4 ± 0.2	-2.84 ± 0.09	-1.3 ± 0.2	-1.72 ± 0.10	-2.6 ± 0.2	1.9 ± 0.2	E Africa M	E Asia F
31	-1.9 ± 0.3	-5.49 ± 0.09	-2.4 ± 0.2	-5.4 ± 0.1	-4.9 ± 0.2	-0.8 ± 0.2	1.8 ± 0.2	-3.3 ± 0.1	-1.6 ± 0.2	-2.26 ± 0.10	-3.2 ± 0.2	1.1 ± 0.2	E Africa M	E Asia F
32	-1.9 ± 0.3	-6.12 ± 0.09	-2.6 ± 0.2	-6.0 ± 0.1	-5.4 ± 0.2	-1.3 ± 0.3	1.1 ± 0.2	-3.9 ± 0.1	-1.6 ± 0.2	-2.73 ± 0.10	-3.6 ± 0.2	0.5 ± 0.2	E Africa M	E Asia F
33	-2.7 ± 0.3	-6.63 ± 0.10	-2.9 ± 0.2	-6.4 ± 0.1	-6.0 ± 0.2	-1.7 ± 0.3	0.7 ± 0.2	-4.6 ± 0.1	-1.6 ± 0.2	-3.2 ± 0.1	-3.8 ± 0.2	-0.0 ± 0.2	E Africa M	E Asia F
34	-3.1 ± 0.3	-7.1 ± 0.1	-3.3 ± 0.2	-6.9 ± 0.1	-6.4 ± 0.2	-2.4 ± 0.3	-0.1 ± 0.2	-5.0 ± 0.1	-2.0 ± 0.2	-3.6 ± 0.1	-4.2 ± 0.3	-0.7 ± 0.2	E Africa M	E Asia F
35	-3.3 ± 0.3	-7.6 ± 0.1	-3.5 ± 0.2	-7.4 ± 0.1	-6.8 ± 0.2	-2.8 ± 0.3	-0.3 ± 0.2	-5.4 ± 0.1	-2.2 ± 0.2	-4.0 ± 0.1	-4.7 ± 0.3	-1.1 ± 0.2	E Africa M	E Asia F
36	-3.6 ± 0.4	-8.0 ± 0.1	-3.6 ± 0.3	-7.8 ± 0.1	-7.0 ± 0.2	-3.2 ± 0.3	-0.9 ± 0.3	-5.8 ± 0.1	-2.0 ± 0.3	-4.5 ± 0.1	-4.8 ± 0.3	-1.9 ± 0.2	E Africa M	E Asia F
37	-3.9 ± 0.4	-8.4 ± 0.1	-3.7 ± 0.3	-8.0 ± 0.2	-7.6 ± 0.2	-3.5 ± 0.3	-1.1 ± 0.3	-6.2 ± 0.1	-2.5 ± 0.3	-4.7 ± 0.1	-5.3 ± 0.3	-2.4 ± 0.2	E Africa M	E Asia F
38	-3.9 ± 0.4	-8.7 ± 0.1	-3.7 ± 0.3	-8.3 ± 0.2	-7.7 ± 0.2	-4.2 ± 0.4	-1.9 ± 0.3	-6.5 ± 0.1	-2.5 ± 0.3	-5.1 ± 0.1	-4.8 ± 0.3	-2.8 ± 0.2	E Africa M	E Asia F
39	-4.1 ± 0.4	-9.2 ± 0.1	-3.8 ± 0.3	-8.8 ± 0.2	-7.6 ± 0.2	-4.1 ± 0.4	-1.8 ± 0.3	-6.8 ± 0.2	-2.6 ± 0.3	-5.3 ± 0.1	-5.0 ± 0.3	-3.3 ± 0.2	E Africa M	E Asia F
40	-4.7 ± 0.5	-9.4 ± 0.1	-3.8 ± 0.3	-8.8 ± 0.2	-8.0 ± 0.3	-4.8 ± 0.4	-2.1 ± 0.3	-7.0 ± 0.2	-2.6 ± 0.3	-5.4 ± 0.2	-5.2 ± 0.3	-3.9 ± 0.3	E Africa M	E Asia F
41	-5.3 ± 0.5	-9.6 ± 0.1	-4.0 ± 0.3	-9.0 ± 0.2	-8.2 ± 0.3	-5.6 ± 0.4	-2.4 ± 0.4	-7.0 ± 0.2	-2.6 ± 0.3	-5.5 ± 0.2	-5.2 ± 0.4	-4.1 ± 0.3	E Africa M	E Asia F
42	-4.5 ± 0.5	-9.8 ± 0.1	-3.4 ± 0.4	-8.8 ± 0.3	-8.0 ± 0.3	-5.3 ± 0.4	-2.6 ± 0.4	-7.0 ± 0.2	-2.2 ± 0.3	-5.9 ± 0.2	-4.8 ± 0.4	-4.3 ± 0.3	E Europe M	E Asia F
43	-5.3 ± 0.6	-9.9 ± 0.2	-3.3 ± 0.4	-9.1 ± 0.3	-8.3 ± 0.3	-5.9 ± 0.5	-2.4 ± 0.4	-6.9 ± 0.2	-2.4 ± 0.4	-5.9 ± 0.2	-5.0 ± 0.4	-5.0 ± 0.3	E Europe M	E Asia F
44	-5.0 ± 0.6	-10.3 ± 0.2	-3.7 ± 0.4	-9.1 ± 0.3	-7.7 ± 0.3	-5.8 ± 0.5	-3.0 ± 0.5	-6.9 ± 0.2	-2.2 ± 0.4	-5.7 ± 0.2	-4.6 ± 0.4	-4.8 ± 0.3	E Europe M	E Asia F
45	-5.7 ± 0.6	-10.3 ± 0.2	-3.7 ± 0.4	-9.0 ± 0.3	-8.1 ± 0.3	-5.9 ± 0.5	-3.2 ± 0.5	-7.0 ± 0.2	-2.3 ± 0.4	-5.8 ± 0.2	-4.4 ± 0.4	-5.2 ± 0.4	E Europe M	E Asia F
46	-4.8 ± 0.7	-10.6 ± 0.2	-3.6 ± 0.4	-8.8 ± 0.3	-8.4 ± 0.4	-6.4 ± 0.5	-3.1 ± 0.5	-6.8 ± 0.2	-1.9 ± 0.4	-5.5 ± 0.2	-4.0 ± 0.4	-5.5 ± 0.4	E Europe M	E Asia F
47	-4.4 ± 0.7	-10.2 ± 0.2	-3.2 ± 0.4	-8.8 ± 0.3	-7.9 ± 0.4	-6.2 ± 0.5	-2.7 ± 0.5	-6.5 ± 0.2	-2.4 ± 0.4	-5.2 ± 0.3	-3.9 ± 0.4	-4.9 ± 0.5	E Europe M	E Asia F
48	-5.4 ± 0.8	-10.1 ± 0.2	-3.3 ± 0.4	-8.6 ± 0.4	-7.8 ± 0.4	-6.5 ± 0.6	-3.7 ± 0.6	-6.5 ± 0.3	-2.1 ± 0.4	-5.2 ± 0.3	-3.7 ± 0.5	-6.1 ± 0.5	E Europe M	E Asia F
49	-5.1 ± 0.8	-10.3 ± 0.2	-3.5 ± 0.4	-8.5 ± 0.4	-7.4 ± 0.4	-6.8 ± 0.6	-3.6 ± 0.6	-6.2 ± 0.3	-2.1 ± 0.4	-5.1 ± 0.3	-3.4 ± 0.5	-5.8 ± 0.5	E Europe M	E Asia F
50	-5.6 ± 0.9	-9.9 ± 0.2	-3.1 ± 0.4	-8.5 ± 0.3	-7.7 ± 0.4	-6.4 ± 0.6	-3.8 ± 0.7	-6.0 ± 0.3	-2.2 ± 0.4	-5.2 ± 0.3	-3.2 ± 0.5	-5.7 ± 0.5	E Europe M	E Asia F
51	-5.0 ± 0.7	-9.9 ± 0.3	-3.6 ± 0.4	-8.3 ± 0.4	-7.3 ± 0.4	-6.6 ± 0.6	-4.0 ± 0.7	-5.8 ± 0.3	-1.8 ± 0.4	-5.1 ± 0.3	-3.0 ± 0.5	-6.1 ± 0.6	E Europe M	E Asia F
52	-5.3 ± 0.8	-9.9 ± 0.3	-3.3 ± 0.4	-8.6 ± 0.3	-6.5 ± 0.4	-7.0 ± 0.6	-3.2 ± 0.7	-5.6 ± 0.3	-2.0 ± 0.4	-5.1 ± 0.3	-3.4 ± 0.5	-6.0 ± 0.6	E Europe M	E Asia F

Table 54. *Mean raw error for Application-type images for algorithm neurotechnology-001. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	4.4 ± 0.3	5.6 ± 0.2	3.8 ± 0.3	3.9 ± 0.2	4.0 ± 0.4	5.7 ± 0.3	4.6 ± 0.3	6.4 ± 0.2	3.3 ± 0.3	4.7 ± 0.2	5.1 ± 0.4	4.7 ± 0.3	E Asia M	E Europe M
15	3.9 ± 0.3	5.8 ± 0.2	3.5 ± 0.3	4.0 ± 0.2	4.1 ± 0.5	4.9 ± 0.3	4.4 ± 0.3	6.7 ± 0.2	3.4 ± 0.3	5.1 ± 0.2	5.7 ± 0.4	4.9 ± 0.4	E Asia M	E Europe M
16	3.8 ± 0.3	5.1 ± 0.2	3.6 ± 0.3	3.5 ± 0.3	4.4 ± 0.4	4.9 ± 0.4	4.3 ± 0.2	6.4 ± 0.1	3.8 ± 0.3	5.1 ± 0.2	5.9 ± 0.3	4.5 ± 0.4	E Asia M	S Asia F
17	3.2 ± 0.3	4.6 ± 0.2	3.2 ± 0.4	3.1 ± 0.2	4.0 ± 0.4	4.4 ± 0.3	4.5 ± 0.3	5.9 ± 0.1	3.3 ± 0.2	4.9 ± 0.2	5.5 ± 0.3	4.9 ± 0.4	E Asia M	S Asia F
18	2.7 ± 0.2	3.5 ± 0.2	2.4 ± 0.3	2.3 ± 0.2	3.0 ± 0.3	3.4 ± 0.3	4.1 ± 0.3	5.1 ± 0.1	2.7 ± 0.2	4.4 ± 0.1	4.9 ± 0.2	4.0 ± 0.3	E Asia M	S Asia F
19	2.3 ± 0.3	2.7 ± 0.2	2.1 ± 0.3	2.0 ± 0.2	2.2 ± 0.2	3.1 ± 0.3	4.0 ± 0.3	4.5 ± 0.1	2.1 ± 0.2	4.1 ± 0.1	4.1 ± 0.2	3.6 ± 0.3	E Asia M	S Asia F
20	1.8 ± 0.3	2.0 ± 0.2	1.7 ± 0.2	1.3 ± 0.2	1.6 ± 0.2	2.4 ± 0.3	4.0 ± 0.3	3.8 ± 0.1	2.0 ± 0.2	3.8 ± 0.1	3.5 ± 0.2	3.5 ± 0.3	E Africa M	S Asia F
21	0.9 ± 0.3	1.2 ± 0.2	1.1 ± 0.2	0.7 ± 0.1	1.1 ± 0.2	1.9 ± 0.3	3.5 ± 0.3	3.1 ± 0.1	1.8 ± 0.2	3.3 ± 0.1	2.9 ± 0.2	3.0 ± 0.3	E Africa M	S Asia F
22	0.8 ± 0.3	0.3 ± 0.1	0.8 ± 0.2	0.0 ± 0.1	0.3 ± 0.2	1.5 ± 0.3	3.5 ± 0.3	2.36 ± 0.10	1.3 ± 0.2	2.7 ± 0.1	2.2 ± 0.2	2.8 ± 0.3	E Africa M	S Asia F
23	0.2 ± 0.2	-0.2 ± 0.1	0.4 ± 0.2	-0.4 ± 0.1	-0.2 ± 0.2	0.8 ± 0.3	2.8 ± 0.3	1.7 ± 0.1	0.9 ± 0.2	2.2 ± 0.1	1.4 ± 0.2	2.3 ± 0.3	E Africa M	S Asia F
24	-0.5 ± 0.2	-1.1 ± 0.1	0.0 ± 0.2	-1.0 ± 0.1	-0.8 ± 0.1	0.2 ± 0.3	2.5 ± 0.3	1.1 ± 0.1	0.5 ± 0.2	1.8 ± 0.1	0.9 ± 0.1	1.6 ± 0.2	E Africa M	E Asia F
25	-1.0 ± 0.2	-1.7 ± 0.1	-0.4 ± 0.2	-1.7 ± 0.1	-1.6 ± 0.1	-0.3 ± 0.3	2.1 ± 0.3	0.4 ± 0.1	0.3 ± 0.2	1.2 ± 0.1	0.2 ± 0.1	1.3 ± 0.2	E Africa M	E Asia F
26	-1.6 ± 0.2	-2.5 ± 0.1	-0.8 ± 0.2	-2.3 ± 0.1	-2.1 ± 0.1	-1.0 ± 0.3	1.6 ± 0.3	-0.31 ± 0.10	-0.1 ± 0.2	0.6 ± 0.1	-0.3 ± 0.2	0.7 ± 0.2	E Africa M	E Asia F
27	-1.8 ± 0.3	-3.09 ± 0.10	-1.2 ± 0.2	-3.0 ± 0.1	-2.6 ± 0.1	-1.5 ± 0.3	1.1 ± 0.3	-0.94 ± 0.10	-0.4 ± 0.2	-0.0 ± 0.1	-0.8 ± 0.2	0.4 ± 0.2	E Africa M	E Asia F
28	-2.6 ± 0.3	-3.70 ± 0.09	-1.5 ± 0.2	-3.6 ± 0.1	-3.3 ± 0.1	-2.1 ± 0.3	0.5 ± 0.3	-1.6 ± 0.1	-0.5 ± 0.2	-0.7 ± 0.1	-1.5 ± 0.2	-0.3 ± 0.2	E Africa M	E Asia F
29	-2.8 ± 0.3	-4.27 ± 0.10	-1.7 ± 0.2	-4.1 ± 0.1	-4.0 ± 0.1	-2.6 ± 0.3	0.3 ± 0.3	-2.08 ± 0.09	-1.1 ± 0.2	-1.30 ± 0.10	-1.9 ± 0.2	-0.5 ± 0.2	E Africa M	E Asia F
30	-3.2 ± 0.3	-4.90 ± 0.09	-2.1 ± 0.2	-4.8 ± 0.1	-4.3 ± 0.1	-3.0 ± 0.3	0.1 ± 0.3	-2.77 ± 0.09	-1.3 ± 0.2	-1.84 ± 0.10	-2.6 ± 0.2	-1.0 ± 0.2	E Africa M	E Asia F
31	-3.9 ± 0.3	-5.41 ± 0.09	-2.3 ± 0.2	-5.3 ± 0.1	-4.9 ± 0.2	-3.7 ± 0.3	-0.4 ± 0.3	-3.3 ± 0.1	-1.6 ± 0.2	-2.38 ± 0.10	-3.2 ± 0.2	-1.7 ± 0.2	E Africa M	E Asia F
32	-3.8 ± 0.3	-6.06 ± 0.10	-2.5 ± 0.2	-5.9 ± 0.1	-5.3 ± 0.2	-3.8 ± 0.3	-1.0 ± 0.3	-3.8 ± 0.1	-1.6 ± 0.2	-2.9 ± 0.1	-3.6 ± 0.2	-2.1 ± 0.3	E Africa M	E Asia F
33	-4.3 ± 0.3	-6.54 ± 0.10	-2.8 ± 0.2	-6.4 ± 0.1	-6.0 ± 0.2	-4.3 ± 0.3	-1.2 ± 0.3	-4.5 ± 0.1	-1.5 ± 0.2	-3.3 ± 0.1	-3.8 ± 0.2	-2.3 ± 0.3	E Africa M	E Asia F
34	-4.5 ± 0.4	-7.0 ± 0.1	-3.2 ± 0.2	-6.8 ± 0.1	-6.3 ± 0.2	-4.8 ± 0.3	-1.9 ± 0.3	-4.9 ± 0.1	-2.0 ± 0.2	-3.7 ± 0.1	-4.2 ± 0.3	-2.8 ± 0.3	E Africa M	E Asia F
35	-4.7 ± 0.4	-7.5 ± 0.1	-3.3 ± 0.2	-7.4 ± 0.1	-6.8 ± 0.2	-5.1 ± 0.4	-1.7 ± 0.3	-5.4 ± 0.1	-2.1 ± 0.2	-4.1 ± 0.1	-4.6 ± 0.3	-3.0 ± 0.3	E Africa M	E Asia F
36	-5.0 ± 0.4	-7.9 ± 0.1	-3.4 ± 0.3	-7.8 ± 0.1	-6.8 ± 0.2	-5.3 ± 0.4	-2.4 ± 0.4	-5.8 ± 0.1	-1.9 ± 0.3	-4.6 ± 0.1	-4.8 ± 0.3	-3.7 ± 0.3	E Europe M	E Asia F
37	-5.3 ± 0.4	-8.3 ± 0.1	-3.6 ± 0.3	-8.0 ± 0.2	-7.5 ± 0.2	-5.5 ± 0.4	-2.2 ± 0.4	-6.1 ± 0.1	-2.5 ± 0.2	-4.8 ± 0.1	-5.2 ± 0.3	-3.9 ± 0.3	E Africa M	E Asia F
38	-5.1 ± 0.5	-8.6 ± 0.1	-3.5 ± 0.3	-8.3 ± 0.2	-7.5 ± 0.2	-5.8 ± 0.5	-2.8 ± 0.4	-6.4 ± 0.1	-2.4 ± 0.3	-5.3 ± 0.1	-4.8 ± 0.3	-4.1 ± 0.3	E Europe M	E Asia F
39	-5.0 ± 0.5	-9.1 ± 0.1	-3.6 ± 0.3	-8.7 ± 0.2	-7.5 ± 0.3	-5.8 ± 0.5	-2.6 ± 0.4	-6.7 ± 0.2	-2.5 ± 0.3	-5.5 ± 0.1	-4.9 ± 0.3	-4.6 ± 0.3	E Europe M	E Asia F
40	-5.5 ± 0.5	-9.3 ± 0.1	-3.6 ± 0.3	-8.7 ± 0.2	-7.9 ± 0.3	-6.2 ± 0.5	-2.8 ± 0.4	-6.9 ± 0.2	-2.6 ± 0.3	-5.5 ± 0.2	-5.1 ± 0.3	-5.0 ± 0.3	E Europe M	E Asia F
41	-6.2 ± 0.6	-9.5 ± 0.1	-3.8 ± 0.3	-9.0 ± 0.2	-8.1 ± 0.3	-7.1 ± 0.5	-3.0 ± 0.4	-6.9 ± 0.2	-2.5 ± 0.3	-5.6 ± 0.2	-5.2 ± 0.4	-5.1 ± 0.4	E Europe M	E Asia F
42	-5.2 ± 0.6	-9.7 ± 0.2	-3.3 ± 0.4	-8.7 ± 0.2	-7.9 ± 0.3	-6.4 ± 0.5	-3.0 ± 0.5	-6.9 ± 0.2	-2.2 ± 0.3	-6.0 ± 0.2	-4.7 ± 0.4	-5.0 ± 0.4	E Europe M	E Asia F
43	-5.8 ± 0.6	-9.8 ± 0.2	-3.2 ± 0.4	-9.0 ± 0.3	-8.1 ± 0.3	-6.8 ± 0.5	-2.7 ± 0.5	-6.8 ± 0.2	-2.4 ± 0.4	-5.9 ± 0.2	-4.9 ± 0.4	-5.7 ± 0.4	E Europe M	E Asia F
44	-5.7 ± 0.7	-10.2 ± 0.2	-3.6 ± 0.4	-9.0 ± 0.3	-7.5 ± 0.3	-6.5 ± 0.6	-3.2 ± 0.5	-6.7 ± 0.2	-2.2 ± 0.4	-5.7 ± 0.2	-4.5 ± 0.4	-5.3 ± 0.4	E Europe M	E Asia F
45	-6.1 ± 0.7	-10.1 ± 0.2	-3.6 ± 0.4	-8.9 ± 0.3	-8.0 ± 0.3	-6.4 ± 0.6	-3.4 ± 0.5	-6.9 ± 0.2	-2.3 ± 0.3	-5.8 ± 0.2	-4.3 ± 0.4	-5.7 ± 0.4	E Europe M	E Asia F
46	-5.2 ± 0.7	-10.5 ± 0.2	-3.4 ± 0.4	-8.6 ± 0.3	-8.2 ± 0.4	-6.9 ± 0.6	-3.3 ± 0.5	-6.7 ± 0.2	-1.9 ± 0.4	-5.5 ± 0.3	-3.9 ± 0.4	-5.8 ± 0.4	E Europe M	E Asia F
47	-4.5 ± 0.8	-10.1 ± 0.2	-3.1 ± 0.4	-8.8 ± 0.3	-7.7 ± 0.4	-6.6 ± 0.6	-2.8 ± 0.5	-6.3 ± 0.3	-2.3 ± 0.4	-5.2 ± 0.3	-3.8 ± 0.4	-5.2 ± 0.5	E Europe M	E Asia F
48	-5.6 ± 0.8	-10.0 ± 0.2	-3.2 ± 0.4	-8.5 ± 0.3	-7.6 ± 0.4	-6.8 ± 0.6	-3.8 ± 0.6	-6.3 ± 0.3	-2.1 ± 0.4	-5.2 ± 0.3	-3.6 ± 0.5	-6.3 ± 0.5	E Europe M	E Asia F
49	-5.4 ± 0.8	-10.1 ± 0.2	-3.4 ± 0.4	-8.4 ± 0.4	-7.2 ± 0.4	-7.2 ± 0.7	-3.7 ± 0.6	-6.1 ± 0.3	-2.0 ± 0.4	-5.1 ± 0.3	-3.3 ± 0.5	-6.0 ± 0.5	E Europe M	E Asia F
50	-5.7 ± 0.9	-9.8 ± 0.2	-3.0 ± 0.4	-8.4 ± 0.3	-7.5 ± 0.4	-6.7 ± 0.7	-3.8 ± 0.7	-5.9 ± 0.3	-2.2 ± 0.4	-5.2 ± 0.3	-3.1 ± 0.5	-5.8 ± 0.5	E Europe M	E Asia F
51	-5.1 ± 0.8	-9.8 ± 0.3	-3.5 ± 0.4	-8.2 ± 0.3	-7.2 ± 0.4	-6.9 ± 0.7	-4.1 ± 0.7	-5.6 ± 0.3	-1.7 ± 0.4	-5.1 ± 0.3	-2.9 ± 0.5	-6.3 ± 0.6	E Europe M	E Asia F
52	-5.3 ± 0.8	-9.8 ± 0.3	-3.2 ± 0.4	-8.5 ± 0.3	-6.4 ± 0.4	-7.2 ± 0.7	-3.2 ± 0.7	-5.4 ± 0.3	-1.9 ± 0.4	-5.1 ± 0.3	-3.3 ± 0.5	-6.1 ± 0.6	E Europe M	E Asia F

Table 55. *Mean raw error for Application-type images for algorithm nominder-000. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	3.5 ± 0.3	3.5 ± 0.1	2.7 ± 0.2	2.2 ± 0.2	2.8 ± 0.3	4.4 ± 0.5	1.1 ± 0.3	2.2 ± 0.1	1.4 ± 0.2	1.2 ± 0.1	1.4 ± 0.2	2.0 ± 0.4	W Africa F	E Africa M
15	3.5 ± 0.4	3.8 ± 0.2	2.6 ± 0.3	2.5 ± 0.2	3.1 ± 0.4	4.6 ± 0.5	1.3 ± 0.3	2.6 ± 0.2	1.5 ± 0.2	1.6 ± 0.2	2.2 ± 0.3	2.5 ± 0.4	W Africa F	E Africa M
16	3.4 ± 0.4	3.8 ± 0.2	2.5 ± 0.3	2.4 ± 0.2	3.1 ± 0.4	4.9 ± 0.5	1.9 ± 0.3	2.7 ± 0.2	1.6 ± 0.2	2.0 ± 0.2	2.4 ± 0.3	2.7 ± 0.4	W Africa F	E Europe M
17	3.7 ± 0.4	3.6 ± 0.2	2.4 ± 0.3	2.4 ± 0.2	3.0 ± 0.3	4.9 ± 0.5	2.2 ± 0.3	2.9 ± 0.2	1.3 ± 0.2	2.6 ± 0.2	2.3 ± 0.3	3.3 ± 0.4	W Africa F	E Europe M
18	3.1 ± 0.3	2.9 ± 0.1	1.7 ± 0.3	1.7 ± 0.2	2.4 ± 0.2	4.5 ± 0.4	2.2 ± 0.3	2.4 ± 0.1	1.1 ± 0.2	2.5 ± 0.2	2.2 ± 0.3	2.9 ± 0.3	W Africa F	E Europe M
19	3.2 ± 0.3	2.6 ± 0.1	1.6 ± 0.3	1.7 ± 0.2	2.1 ± 0.2	5.0 ± 0.4	2.7 ± 0.3	2.5 ± 0.1	1.2 ± 0.2	2.8 ± 0.2	1.9 ± 0.2	3.3 ± 0.4	W Africa F	E Europe M
20	2.7 ± 0.3	2.4 ± 0.1	1.2 ± 0.2	1.5 ± 0.2	1.9 ± 0.2	4.7 ± 0.4	3.0 ± 0.3	2.3 ± 0.1	1.3 ± 0.2	3.0 ± 0.1	1.9 ± 0.2	3.4 ± 0.3	W Africa F	E Europe F
21	2.6 ± 0.3	2.0 ± 0.1	0.9 ± 0.2	1.0 ± 0.1	1.5 ± 0.2	4.5 ± 0.4	3.0 ± 0.3	2.1 ± 0.1	1.0 ± 0.2	2.9 ± 0.1	1.8 ± 0.2	3.4 ± 0.3	W Africa F	E Europe F
22	2.5 ± 0.3	1.4 ± 0.1	0.6 ± 0.2	0.6 ± 0.1	1.0 ± 0.2	4.0 ± 0.3	3.4 ± 0.3	1.8 ± 0.1	1.3 ± 0.2	2.8 ± 0.2	1.4 ± 0.2	3.1 ± 0.3	W Africa F	S Asia F
23	2.1 ± 0.3	1.1 ± 0.1	0.5 ± 0.2	0.5 ± 0.1	0.8 ± 0.1	4.2 ± 0.3	2.9 ± 0.3	1.5 ± 0.1	1.0 ± 0.2	2.7 ± 0.2	1.2 ± 0.2	3.1 ± 0.3	W Africa F	E Europe F
24	2.1 ± 0.3	0.58 ± 0.10	0.3 ± 0.1	-0.0 ± 0.1	0.4 ± 0.1	3.3 ± 0.3	2.9 ± 0.3	1.2 ± 0.1	1.1 ± 0.2	2.7 ± 0.1	0.9 ± 0.2	2.9 ± 0.3	W Africa F	S Asia F
25	1.5 ± 0.3	0.20 ± 0.09	0.0 ± 0.1	-0.4 ± 0.1	0.0 ± 0.1	3.4 ± 0.3	2.8 ± 0.3	1.1 ± 0.1	1.2 ± 0.2	2.5 ± 0.1	0.8 ± 0.2	2.7 ± 0.3	W Africa F	S Asia F
26	1.2 ± 0.3	-0.27 ± 0.09	-0.0 ± 0.1	-1.04 ± 0.10	-0.2 ± 0.1	3.0 ± 0.3	2.5 ± 0.2	0.8 ± 0.1	1.1 ± 0.2	2.4 ± 0.1	0.8 ± 0.2	2.5 ± 0.2	W Africa F	S Asia F
27	0.9 ± 0.3	-0.61 ± 0.09	-0.1 ± 0.1	-1.44 ± 0.10	-0.6 ± 0.1	2.7 ± 0.2	2.3 ± 0.2	0.7 ± 0.1	1.3 ± 0.2	2.1 ± 0.1	0.7 ± 0.2	2.1 ± 0.2	W Africa F	S Asia F
28	0.5 ± 0.3	-0.98 ± 0.09	-0.2 ± 0.1	-1.75 ± 0.10	-0.9 ± 0.1	2.4 ± 0.2	2.1 ± 0.2	0.4 ± 0.1	1.3 ± 0.2	1.7 ± 0.1	0.3 ± 0.2	1.8 ± 0.2	W Africa F	S Asia F
29	0.5 ± 0.3	-1.33 ± 0.09	-0.2 ± 0.1	-2.0 ± 0.1	-1.2 ± 0.1	2.0 ± 0.2	1.8 ± 0.2	0.2 ± 0.1	1.1 ± 0.2	1.4 ± 0.1	0.0 ± 0.2	1.9 ± 0.2	W Africa F	S Asia F
30	-0.1 ± 0.2	-1.69 ± 0.09	-0.3 ± 0.1	-2.5 ± 0.1	-1.3 ± 0.1	1.4 ± 0.2	1.7 ± 0.2	-0.0 ± 0.1	1.0 ± 0.2	1.01 ± 0.09	-0.1 ± 0.2	1.5 ± 0.2	E Africa M	S Asia F
31	-0.4 ± 0.3	-1.92 ± 0.09	-0.4 ± 0.2	-2.9 ± 0.1	-1.6 ± 0.1	1.2 ± 0.2	1.5 ± 0.2	-0.2 ± 0.1	0.8 ± 0.2	0.73 ± 0.10	-0.3 ± 0.2	1.3 ± 0.2	E Africa M	S Asia F
32	-0.4 ± 0.3	-2.19 ± 0.09	-0.4 ± 0.2	-3.2 ± 0.1	-1.8 ± 0.2	0.8 ± 0.2	1.3 ± 0.2	-0.4 ± 0.1	0.8 ± 0.2	0.53 ± 0.09	-0.3 ± 0.2	0.9 ± 0.2	E Africa M	S Asia F
33	-0.9 ± 0.3	-2.49 ± 0.09	-0.5 ± 0.2	-3.4 ± 0.1	-2.3 ± 0.2	0.4 ± 0.2	1.0 ± 0.2	-0.8 ± 0.1	0.9 ± 0.2	0.28 ± 0.10	-0.5 ± 0.2	0.6 ± 0.2	E Africa M	S Asia F
34	-1.0 ± 0.3	-2.70 ± 0.09	-0.6 ± 0.2	-3.7 ± 0.1	-2.5 ± 0.2	-0.2 ± 0.2	0.5 ± 0.3	-1.0 ± 0.1	0.6 ± 0.2	0.0 ± 0.1	-0.7 ± 0.2	0.4 ± 0.2	E Europe M	S Asia F
35	-1.1 ± 0.3	-3.14 ± 0.09	-0.6 ± 0.2	-4.0 ± 0.1	-2.8 ± 0.2	-0.5 ± 0.3	0.6 ± 0.3	-1.1 ± 0.1	0.5 ± 0.2	-0.2 ± 0.1	-0.9 ± 0.3	0.2 ± 0.2	E Africa M	S Asia F
36	-1.4 ± 0.3	-3.3 ± 0.1	-0.4 ± 0.2	-4.3 ± 0.1	-2.9 ± 0.2	-0.8 ± 0.3	0.3 ± 0.3	-1.3 ± 0.1	0.6 ± 0.2	-0.4 ± 0.1	-0.9 ± 0.3	-0.4 ± 0.2	E Europe M	S Asia F
37	-1.7 ± 0.3	-3.56 ± 0.10	-0.5 ± 0.2	-4.4 ± 0.1	-3.1 ± 0.2	-1.4 ± 0.3	0.3 ± 0.3	-1.5 ± 0.1	0.2 ± 0.2	-0.5 ± 0.1	-1.1 ± 0.3	-0.6 ± 0.2	E Africa M	S Asia F
38	-1.6 ± 0.3	-3.8 ± 0.1	-0.5 ± 0.2	-4.5 ± 0.1	-3.2 ± 0.2	-1.6 ± 0.3	-0.1 ± 0.3	-1.7 ± 0.1	0.1 ± 0.2	-0.7 ± 0.1	-0.9 ± 0.3	-0.8 ± 0.3	E Europe M	S Asia F
39	-1.8 ± 0.3	-4.0 ± 0.1	-0.5 ± 0.2	-4.8 ± 0.2	-3.3 ± 0.2	-1.7 ± 0.3	0.1 ± 0.3	-1.8 ± 0.1	0.0 ± 0.2	-0.8 ± 0.1	-0.8 ± 0.3	-1.2 ± 0.3	E Africa M	S Asia F
40	-2.2 ± 0.4	-4.2 ± 0.1	-0.2 ± 0.2	-4.7 ± 0.2	-3.6 ± 0.2	-2.3 ± 0.3	-0.1 ± 0.3	-1.8 ± 0.1	0.1 ± 0.2	-0.8 ± 0.1	-0.8 ± 0.3	-1.3 ± 0.3	E Europe M	S Asia F
41	-2.5 ± 0.4	-4.3 ± 0.1	-0.5 ± 0.2	-4.8 ± 0.2	-3.7 ± 0.2	-3.1 ± 0.3	-0.1 ± 0.4	-1.9 ± 0.1	-0.0 ± 0.2	-1.0 ± 0.1	-1.0 ± 0.3	-1.5 ± 0.3	E Europe M	S Asia F
42	-2.4 ± 0.4	-4.5 ± 0.1	-0.1 ± 0.3	-4.6 ± 0.2	-3.9 ± 0.2	-2.8 ± 0.3	-0.2 ± 0.4	-2.0 ± 0.1	0.1 ± 0.2	-1.1 ± 0.1	-0.8 ± 0.3	-1.9 ± 0.3	E Europe M	S Asia F
43	-2.2 ± 0.4	-4.7 ± 0.1	-0.4 ± 0.2	-4.8 ± 0.2	-4.0 ± 0.2	-3.4 ± 0.4	0.2 ± 0.4	-2.1 ± 0.1	-0.0 ± 0.3	-1.1 ± 0.2	-0.8 ± 0.3	-2.1 ± 0.3	E Africa M	S Asia F
44	-2.6 ± 0.5	-5.0 ± 0.1	-0.6 ± 0.3	-4.7 ± 0.2	-3.8 ± 0.2	-3.8 ± 0.4	-0.3 ± 0.4	-2.2 ± 0.1	0.2 ± 0.3	-1.1 ± 0.2	-0.7 ± 0.3	-2.2 ± 0.3	E Europe M	E Asia F
45	-2.5 ± 0.5	-5.1 ± 0.1	-0.6 ± 0.3	-4.7 ± 0.2	-4.3 ± 0.2	-3.8 ± 0.4	-0.5 ± 0.4	-2.4 ± 0.1	-0.1 ± 0.3	-1.1 ± 0.2	-0.9 ± 0.3	-2.4 ± 0.3	E Europe M	E Asia F
46	-2.1 ± 0.6	-5.4 ± 0.1	-0.4 ± 0.3	-4.6 ± 0.2	-4.5 ± 0.2	-3.9 ± 0.4	-0.3 ± 0.5	-2.4 ± 0.1	0.5 ± 0.3	-0.8 ± 0.2	-0.8 ± 0.3	-2.8 ± 0.3	E Europe M	E Asia F
47	-2.4 ± 0.6	-5.3 ± 0.1	-0.6 ± 0.3	-4.5 ± 0.2	-4.3 ± 0.2	-4.2 ± 0.4	-0.2 ± 0.4	-2.5 ± 0.1	0.1 ± 0.3	-1.0 ± 0.2	-0.6 ± 0.3	-2.9 ± 0.3	E Europe M	E Asia F
48	-3.1 ± 0.6	-5.4 ± 0.1	-0.5 ± 0.3	-4.3 ± 0.3	-4.4 ± 0.2	-4.3 ± 0.4	-1.2 ± 0.5	-2.5 ± 0.1	0.2 ± 0.3	-0.9 ± 0.2	-0.7 ± 0.3	-3.3 ± 0.4	E Europe M	E Asia F
49	-2.3 ± 0.6	-5.6 ± 0.1	-0.8 ± 0.3	-4.3 ± 0.3	-4.1 ± 0.3	-4.7 ± 0.5	-1.1 ± 0.5	-2.5 ± 0.2	0.0 ± 0.3	-1.0 ± 0.2	-0.6 ± 0.3	-3.4 ± 0.4	E Europe M	E Asia F
50	-3.2 ± 0.7	-5.5 ± 0.1	-0.5 ± 0.3	-4.3 ± 0.2	-4.7 ± 0.3	-5.0 ± 0.5	-1.5 ± 0.5	-2.5 ± 0.2	0.0 ± 0.3	-1.2 ± 0.2	-0.4 ± 0.3	-3.7 ± 0.4	E Europe M	E Asia F
51	-2.3 ± 0.6	-5.5 ± 0.2	-1.0 ± 0.3	-4.2 ± 0.3	-4.7 ± 0.3	-5.1 ± 0.5	-1.8 ± 0.6	-2.5 ± 0.2	0.1 ± 0.3	-1.3 ± 0.2	-0.4 ± 0.3	-4.1 ± 0.4	E Europe M	E Asia F
52	-2.9 ± 0.7	-5.7 ± 0.2	-0.7 ± 0.3	-4.5 ± 0.3	-4.3 ± 0.3	-5.5 ± 0.5	-1.6 ± 0.5	-2.8 ± 0.2	-0.0 ± 0.3	-1.5 ± 0.2	-0.9 ± 0.3	-3.8 ± 0.4	E Europe M	E Asia F

Table 56. *Mean raw error for Application-type images for algorithm nominder-001. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	4.0 ± 0.2	3.9 ± 0.1	3.7 ± 0.2	3.4 ± 0.1	3.5 ± 0.3	5.4 ± 0.3	2.4 ± 0.2	2.8 ± 0.1	2.0 ± 0.2	1.7 ± 0.1	2.1 ± 0.2	2.7 ± 0.3	W Africa F	S Asia M
15	3.9 ± 0.2	4.0 ± 0.1	3.3 ± 0.2	3.6 ± 0.2	3.7 ± 0.3	5.1 ± 0.3	2.2 ± 0.2	3.3 ± 0.1	2.1 ± 0.2	2.0 ± 0.1	2.9 ± 0.2	2.9 ± 0.3	W Africa F	S Asia M
16	3.7 ± 0.3	3.8 ± 0.1	3.3 ± 0.2	3.3 ± 0.2	3.6 ± 0.3	5.3 ± 0.4	2.6 ± 0.2	3.2 ± 0.1	1.9 ± 0.2	2.2 ± 0.1	2.7 ± 0.2	2.5 ± 0.2	W Africa F	E Europe M
17	3.8 ± 0.3	3.4 ± 0.1	2.7 ± 0.2	3.2 ± 0.2	3.1 ± 0.3	4.9 ± 0.3	2.0 ± 0.2	3.0 ± 0.1	1.5 ± 0.2	2.2 ± 0.1	2.6 ± 0.2	2.8 ± 0.3	W Africa F	E Europe M
18	3.0 ± 0.2	2.7 ± 0.1	1.9 ± 0.3	2.4 ± 0.1	2.7 ± 0.2	4.4 ± 0.3	1.8 ± 0.2	2.4 ± 0.1	0.9 ± 0.2	1.7 ± 0.1	2.2 ± 0.2	2.1 ± 0.3	W Africa F	E Europe M
19	3.0 ± 0.3	2.26 ± 0.10	1.6 ± 0.2	2.2 ± 0.1	2.2 ± 0.2	4.5 ± 0.3	2.0 ± 0.2	2.2 ± 0.1	0.8 ± 0.2	1.7 ± 0.1	1.7 ± 0.2	2.2 ± 0.3	W Africa F	E Europe M
20	2.7 ± 0.2	2.0 ± 0.1	1.2 ± 0.2	1.8 ± 0.1	1.9 ± 0.1	4.2 ± 0.3	2.1 ± 0.3	1.8 ± 0.1	0.7 ± 0.2	1.7 ± 0.1	1.5 ± 0.2	2.2 ± 0.3	W Africa F	E Europe M
21	2.5 ± 0.2	1.52 ± 0.09	0.8 ± 0.2	1.3 ± 0.1	1.4 ± 0.1	3.7 ± 0.3	2.0 ± 0.2	1.58 ± 0.09	0.4 ± 0.2	1.5 ± 0.1	1.3 ± 0.2	2.1 ± 0.3	W Africa F	E Europe M
22	2.4 ± 0.2	0.83 ± 0.09	0.4 ± 0.2	0.9 ± 0.1	0.9 ± 0.1	3.3 ± 0.3	2.4 ± 0.3	1.3 ± 0.1	0.5 ± 0.2	1.4 ± 0.1	0.9 ± 0.1	1.8 ± 0.3	W Africa F	E Europe F
23	1.9 ± 0.2	0.44 ± 0.08	0.2 ± 0.1	0.51 ± 0.10	0.5 ± 0.1	3.4 ± 0.3	2.2 ± 0.3	0.9 ± 0.1	0.2 ± 0.2	1.4 ± 0.1	0.7 ± 0.2	2.0 ± 0.3	W Africa F	E Europe F
24	1.7 ± 0.2	-0.15 ± 0.08	-0.2 ± 0.1	0.04 ± 0.09	0.1 ± 0.1	2.8 ± 0.3	2.2 ± 0.3	0.6 ± 0.1	0.3 ± 0.2	1.4 ± 0.1	0.2 ± 0.1	1.9 ± 0.3	W Africa F	E Europe F
25	1.3 ± 0.2	-0.49 ± 0.08	-0.6 ± 0.1	-0.38 ± 0.09	-0.3 ± 0.1	2.5 ± 0.2	2.1 ± 0.3	0.3 ± 0.1	0.3 ± 0.2	1.3 ± 0.1	0.1 ± 0.1	1.9 ± 0.2	W Africa F	E Europe F
26	0.9 ± 0.2	-1.03 ± 0.07	-0.7 ± 0.1	-0.90 ± 0.08	-0.5 ± 0.1	2.4 ± 0.2	1.9 ± 0.2	-0.0 ± 0.1	0.0 ± 0.2	1.2 ± 0.1	-0.0 ± 0.2	1.7 ± 0.2	W Africa F	E Asia F
27	0.7 ± 0.2	-1.44 ± 0.07	-0.9 ± 0.1	-1.30 ± 0.08	-0.9 ± 0.1	2.2 ± 0.2	1.8 ± 0.2	-0.2 ± 0.1	0.1 ± 0.2	0.9 ± 0.1	-0.2 ± 0.2	1.5 ± 0.2	W Africa F	E Asia F
28	0.5 ± 0.2	-1.81 ± 0.07	-1.1 ± 0.1	-1.60 ± 0.09	-1.3 ± 0.1	1.8 ± 0.2	1.6 ± 0.2	-0.5 ± 0.1	0.1 ± 0.2	0.59 ± 0.10	-0.4 ± 0.2	1.2 ± 0.2	W Africa F	E Asia F
29	0.5 ± 0.2	-2.25 ± 0.07	-1.2 ± 0.1	-1.95 ± 0.09	-1.4 ± 0.1	1.5 ± 0.2	1.6 ± 0.2	-0.7 ± 0.1	-0.2 ± 0.2	0.35 ± 0.09	-0.9 ± 0.2	1.5 ± 0.2	E Africa M	E Asia F
30	0.1 ± 0.2	-2.55 ± 0.08	-1.4 ± 0.1	-2.33 ± 0.09	-1.7 ± 0.1	1.1 ± 0.2	1.5 ± 0.2	-1.0 ± 0.1	-0.3 ± 0.2	0.07 ± 0.09	-0.9 ± 0.2	1.2 ± 0.2	E Africa M	E Asia F
31	-0.2 ± 0.2	-2.87 ± 0.08	-1.5 ± 0.1	-2.64 ± 0.10	-1.9 ± 0.1	0.9 ± 0.2	1.5 ± 0.2	-1.3 ± 0.1	-0.4 ± 0.2	-0.12 ± 0.09	-1.2 ± 0.2	1.1 ± 0.2	E Africa M	E Asia F
32	-0.1 ± 0.2	-3.11 ± 0.08	-1.6 ± 0.1	-2.9 ± 0.1	-2.0 ± 0.1	0.6 ± 0.2	1.2 ± 0.2	-1.5 ± 0.1	-0.4 ± 0.2	-0.29 ± 0.09	-1.3 ± 0.2	0.9 ± 0.2	E Africa M	E Asia F
33	-0.4 ± 0.3	-3.49 ± 0.09	-1.8 ± 0.2	-3.0 ± 0.1	-2.3 ± 0.2	0.2 ± 0.2	1.2 ± 0.2	-1.8 ± 0.1	-0.4 ± 0.2	-0.47 ± 0.09	-1.5 ± 0.2	0.8 ± 0.2	E Africa M	E Asia F
34	-0.6 ± 0.3	-3.64 ± 0.09	-2.0 ± 0.2	-3.2 ± 0.1	-2.5 ± 0.2	-0.1 ± 0.2	0.8 ± 0.2	-2.1 ± 0.1	-0.6 ± 0.2	-0.71 ± 0.09	-1.6 ± 0.2	0.8 ± 0.2	E Africa M	E Asia F
35	-0.5 ± 0.3	-4.00 ± 0.09	-1.9 ± 0.2	-3.4 ± 0.1	-2.8 ± 0.2	-0.3 ± 0.3	1.0 ± 0.2	-2.1 ± 0.1	-0.8 ± 0.2	-0.83 ± 0.09	-2.0 ± 0.2	0.6 ± 0.2	E Africa M	E Asia F
36	-0.7 ± 0.3	-4.06 ± 0.10	-2.0 ± 0.2	-3.5 ± 0.1	-2.7 ± 0.2	-0.4 ± 0.3	0.9 ± 0.3	-2.4 ± 0.1	-0.7 ± 0.2	-1.00 ± 0.10	-1.9 ± 0.2	0.5 ± 0.2	E Africa M	E Asia F
37	-1.1 ± 0.3	-4.27 ± 0.10	-2.1 ± 0.2	-3.6 ± 0.1	-2.9 ± 0.2	-0.6 ± 0.3	1.0 ± 0.3	-2.7 ± 0.1	-0.9 ± 0.2	-1.1 ± 0.1	-2.2 ± 0.2	0.2 ± 0.2	E Africa M	E Asia F
38	-0.7 ± 0.3	-4.5 ± 0.1	-2.0 ± 0.2	-3.7 ± 0.1	-2.9 ± 0.2	-0.9 ± 0.3	0.5 ± 0.3	-2.7 ± 0.1	-1.0 ± 0.2	-1.4 ± 0.1	-1.9 ± 0.2	0.2 ± 0.2	E Africa M	E Asia F
39	-1.0 ± 0.3	-4.6 ± 0.1	-2.2 ± 0.2	-3.9 ± 0.1	-3.0 ± 0.2	-1.0 ± 0.3	0.9 ± 0.3	-3.0 ± 0.1	-1.0 ± 0.2	-1.4 ± 0.1	-1.9 ± 0.2	0.1 ± 0.2	E Africa M	E Asia F
40	-1.2 ± 0.4	-4.7 ± 0.1	-1.8 ± 0.2	-3.7 ± 0.1	-3.0 ± 0.2	-1.3 ± 0.3	0.8 ± 0.3	-3.0 ± 0.1	-1.1 ± 0.2	-1.5 ± 0.1	-2.1 ± 0.2	0.1 ± 0.3	E Africa M	E Asia F
41	-1.6 ± 0.4	-4.7 ± 0.1	-2.0 ± 0.2	-3.9 ± 0.2	-3.1 ± 0.2	-1.9 ± 0.3	0.8 ± 0.3	-3.1 ± 0.1	-1.2 ± 0.2	-1.7 ± 0.1	-2.2 ± 0.2	-0.0 ± 0.3	E Africa M	E Asia F
42	-1.3 ± 0.4	-4.7 ± 0.1	-1.8 ± 0.2	-3.6 ± 0.2	-3.1 ± 0.2	-1.5 ± 0.3	0.9 ± 0.3	-3.1 ± 0.1	-1.0 ± 0.2	-1.7 ± 0.1	-2.1 ± 0.2	-0.2 ± 0.3	E Africa M	E Asia F
43	-1.3 ± 0.4	-4.9 ± 0.1	-1.9 ± 0.2	-3.9 ± 0.2	-3.2 ± 0.2	-1.9 ± 0.3	1.2 ± 0.3	-3.3 ± 0.1	-1.3 ± 0.2	-1.7 ± 0.1	-2.2 ± 0.2	-0.4 ± 0.3	E Africa M	E Asia F
44	-1.5 ± 0.4	-5.0 ± 0.1	-2.0 ± 0.2	-3.8 ± 0.2	-3.1 ± 0.2	-2.2 ± 0.4	0.7 ± 0.4	-3.3 ± 0.1	-1.0 ± 0.2	-1.9 ± 0.1	-2.0 ± 0.3	-0.3 ± 0.3	E Africa M	E Asia F
45	-1.6 ± 0.4	-5.0 ± 0.1	-2.0 ± 0.2	-3.8 ± 0.2	-3.2 ± 0.2	-2.1 ± 0.4	0.6 ± 0.4	-3.5 ± 0.1	-1.2 ± 0.2	-1.7 ± 0.2	-2.1 ± 0.3	-0.6 ± 0.3	E Africa M	E Asia F
46	-1.0 ± 0.5	-5.2 ± 0.1	-1.6 ± 0.3	-3.6 ± 0.2	-3.5 ± 0.2	-2.1 ± 0.4	0.6 ± 0.4	-3.5 ± 0.1	-0.8 ± 0.2	-1.6 ± 0.2	-2.0 ± 0.3	-0.7 ± 0.3	E Africa M	E Asia F
47	-1.3 ± 0.5	-5.0 ± 0.1	-1.8 ± 0.3	-3.6 ± 0.2	-3.2 ± 0.2	-2.1 ± 0.4	1.2 ± 0.4	-3.6 ± 0.1	-1.1 ± 0.2	-1.7 ± 0.2	-1.9 ± 0.3	-0.5 ± 0.3	E Africa M	E Asia F
48	-1.6 ± 0.6	-5.0 ± 0.1	-1.7 ± 0.3	-3.4 ± 0.2	-3.2 ± 0.2	-2.2 ± 0.4	0.6 ± 0.5	-3.6 ± 0.1	-1.1 ± 0.3	-1.6 ± 0.2	-1.9 ± 0.3	-0.9 ± 0.4	E Africa M	E Asia F
49	-1.1 ± 0.6	-5.1 ± 0.1	-1.8 ± 0.3	-3.4 ± 0.2	-2.9 ± 0.3	-2.4 ± 0.5	0.2 ± 0.4	-3.6 ± 0.1	-1.2 ± 0.3	-1.7 ± 0.2	-1.9 ± 0.3	-0.7 ± 0.3	E Africa M	E Asia F
50	-1.6 ± 0.6	-4.9 ± 0.1	-1.6 ± 0.3	-3.4 ± 0.2	-3.1 ± 0.3	-2.2 ± 0.5	0.1 ± 0.4	-3.6 ± 0.1	-1.2 ± 0.3	-1.6 ± 0.2	-1.5 ± 0.3	-1.0 ± 0.3	E Africa M	E Asia F
51	-1.3 ± 0.5	-4.8 ± 0.1	-2.0 ± 0.3	-3.2 ± 0.2	-3.1 ± 0.3	-2.3 ± 0.5	-0.4 ± 0.5	-3.7 ± 0.1	-1.2 ± 0.2	-1.7 ± 0.2	-1.6 ± 0.3	-1.2 ± 0.4	E Africa M	E Asia F
52	-1.5 ± 0.6	-4.8 ± 0.2	-1.5 ± 0.3	-3.5 ± 0.2	-2.6 ± 0.3	-2.5 ± 0.5	-0.2 ± 0.5	-3.7 ± 0.1	-1.4 ± 0.3	-1.9 ± 0.2	-2.0 ± 0.3	-1.2 ± 0.4	E Africa M	E Asia F

Table 57. *Mean raw error for Application-type images for algorithm ondato-000. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	5.4 ± 0.3	4.9 ± 0.1	3.3 ± 0.3	4.4 ± 0.2	4.7 ± 0.3	5.8 ± 0.4	4.0 ± 0.3	3.2 ± 0.1	1.5 ± 0.2	2.5 ± 0.1	2.7 ± 0.2	4.0 ± 0.3	W Africa F	E Europe M
15	5.3 ± 0.4	4.9 ± 0.1	3.1 ± 0.3	4.3 ± 0.2	4.6 ± 0.3	5.9 ± 0.5	3.3 ± 0.3	3.0 ± 0.1	1.4 ± 0.2	2.3 ± 0.1	2.8 ± 0.2	3.5 ± 0.4	W Africa F	E Europe M
16	4.8 ± 0.3	4.6 ± 0.1	3.4 ± 0.3	4.0 ± 0.2	4.6 ± 0.3	6.0 ± 0.5	3.0 ± 0.3	2.8 ± 0.1	1.4 ± 0.2	2.3 ± 0.1	2.7 ± 0.2	3.3 ± 0.4	W Africa F	E Europe M
17	5.0 ± 0.4	4.2 ± 0.1	2.9 ± 0.3	3.8 ± 0.2	4.0 ± 0.3	5.7 ± 0.4	2.9 ± 0.3	2.8 ± 0.1	1.2 ± 0.2	2.6 ± 0.2	2.7 ± 0.3	3.5 ± 0.4	W Africa F	E Europe M
18	4.3 ± 0.3	3.6 ± 0.1	2.3 ± 0.3	3.2 ± 0.1	3.6 ± 0.2	5.4 ± 0.4	2.8 ± 0.3	2.4 ± 0.1	1.1 ± 0.2	2.3 ± 0.1	2.6 ± 0.2	3.2 ± 0.3	W Africa F	E Europe M
19	4.3 ± 0.3	3.2 ± 0.1	2.2 ± 0.3	2.9 ± 0.1	3.0 ± 0.2	5.3 ± 0.4	3.3 ± 0.3	2.3 ± 0.1	1.0 ± 0.2	2.5 ± 0.1	2.4 ± 0.2	3.4 ± 0.4	W Africa F	E Europe M
20	4.0 ± 0.3	2.8 ± 0.1	2.0 ± 0.2	2.5 ± 0.2	2.8 ± 0.2	5.1 ± 0.4	3.4 ± 0.3	2.1 ± 0.1	1.3 ± 0.2	2.6 ± 0.1	2.4 ± 0.2	3.8 ± 0.4	W Africa F	E Europe M
21	3.7 ± 0.3	2.5 ± 0.1	1.5 ± 0.2	2.1 ± 0.1	2.5 ± 0.1	4.9 ± 0.4	3.7 ± 0.3	2.0 ± 0.1	0.8 ± 0.2	2.5 ± 0.1	2.3 ± 0.2	3.8 ± 0.4	W Africa F	E Europe M
22	3.7 ± 0.3	2.0 ± 0.1	1.4 ± 0.2	1.7 ± 0.1	2.1 ± 0.1	4.5 ± 0.4	4.2 ± 0.3	1.7 ± 0.1	1.0 ± 0.2	2.4 ± 0.1	2.0 ± 0.2	3.6 ± 0.3	W Africa F	E Europe M
23	3.6 ± 0.3	1.62 ± 0.09	1.1 ± 0.2	1.4 ± 0.1	1.6 ± 0.1	4.6 ± 0.4	3.9 ± 0.3	1.5 ± 0.1	0.7 ± 0.2	2.4 ± 0.1	1.8 ± 0.2	3.8 ± 0.3	W Africa F	E Europe M
24	3.3 ± 0.3	1.04 ± 0.09	0.9 ± 0.1	0.9 ± 0.1	1.3 ± 0.1	4.0 ± 0.3	3.8 ± 0.3	1.2 ± 0.1	0.7 ± 0.2	2.3 ± 0.1	1.6 ± 0.2	3.7 ± 0.3	W Africa F	E Europe M
25	3.0 ± 0.3	0.75 ± 0.08	0.6 ± 0.1	0.6 ± 0.1	0.9 ± 0.1	3.9 ± 0.3	4.0 ± 0.3	1.1 ± 0.1	0.7 ± 0.2	2.2 ± 0.1	1.3 ± 0.2	3.7 ± 0.3	E Africa M	E Europe F
26	2.9 ± 0.3	0.25 ± 0.08	0.4 ± 0.1	0.11 ± 0.10	0.7 ± 0.1	3.6 ± 0.3	3.7 ± 0.3	0.8 ± 0.1	0.3 ± 0.2	2.0 ± 0.1	1.1 ± 0.2	3.5 ± 0.3	E Africa M	S Asia F
27	2.9 ± 0.3	-0.21 ± 0.08	0.2 ± 0.1	-0.30 ± 0.09	0.2 ± 0.1	3.5 ± 0.3	3.5 ± 0.3	0.6 ± 0.1	0.5 ± 0.2	1.7 ± 0.1	1.2 ± 0.2	3.2 ± 0.3	W Africa F	S Asia F
28	2.3 ± 0.3	-0.63 ± 0.08	-0.0 ± 0.1	-0.59 ± 0.10	-0.1 ± 0.1	3.1 ± 0.3	3.4 ± 0.2	0.5 ± 0.1	0.4 ± 0.2	1.5 ± 0.1	1.0 ± 0.2	2.9 ± 0.2	E Africa M	E Asia F
29	2.4 ± 0.3	-0.99 ± 0.08	-0.2 ± 0.1	-0.9 ± 0.1	-0.3 ± 0.1	2.8 ± 0.3	3.2 ± 0.3	0.2 ± 0.1	0.2 ± 0.2	1.27 ± 0.10	0.8 ± 0.2	3.4 ± 0.2	W Africa M	E Asia F
30	2.3 ± 0.3	-1.29 ± 0.08	-0.4 ± 0.1	-1.3 ± 0.1	-0.6 ± 0.1	2.5 ± 0.3	3.1 ± 0.3	0.0 ± 0.1	0.1 ± 0.2	1.07 ± 0.10	0.7 ± 0.2	2.9 ± 0.2	E Africa M	E Asia F
31	1.8 ± 0.3	-1.59 ± 0.08	-0.4 ± 0.1	-1.6 ± 0.1	-0.8 ± 0.1	2.2 ± 0.3	3.1 ± 0.3	-0.1 ± 0.1	-0.1 ± 0.2	0.9 ± 0.1	0.6 ± 0.2	2.8 ± 0.2	E Africa M	S Asia F
32	2.1 ± 0.3	-1.91 ± 0.09	-0.7 ± 0.2	-1.7 ± 0.1	-1.0 ± 0.2	2.2 ± 0.3	2.6 ± 0.3	-0.2 ± 0.1	-0.1 ± 0.2	0.77 ± 0.10	0.5 ± 0.2	2.7 ± 0.2	W Africa M	E Asia F
33	1.9 ± 0.3	-2.19 ± 0.09	-0.8 ± 0.2	-2.0 ± 0.1	-1.2 ± 0.2	2.0 ± 0.3	2.8 ± 0.3	-0.4 ± 0.1	0.3 ± 0.2	0.5 ± 0.1	0.3 ± 0.2	2.5 ± 0.3	E Africa M	E Asia F
34	1.7 ± 0.3	-2.37 ± 0.10	-0.9 ± 0.2	-2.2 ± 0.1	-1.3 ± 0.2	1.8 ± 0.3	2.5 ± 0.3	-0.5 ± 0.1	-0.1 ± 0.2	0.5 ± 0.1	0.2 ± 0.2	2.7 ± 0.3	W Africa M	E Asia F
35	1.9 ± 0.4	-2.7 ± 0.1	-0.8 ± 0.2	-2.4 ± 0.1	-1.6 ± 0.2	1.6 ± 0.3	2.6 ± 0.3	-0.5 ± 0.1	-0.0 ± 0.2	0.4 ± 0.1	0.2 ± 0.3	2.2 ± 0.3	E Africa M	E Asia F
36	1.8 ± 0.4	-2.8 ± 0.1	-0.8 ± 0.2	-2.5 ± 0.1	-1.4 ± 0.2	1.9 ± 0.3	2.5 ± 0.3	-0.5 ± 0.1	0.1 ± 0.2	0.2 ± 0.1	0.4 ± 0.3	2.2 ± 0.3	E Africa M	E Asia F
37	1.6 ± 0.4	-2.8 ± 0.1	-0.8 ± 0.2	-2.3 ± 0.1	-1.5 ± 0.2	1.5 ± 0.4	2.4 ± 0.3	-0.6 ± 0.1	-0.1 ± 0.2	0.2 ± 0.1	0.1 ± 0.3	2.0 ± 0.3	E Africa M	E Asia F
38	2.0 ± 0.4	-3.0 ± 0.1	-0.8 ± 0.2	-2.4 ± 0.2	-1.5 ± 0.2	1.4 ± 0.4	2.2 ± 0.3	-0.5 ± 0.1	-0.1 ± 0.2	0.1 ± 0.1	0.4 ± 0.3	2.1 ± 0.3	E Africa M	E Asia F
39	1.8 ± 0.4	-3.0 ± 0.1	-0.8 ± 0.2	-2.4 ± 0.2	-1.5 ± 0.2	1.2 ± 0.4	2.5 ± 0.3	-0.6 ± 0.1	0.1 ± 0.2	0.1 ± 0.1	0.5 ± 0.3	1.8 ± 0.3	E Africa M	E Asia F
40	1.6 ± 0.4	-3.1 ± 0.1	-0.4 ± 0.2	-2.2 ± 0.2	-1.6 ± 0.2	1.1 ± 0.4	2.3 ± 0.3	-0.6 ± 0.1	0.1 ± 0.2	0.2 ± 0.1	0.5 ± 0.2	1.9 ± 0.3	E Africa M	E Asia F
41	1.1 ± 0.4	-3.0 ± 0.1	-0.5 ± 0.2	-2.2 ± 0.2	-1.8 ± 0.2	0.4 ± 0.4	2.6 ± 0.4	-0.5 ± 0.1	0.1 ± 0.2	0.1 ± 0.1	0.3 ± 0.3	1.8 ± 0.3	E Africa M	E Asia F
42	1.4 ± 0.5	-2.8 ± 0.1	-0.2 ± 0.3	-1.7 ± 0.2	-1.5 ± 0.2	0.9 ± 0.4	2.5 ± 0.4	-0.3 ± 0.1	0.4 ± 0.2	0.0 ± 0.1	0.7 ± 0.3	1.6 ± 0.3	E Africa M	E Asia F
43	1.7 ± 0.5	-3.0 ± 0.1	-0.3 ± 0.3	-1.9 ± 0.2	-1.6 ± 0.2	0.6 ± 0.4	2.6 ± 0.4	-0.3 ± 0.1	0.1 ± 0.2	0.1 ± 0.2	0.7 ± 0.3	1.3 ± 0.3	E Africa M	E Asia F
44	1.4 ± 0.5	-3.0 ± 0.1	-0.4 ± 0.3	-1.7 ± 0.2	-1.4 ± 0.2	0.2 ± 0.4	2.0 ± 0.4	-0.2 ± 0.2	0.7 ± 0.3	0.1 ± 0.2	0.9 ± 0.3	1.4 ± 0.3	E Africa M	E Asia F
45	1.3 ± 0.5	-2.8 ± 0.1	-0.4 ± 0.3	-1.6 ± 0.2	-1.4 ± 0.2	0.2 ± 0.4	1.9 ± 0.4	-0.3 ± 0.2	0.3 ± 0.3	0.3 ± 0.2	0.8 ± 0.3	0.9 ± 0.3	E Africa M	E Asia F
46	1.7 ± 0.5	-2.9 ± 0.1	-0.3 ± 0.3	-1.4 ± 0.2	-1.7 ± 0.2	0.4 ± 0.4	2.1 ± 0.4	-0.2 ± 0.2	0.5 ± 0.3	0.4 ± 0.2	0.8 ± 0.3	0.8 ± 0.3	E Africa M	E Asia F
47	1.5 ± 0.5	-2.5 ± 0.1	-0.2 ± 0.3	-1.4 ± 0.2	-1.5 ± 0.3	0.1 ± 0.4	2.2 ± 0.4	-0.1 ± 0.2	0.6 ± 0.3	0.5 ± 0.2	0.9 ± 0.3	0.9 ± 0.4	E Africa M	E Asia F
48	0.9 ± 0.6	-2.5 ± 0.1	-0.1 ± 0.3	-1.1 ± 0.2	-1.4 ± 0.2	0.3 ± 0.4	1.6 ± 0.5	-0.2 ± 0.1	0.6 ± 0.3	0.5 ± 0.2	0.8 ± 0.3	0.6 ± 0.4	E Africa M	E Asia F
49	1.6 ± 0.5	-2.6 ± 0.1	-0.3 ± 0.3	-1.2 ± 0.2	-1.2 ± 0.3	-0.3 ± 0.4	1.5 ± 0.5	-0.1 ± 0.2	0.5 ± 0.3	0.2 ± 0.2	0.9 ± 0.3	0.5 ± 0.4	E Africa F	E Asia F
50	1.1 ± 0.6	-2.4 ± 0.2	-0.1 ± 0.3	-1.2 ± 0.2	-1.4 ± 0.2	-0.1 ± 0.4	1.1 ± 0.5	-0.2 ± 0.1	0.4 ± 0.3	0.3 ± 0.2	1.0 ± 0.3	0.4 ± 0.3	E Africa F	E Asia F
51	1.0 ± 0.5	-2.4 ± 0.1	-0.5 ± 0.3	-1.2 ± 0.2	-1.4 ± 0.2	-0.4 ± 0.5	0.9 ± 0.6	-0.3 ± 0.1	0.7 ± 0.3	0.3 ± 0.2	1.1 ± 0.3	-0.0 ± 0.4	S E Asia M	E Asia F
52	0.8 ± 0.6	-2.4 ± 0.1	-0.3 ± 0.3	-1.5 ± 0.2	-1.2 ± 0.2	-0.7 ± 0.4	1.2 ± 0.5	-0.4 ± 0.2	0.3 ± 0.3	0.1 ± 0.2	0.6 ± 0.3	0.0 ± 0.4	E Africa M	E Asia F

Table 58. *Mean raw error for Application-type images for algorithm ondato-001. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	4.8 ± 0.3	4.9 ± 0.1	3.5 ± 0.2	4.1 ± 0.2	4.5 ± 0.3	5.6 ± 0.4	3.7 ± 0.3	3.4 ± 0.1	1.5 ± 0.2	2.2 ± 0.1	2.7 ± 0.2	3.7 ± 0.3	W Africa F	E Europe M
15	4.9 ± 0.4	4.9 ± 0.1	3.5 ± 0.2	4.3 ± 0.2	4.6 ± 0.3	5.3 ± 0.4	3.1 ± 0.3	3.34 ± 0.10	1.7 ± 0.2	2.3 ± 0.1	3.0 ± 0.2	3.5 ± 0.3	W Africa F	E Europe M
16	4.6 ± 0.3	4.5 ± 0.1	3.4 ± 0.2	4.0 ± 0.2	4.5 ± 0.3	5.4 ± 0.4	3.2 ± 0.3	3.08 ± 0.09	1.8 ± 0.2	2.4 ± 0.1	2.9 ± 0.2	3.2 ± 0.3	W Africa F	E Europe M
17	4.5 ± 0.3	4.2 ± 0.1	3.1 ± 0.2	3.9 ± 0.2	4.2 ± 0.3	5.1 ± 0.3	3.1 ± 0.3	2.86 ± 0.10	1.5 ± 0.2	2.6 ± 0.1	2.8 ± 0.2	3.3 ± 0.4	W Africa F	E Europe M
18	4.0 ± 0.3	3.6 ± 0.1	2.5 ± 0.3	3.4 ± 0.1	3.8 ± 0.2	4.6 ± 0.3	2.7 ± 0.2	2.32 ± 0.09	1.3 ± 0.2	2.3 ± 0.1	2.4 ± 0.2	2.8 ± 0.3	W Africa F	E Europe M
19	4.0 ± 0.3	3.2 ± 0.1	2.4 ± 0.2	3.2 ± 0.1	3.4 ± 0.2	4.7 ± 0.3	3.0 ± 0.3	2.11 ± 0.10	1.1 ± 0.2	2.3 ± 0.1	2.2 ± 0.2	3.1 ± 0.4	W Africa F	E Europe M
20	3.7 ± 0.3	3.0 ± 0.1	2.2 ± 0.2	2.9 ± 0.2	3.2 ± 0.2	4.3 ± 0.3	3.1 ± 0.3	1.89 ± 0.10	1.2 ± 0.2	2.4 ± 0.1	2.1 ± 0.2	3.2 ± 0.3	W Africa F	E Europe M
21	3.3 ± 0.3	2.8 ± 0.1	1.7 ± 0.2	2.4 ± 0.1	3.0 ± 0.1	4.1 ± 0.3	3.2 ± 0.3	1.69 ± 0.09	0.9 ± 0.2	2.3 ± 0.1	2.0 ± 0.2	2.9 ± 0.3	W Africa F	E Europe M
22	3.3 ± 0.3	2.3 ± 0.1	1.5 ± 0.2	1.9 ± 0.1	2.5 ± 0.1	3.4 ± 0.3	3.6 ± 0.3	1.4 ± 0.1	0.9 ± 0.2	2.1 ± 0.1	1.6 ± 0.1	2.8 ± 0.3	E Africa M	E Europe M
23	3.1 ± 0.2	2.00 ± 0.09	1.3 ± 0.1	1.7 ± 0.1	2.1 ± 0.1	3.5 ± 0.3	3.1 ± 0.3	1.2 ± 0.1	0.7 ± 0.2	2.0 ± 0.1	1.5 ± 0.2	2.8 ± 0.3	W Africa F	E Europe M
24	2.8 ± 0.3	1.49 ± 0.09	1.1 ± 0.1	1.17 ± 0.10	1.8 ± 0.1	2.8 ± 0.3	2.9 ± 0.2	0.9 ± 0.1	0.7 ± 0.2	1.9 ± 0.1	1.3 ± 0.2	2.8 ± 0.2	E Africa M	E Europe M
25	2.4 ± 0.2	1.23 ± 0.08	0.9 ± 0.1	0.76 ± 0.09	1.5 ± 0.1	2.7 ± 0.3	3.0 ± 0.2	0.8 ± 0.1	0.7 ± 0.1	1.7 ± 0.1	1.1 ± 0.1	2.4 ± 0.2	E Africa M	E Europe M
26	2.3 ± 0.2	0.82 ± 0.08	0.7 ± 0.1	0.29 ± 0.09	1.3 ± 0.1	2.3 ± 0.2	2.6 ± 0.2	0.5 ± 0.1	0.4 ± 0.1	1.4 ± 0.1	1.0 ± 0.2	2.1 ± 0.2	E Africa M	S Asia F
27	2.1 ± 0.3	0.38 ± 0.08	0.5 ± 0.1	-0.08 ± 0.09	0.8 ± 0.1	2.1 ± 0.2	2.4 ± 0.2	0.3 ± 0.1	0.5 ± 0.1	1.14 ± 0.10	0.9 ± 0.2	1.8 ± 0.2	E Africa M	S Asia F
28	1.7 ± 0.2	0.01 ± 0.08	0.4 ± 0.1	-0.44 ± 0.09	0.5 ± 0.1	1.8 ± 0.2	2.0 ± 0.2	0.2 ± 0.1	0.3 ± 0.1	0.93 ± 0.09	0.7 ± 0.2	1.4 ± 0.2	E Africa M	S Asia F
29	1.7 ± 0.3	-0.31 ± 0.08	0.1 ± 0.1	-0.79 ± 0.09	0.3 ± 0.1	1.4 ± 0.2	2.0 ± 0.2	-0.0 ± 0.1	0.2 ± 0.1	0.62 ± 0.09	0.3 ± 0.2	1.6 ± 0.2	E Africa M	S Asia F
30	1.5 ± 0.3	-0.59 ± 0.08	-0.0 ± 0.1	-1.18 ± 0.09	0.1 ± 0.1	1.0 ± 0.2	1.7 ± 0.2	-0.2 ± 0.1	0.1 ± 0.2	0.38 ± 0.09	0.4 ± 0.2	1.2 ± 0.2	E Africa M	S Asia F
31	0.9 ± 0.3	-0.90 ± 0.08	-0.0 ± 0.1	-1.51 ± 0.10	-0.2 ± 0.1	0.6 ± 0.2	1.5 ± 0.2	-0.4 ± 0.1	-0.1 ± 0.2	0.11 ± 0.09	0.2 ± 0.2	1.0 ± 0.2	E Africa M	S Asia F
32	1.1 ± 0.3	-1.15 ± 0.09	-0.3 ± 0.1	-1.7 ± 0.1	-0.4 ± 0.1	0.6 ± 0.3	1.0 ± 0.2	-0.6 ± 0.1	-0.1 ± 0.2	-0.04 ± 0.09	0.1 ± 0.2	0.7 ± 0.2	E Africa F	S Asia F
33	0.9 ± 0.3	-1.41 ± 0.09	-0.5 ± 0.1	-2.0 ± 0.1	-0.6 ± 0.2	0.3 ± 0.3	1.2 ± 0.2	-0.8 ± 0.1	0.1 ± 0.2	-0.36 ± 0.09	-0.1 ± 0.2	0.5 ± 0.2	E Africa M	S Asia F
34	0.7 ± 0.3	-1.69 ± 0.09	-0.7 ± 0.2	-2.2 ± 0.1	-0.9 ± 0.1	0.0 ± 0.3	0.8 ± 0.3	-1.0 ± 0.1	-0.2 ± 0.2	-0.47 ± 0.10	-0.3 ± 0.2	0.7 ± 0.2	E Africa M	S Asia F
35	0.8 ± 0.3	-1.98 ± 0.10	-0.6 ± 0.2	-2.4 ± 0.1	-1.1 ± 0.2	-0.3 ± 0.3	0.7 ± 0.3	-1.0 ± 0.1	-0.3 ± 0.2	-0.7 ± 0.1	-0.4 ± 0.2	0.1 ± 0.2	E Africa F	S Asia F
36	0.5 ± 0.3	-2.11 ± 0.10	-0.6 ± 0.2	-2.7 ± 0.1	-1.1 ± 0.2	-0.2 ± 0.3	0.7 ± 0.3	-1.2 ± 0.1	-0.2 ± 0.2	-0.8 ± 0.1	-0.3 ± 0.2	0.0 ± 0.2	E Africa M	S Asia F
37	0.2 ± 0.3	-2.28 ± 0.10	-0.8 ± 0.2	-2.6 ± 0.1	-1.2 ± 0.2	-0.6 ± 0.3	0.5 ± 0.3	-1.3 ± 0.1	-0.5 ± 0.2	-1.0 ± 0.1	-0.6 ± 0.2	-0.2 ± 0.2	E Africa M	S Asia F
38	0.6 ± 0.4	-2.5 ± 0.1	-0.9 ± 0.2	-2.7 ± 0.1	-1.4 ± 0.2	-0.6 ± 0.3	0.2 ± 0.3	-1.3 ± 0.1	-0.6 ± 0.2	-1.1 ± 0.1	-0.4 ± 0.2	-0.3 ± 0.2	E Africa F	S Asia F
39	0.2 ± 0.4	-2.5 ± 0.1	-1.0 ± 0.2	-2.9 ± 0.1	-1.5 ± 0.2	-0.8 ± 0.3	0.6 ± 0.3	-1.4 ± 0.1	-0.5 ± 0.2	-1.1 ± 0.1	-0.3 ± 0.2	-0.5 ± 0.3	E Africa M	S Asia F
40	0.2 ± 0.4	-2.8 ± 0.1	-0.9 ± 0.2	-2.8 ± 0.2	-1.8 ± 0.2	-1.2 ± 0.3	0.4 ± 0.3	-1.5 ± 0.1	-0.7 ± 0.2	-1.1 ± 0.1	-0.6 ± 0.2	-0.6 ± 0.3	E Africa M	S Asia F
41	-0.3 ± 0.4	-2.8 ± 0.1	-0.9 ± 0.2	-2.9 ± 0.2	-1.9 ± 0.2	-1.6 ± 0.4	0.5 ± 0.3	-1.5 ± 0.1	-0.7 ± 0.2	-1.2 ± 0.1	-0.7 ± 0.2	-0.6 ± 0.3	E Africa M	S Asia F
42	0.1 ± 0.4	-2.8 ± 0.1	-0.7 ± 0.2	-2.5 ± 0.2	-2.0 ± 0.2	-1.2 ± 0.4	0.6 ± 0.3	-1.5 ± 0.1	-0.4 ± 0.2	-1.3 ± 0.1	-0.5 ± 0.2	-0.8 ± 0.3	E Africa M	E Asia F
43	0.4 ± 0.4	-3.0 ± 0.1	-0.9 ± 0.2	-2.8 ± 0.2	-2.1 ± 0.2	-1.5 ± 0.4	0.8 ± 0.4	-1.5 ± 0.1	-0.8 ± 0.2	-1.3 ± 0.1	-0.5 ± 0.3	-1.2 ± 0.3	E Africa M	E Asia F
44	0.0 ± 0.5	-3.2 ± 0.1	-1.1 ± 0.2	-2.6 ± 0.2	-2.1 ± 0.2	-2.0 ± 0.4	0.2 ± 0.4	-1.5 ± 0.1	-0.4 ± 0.2	-1.2 ± 0.2	-0.4 ± 0.3	-0.9 ± 0.3	E Africa M	E Asia F
45	-0.0 ± 0.5	-3.1 ± 0.1	-1.0 ± 0.2	-2.6 ± 0.2	-2.2 ± 0.2	-1.9 ± 0.4	0.3 ± 0.4	-1.6 ± 0.1	-0.6 ± 0.2	-1.0 ± 0.2	-0.4 ± 0.3	-1.5 ± 0.3	E Africa M	E Asia F
46	0.5 ± 0.5	-3.4 ± 0.1	-1.0 ± 0.2	-2.4 ± 0.2	-2.4 ± 0.2	-1.6 ± 0.4	0.3 ± 0.5	-1.6 ± 0.1	-0.3 ± 0.3	-0.7 ± 0.2	-0.5 ± 0.3	-1.6 ± 0.3	E Africa F	E Asia F
47	0.2 ± 0.6	-3.2 ± 0.1	-0.8 ± 0.3	-2.3 ± 0.2	-2.3 ± 0.2	-2.0 ± 0.4	0.6 ± 0.4	-1.5 ± 0.1	-0.1 ± 0.3	-0.7 ± 0.2	-0.2 ± 0.3	-1.4 ± 0.4	E Africa M	E Asia F
48	-0.2 ± 0.6	-3.1 ± 0.1	-0.6 ± 0.3	-2.1 ± 0.2	-2.2 ± 0.2	-1.9 ± 0.4	-0.0 ± 0.5	-1.5 ± 0.1	-0.1 ± 0.3	-0.5 ± 0.2	-0.3 ± 0.3	-1.6 ± 0.4	E Africa M	E Asia F
49	0.3 ± 0.6	-3.3 ± 0.1	-0.7 ± 0.3	-2.0 ± 0.2	-2.1 ± 0.2	-2.5 ± 0.4	0.1 ± 0.5	-1.4 ± 0.2	-0.1 ± 0.3	-0.7 ± 0.2	-0.1 ± 0.3	-1.6 ± 0.4	E Africa F	E Asia F
50	-0.2 ± 0.6	-3.1 ± 0.1	-0.5 ± 0.3	-2.0 ± 0.2	-2.2 ± 0.2	-2.2 ± 0.4	-0.3 ± 0.5	-1.3 ± 0.2	-0.1 ± 0.3	-0.5 ± 0.2	0.1 ± 0.3	-1.7 ± 0.4	S E Asia M	E Asia F
51	0.1 ± 0.6	-3.1 ± 0.1	-0.9 ± 0.3	-1.9 ± 0.2	-2.2 ± 0.2	-2.5 ± 0.5	-0.4 ± 0.6	-1.3 ± 0.2	0.2 ± 0.3	-0.5 ± 0.2	0.2 ± 0.3	-2.2 ± 0.4	S E Asia M	E Asia F
52	-0.2 ± 0.6	-3.1 ± 0.1	-0.5 ± 0.3	-2.1 ± 0.2	-1.8 ± 0.2	-2.8 ± 0.4	-0.2 ± 0.6	-1.4 ± 0.2	0.0 ± 0.3	-0.6 ± 0.2	-0.1 ± 0.3	-1.9 ± 0.4	E Europe M	E Asia F

Table 59. *Mean raw error for Application-type images for algorithm privately-000. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	1.2 ± 0.4	3.4 ± 0.2	0.7 ± 0.3	1.6 ± 0.2	2.8 ± 0.4	2.0 ± 0.4	1.1 ± 0.3	3.2 ± 0.1	-0.3 ± 0.2	1.2 ± 0.1	2.0 ± 0.3	1.7 ± 0.3	E Asia F	E Europe M
15	1.3 ± 0.4	3.8 ± 0.2	0.7 ± 0.3	2.1 ± 0.3	3.3 ± 0.4	1.9 ± 0.5	0.9 ± 0.3	3.4 ± 0.1	-0.3 ± 0.2	1.4 ± 0.2	2.3 ± 0.3	1.9 ± 0.4	E Asia F	E Europe M
16	1.2 ± 0.4	3.8 ± 0.2	0.9 ± 0.4	1.9 ± 0.3	3.7 ± 0.4	1.9 ± 0.6	1.4 ± 0.3	3.1 ± 0.1	-0.0 ± 0.3	1.4 ± 0.2	2.5 ± 0.3	1.3 ± 0.3	E Asia F	E Europe M
17	1.5 ± 0.4	3.6 ± 0.2	1.0 ± 0.4	1.8 ± 0.3	3.2 ± 0.4	1.6 ± 0.4	1.2 ± 0.3	2.9 ± 0.1	-0.5 ± 0.3	1.5 ± 0.2	2.1 ± 0.3	1.3 ± 0.4	E Asia F	E Europe M
18	1.1 ± 0.3	3.1 ± 0.2	0.8 ± 0.4	1.2 ± 0.2	3.0 ± 0.3	0.8 ± 0.4	0.9 ± 0.3	2.1 ± 0.1	-0.5 ± 0.3	0.8 ± 0.1	1.7 ± 0.2	0.7 ± 0.3	E Asia F	E Europe M
19	1.1 ± 0.4	2.8 ± 0.2	0.6 ± 0.4	1.2 ± 0.2	2.7 ± 0.2	0.9 ± 0.4	0.8 ± 0.3	1.8 ± 0.1	-0.6 ± 0.3	0.9 ± 0.1	1.2 ± 0.2	0.5 ± 0.3	E Asia F	E Europe M
20	0.7 ± 0.4	2.8 ± 0.2	0.4 ± 0.3	0.9 ± 0.2	2.5 ± 0.2	0.9 ± 0.4	0.8 ± 0.3	1.3 ± 0.1	-0.6 ± 0.3	0.7 ± 0.1	0.9 ± 0.2	0.4 ± 0.3	E Asia F	E Europe M
21	0.4 ± 0.3	2.5 ± 0.1	-0.0 ± 0.3	0.4 ± 0.2	2.3 ± 0.2	0.3 ± 0.4	0.5 ± 0.3	0.9 ± 0.1	-0.6 ± 0.2	0.4 ± 0.1	0.5 ± 0.2	-0.3 ± 0.3	E Asia F	E Europe M
22	0.2 ± 0.3	2.0 ± 0.1	-0.1 ± 0.2	-0.2 ± 0.2	1.8 ± 0.2	0.0 ± 0.4	0.8 ± 0.3	0.4 ± 0.1	-0.7 ± 0.2	-0.0 ± 0.1	-0.2 ± 0.2	-0.5 ± 0.3	E Asia F	E Europe M
23	-0.3 ± 0.3	1.6 ± 0.1	-0.4 ± 0.2	-0.5 ± 0.1	1.6 ± 0.2	-0.3 ± 0.3	0.1 ± 0.3	-0.2 ± 0.1	-1.0 ± 0.2	-0.3 ± 0.1	-0.7 ± 0.2	-0.8 ± 0.2	E Asia F	E Europe M
24	-0.7 ± 0.3	1.2 ± 0.1	-0.7 ± 0.2	-0.9 ± 0.1	1.1 ± 0.1	-0.9 ± 0.3	-0.1 ± 0.3	-0.6 ± 0.1	-1.4 ± 0.2	-0.6 ± 0.1	-1.1 ± 0.2	-1.3 ± 0.2	E Asia F	E Europe M
25	-1.0 ± 0.3	0.9 ± 0.1	-1.1 ± 0.2	-1.5 ± 0.1	0.6 ± 0.1	-1.3 ± 0.3	-0.2 ± 0.3	-0.9 ± 0.1	-1.6 ± 0.2	-1.1 ± 0.1	-1.3 ± 0.2	-1.6 ± 0.2	E Asia F	W Africa M
26	-1.4 ± 0.2	0.4 ± 0.1	-1.4 ± 0.1	-2.0 ± 0.1	0.3 ± 0.1	-1.9 ± 0.3	-0.7 ± 0.2	-1.4 ± 0.1	-2.1 ± 0.2	-1.5 ± 0.1	-1.8 ± 0.2	-2.0 ± 0.2	E Asia F	E Europe M
27	-1.5 ± 0.3	0.08 ± 0.09	-1.7 ± 0.1	-2.4 ± 0.1	-0.1 ± 0.1	-2.3 ± 0.2	-1.0 ± 0.2	-1.7 ± 0.1	-2.2 ± 0.2	-1.9 ± 0.1	-1.8 ± 0.2	-2.5 ± 0.2	E Asia F	W Africa M
28	-2.2 ± 0.3	-0.31 ± 0.09	-2.1 ± 0.1	-2.9 ± 0.1	-0.4 ± 0.1	-2.9 ± 0.2	-1.4 ± 0.2	-2.0 ± 0.1	-2.2 ± 0.2	-2.32 ± 0.10	-2.3 ± 0.2	-3.0 ± 0.2	E Asia F	W Africa M
29	-2.5 ± 0.2	-0.68 ± 0.09	-2.3 ± 0.1	-3.3 ± 0.1	-0.8 ± 0.1	-3.3 ± 0.2	-1.7 ± 0.2	-2.3 ± 0.1	-2.6 ± 0.2	-2.81 ± 0.10	-2.6 ± 0.2	-3.1 ± 0.2	E Asia F	S Asia F
30	-3.1 ± 0.2	-1.10 ± 0.09	-2.7 ± 0.1	-3.8 ± 0.1	-1.0 ± 0.1	-4.0 ± 0.2	-2.0 ± 0.3	-2.7 ± 0.1	-2.8 ± 0.2	-3.27 ± 0.09	-2.9 ± 0.2	-3.6 ± 0.2	S E Asia F	W Africa F
31	-3.5 ± 0.3	-1.52 ± 0.09	-2.9 ± 0.2	-4.3 ± 0.1	-1.5 ± 0.1	-4.3 ± 0.2	-2.2 ± 0.3	-2.9 ± 0.1	-3.2 ± 0.2	-3.63 ± 0.10	-3.2 ± 0.2	-4.1 ± 0.2	E Asia F	S Asia F
32	-3.8 ± 0.3	-1.87 ± 0.09	-3.3 ± 0.2	-4.7 ± 0.1	-2.0 ± 0.2	-4.8 ± 0.3	-2.6 ± 0.3	-3.1 ± 0.1	-3.1 ± 0.2	-3.88 ± 0.10	-3.3 ± 0.2	-4.4 ± 0.2	E Asia F	W Africa F
33	-4.4 ± 0.3	-2.27 ± 0.10	-3.7 ± 0.2	-5.1 ± 0.1	-2.4 ± 0.2	-5.2 ± 0.3	-3.0 ± 0.3	-3.4 ± 0.1	-3.2 ± 0.2	-4.40 ± 0.10	-3.6 ± 0.2	-4.7 ± 0.2	E Asia F	W Africa F
34	-4.6 ± 0.3	-2.59 ± 0.10	-4.1 ± 0.2	-5.4 ± 0.1	-2.7 ± 0.2	-5.7 ± 0.3	-3.5 ± 0.3	-3.7 ± 0.1	-3.5 ± 0.2	-4.6 ± 0.1	-3.7 ± 0.3	-5.0 ± 0.2	E Asia F	W Africa F
35	-4.7 ± 0.3	-3.1 ± 0.1	-4.3 ± 0.2	-5.8 ± 0.1	-3.2 ± 0.2	-6.2 ± 0.3	-3.4 ± 0.3	-3.8 ± 0.1	-3.8 ± 0.2	-5.1 ± 0.1	-4.1 ± 0.3	-5.4 ± 0.2	E Asia F	W Africa F
36	-5.0 ± 0.3	-3.3 ± 0.1	-4.4 ± 0.2	-6.2 ± 0.1	-3.3 ± 0.2	-6.3 ± 0.3	-4.1 ± 0.3	-4.1 ± 0.1	-3.7 ± 0.2	-5.3 ± 0.1	-4.1 ± 0.3	-5.7 ± 0.3	E Asia F	W Africa F
37	-5.6 ± 0.3	-3.6 ± 0.1	-4.8 ± 0.2	-6.3 ± 0.1	-3.9 ± 0.2	-6.9 ± 0.3	-4.0 ± 0.3	-4.2 ± 0.1	-4.2 ± 0.2	-5.6 ± 0.1	-4.4 ± 0.3	-6.0 ± 0.3	E Asia F	W Africa F
38	-5.4 ± 0.4	-4.0 ± 0.1	-4.9 ± 0.2	-6.6 ± 0.2	-3.8 ± 0.2	-7.3 ± 0.4	-4.5 ± 0.3	-4.6 ± 0.1	-4.3 ± 0.2	-5.9 ± 0.1	-4.0 ± 0.3	-6.2 ± 0.3	S E Asia F	W Africa F
39	-5.8 ± 0.4	-4.2 ± 0.1	-5.2 ± 0.2	-7.1 ± 0.2	-4.2 ± 0.2	-7.4 ± 0.4	-4.2 ± 0.4	-4.8 ± 0.1	-4.2 ± 0.2	-6.1 ± 0.1	-4.0 ± 0.3	-6.5 ± 0.3	S E Asia M	W Africa F
40	-6.1 ± 0.4	-4.5 ± 0.1	-5.0 ± 0.3	-7.0 ± 0.2	-4.6 ± 0.2	-8.0 ± 0.3	-4.3 ± 0.4	-5.0 ± 0.1	-4.5 ± 0.2	-6.2 ± 0.1	-4.4 ± 0.3	-6.7 ± 0.3	E Africa M	W Africa F
41	-6.5 ± 0.4	-4.7 ± 0.1	-5.5 ± 0.3	-7.4 ± 0.2	-4.7 ± 0.2	-8.8 ± 0.4	-4.3 ± 0.4	-5.0 ± 0.2	-4.3 ± 0.3	-6.4 ± 0.2	-4.4 ± 0.3	-6.9 ± 0.4	E Europe M	W Africa F
42	-6.2 ± 0.5	-4.7 ± 0.1	-5.1 ± 0.3	-7.2 ± 0.2	-5.1 ± 0.2	-8.4 ± 0.4	-4.3 ± 0.4	-5.0 ± 0.2	-4.0 ± 0.3	-6.4 ± 0.2	-4.1 ± 0.3	-7.0 ± 0.3	E Europe M	W Africa F
43	-6.5 ± 0.5	-5.0 ± 0.1	-5.4 ± 0.3	-7.6 ± 0.2	-5.4 ± 0.3	-9.0 ± 0.4	-4.1 ± 0.5	-5.0 ± 0.2	-4.4 ± 0.3	-6.4 ± 0.2	-4.1 ± 0.3	-7.3 ± 0.4	E Africa M	W Africa F
44	-6.3 ± 0.6	-5.2 ± 0.1	-5.5 ± 0.3	-7.5 ± 0.3	-5.1 ± 0.3	-9.1 ± 0.5	-4.6 ± 0.5	-4.9 ± 0.2	-4.2 ± 0.3	-6.4 ± 0.2	-3.8 ± 0.3	-6.9 ± 0.4	S E Asia M	W Africa F
45	-6.7 ± 0.6	-5.2 ± 0.2	-5.5 ± 0.3	-7.5 ± 0.3	-5.4 ± 0.3	-9.4 ± 0.5	-4.6 ± 0.5	-5.1 ± 0.2	-4.2 ± 0.4	-6.3 ± 0.2	-4.0 ± 0.3	-7.4 ± 0.4	S E Asia M	W Africa F
46	-6.3 ± 0.6	-5.4 ± 0.2	-5.7 ± 0.4	-7.2 ± 0.3	-5.8 ± 0.3	-9.5 ± 0.5	-4.4 ± 0.5	-5.0 ± 0.2	-4.0 ± 0.4	-6.0 ± 0.2	-3.7 ± 0.4	-7.5 ± 0.4	S E Asia M	W Africa F
47	-5.7 ± 0.7	-5.3 ± 0.2	-5.4 ± 0.4	-7.3 ± 0.3	-5.4 ± 0.3	-9.5 ± 0.5	-3.8 ± 0.6	-4.8 ± 0.2	-4.0 ± 0.4	-6.0 ± 0.3	-3.5 ± 0.3	-7.2 ± 0.5	S E Asia M	W Africa F
48	-6.5 ± 0.7	-5.3 ± 0.2	-5.2 ± 0.4	-7.2 ± 0.3	-5.6 ± 0.3	-9.6 ± 0.5	-4.7 ± 0.6	-4.9 ± 0.2	-3.7 ± 0.4	-5.9 ± 0.3	-3.5 ± 0.4	-7.6 ± 0.5	S E Asia M	W Africa F
49	-6.5 ± 0.7	-5.4 ± 0.2	-5.5 ± 0.4	-7.0 ± 0.3	-5.3 ± 0.3	-9.7 ± 0.6	-4.9 ± 0.6	-4.7 ± 0.2	-3.9 ± 0.4	-5.8 ± 0.3	-3.5 ± 0.4	-7.8 ± 0.5	S E Asia M	W Africa F
50	-6.5 ± 0.8	-5.5 ± 0.2	-5.1 ± 0.4	-7.0 ± 0.3	-5.7 ± 0.3	-9.6 ± 0.6	-4.4 ± 0.6	-4.7 ± 0.2	-4.0 ± 0.4	-5.9 ± 0.3	-3.3 ± 0.4	-7.4 ± 0.5	S E Asia M	W Africa F
51	-5.9 ± 0.7	-5.5 ± 0.2	-5.1 ± 0.4	-7.0 ± 0.3	-5.9 ± 0.3	-10.1 ± 0.6	-5.0 ± 0.7	-4.7 ± 0.2	-3.8 ± 0.4	-5.8 ± 0.3	-3.4 ± 0.3	-7.9 ± 0.5	S E Asia M	W Africa F
52	-6.4 ± 0.8	-5.7 ± 0.2	-4.7 ± 0.4	-7.1 ± 0.3	-5.3 ± 0.3	-10.7 ± 0.6	-4.7 ± 0.7	-4.7 ± 0.2	-3.9 ± 0.4	-5.8 ± 0.3	-3.9 ± 0.4	-8.0 ± 0.5	E Europe M	W Africa F

Table 60. *Mean raw error for Application-type images for algorithm regula-000. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	2.1 ± 0.3	1.98 ± 0.09	1.2 ± 0.2	2.1 ± 0.1	1.9 ± 0.2	2.3 ± 0.3	0.4 ± 0.2	1.38 ± 0.08	0.2 ± 0.1	0.7 ± 0.1	0.9 ± 0.2	0.4 ± 0.2	W Africa F	E Europe M
15	2.5 ± 0.3	1.81 ± 0.09	1.3 ± 0.2	2.5 ± 0.2	2.1 ± 0.3	2.4 ± 0.4	0.4 ± 0.2	1.35 ± 0.07	0.3 ± 0.1	1.0 ± 0.1	1.1 ± 0.1	0.9 ± 0.3	S Asia F	E Europe M
16	2.4 ± 0.3	1.59 ± 0.09	1.5 ± 0.2	2.2 ± 0.2	2.1 ± 0.3	3.1 ± 0.5	1.0 ± 0.2	1.12 ± 0.06	0.5 ± 0.2	1.0 ± 0.1	1.0 ± 0.1	0.8 ± 0.3	W Africa F	E Europe M
17	2.6 ± 0.3	1.3 ± 0.1	1.5 ± 0.2	2.3 ± 0.2	1.9 ± 0.2	3.0 ± 0.3	0.8 ± 0.2	0.88 ± 0.08	0.2 ± 0.1	1.0 ± 0.1	0.9 ± 0.2	1.4 ± 0.4	W Africa F	E Europe M
18	2.2 ± 0.3	0.74 ± 0.10	0.8 ± 0.3	1.7 ± 0.1	1.6 ± 0.2	2.5 ± 0.4	0.7 ± 0.2	0.32 ± 0.08	-0.1 ± 0.2	0.6 ± 0.1	0.5 ± 0.2	1.1 ± 0.3	W Africa F	E Europe M
19	2.4 ± 0.3	0.5 ± 0.1	0.8 ± 0.2	1.7 ± 0.1	1.5 ± 0.2	3.1 ± 0.3	1.0 ± 0.2	0.21 ± 0.09	-0.3 ± 0.2	0.7 ± 0.1	0.3 ± 0.2	1.4 ± 0.3	W Africa F	E Europe M
20	2.3 ± 0.3	0.5 ± 0.1	0.6 ± 0.2	1.6 ± 0.1	1.4 ± 0.2	2.9 ± 0.3	1.1 ± 0.3	-0.02 ± 0.09	-0.0 ± 0.2	0.8 ± 0.1	0.3 ± 0.2	1.6 ± 0.3	W Africa F	E Asia M
21	2.2 ± 0.2	0.4 ± 0.1	0.5 ± 0.2	1.3 ± 0.1	1.3 ± 0.2	2.8 ± 0.3	1.3 ± 0.2	-0.13 ± 0.09	-0.3 ± 0.2	0.7 ± 0.1	0.2 ± 0.2	1.6 ± 0.3	W Africa F	E Europe M
22	2.2 ± 0.2	0.1 ± 0.1	0.4 ± 0.2	1.0 ± 0.1	1.1 ± 0.1	2.4 ± 0.3	1.8 ± 0.3	-0.34 ± 0.09	-0.1 ± 0.2	0.6 ± 0.1	0.1 ± 0.2	1.5 ± 0.3	W Africa F	E Asia M
23	2.0 ± 0.2	0.1 ± 0.1	0.3 ± 0.1	0.8 ± 0.1	0.9 ± 0.1	2.6 ± 0.3	1.5 ± 0.3	-0.5 ± 0.1	-0.2 ± 0.2	0.6 ± 0.1	0.1 ± 0.2	1.8 ± 0.2	W Africa F	E Asia M
24	1.9 ± 0.2	-0.15 ± 0.10	0.3 ± 0.1	0.52 ± 0.10	0.7 ± 0.1	2.0 ± 0.2	1.6 ± 0.2	-0.6 ± 0.1	-0.2 ± 0.1	0.6 ± 0.1	0.0 ± 0.2	1.6 ± 0.2	W Africa F	E Asia M
25	1.4 ± 0.2	-0.13 ± 0.10	0.1 ± 0.1	0.15 ± 0.09	0.6 ± 0.1	2.1 ± 0.2	1.5 ± 0.2	-0.7 ± 0.1	-0.2 ± 0.1	0.42 ± 0.10	-0.0 ± 0.2	1.5 ± 0.2	W Africa F	E Asia M
26	1.2 ± 0.2	-0.34 ± 0.09	-0.0 ± 0.1	-0.18 ± 0.09	0.6 ± 0.1	1.7 ± 0.2	1.4 ± 0.2	-0.8 ± 0.1	-0.3 ± 0.1	0.29 ± 0.09	-0.2 ± 0.2	1.3 ± 0.2	W Africa F	E Asia M
27	1.2 ± 0.2	-0.43 ± 0.09	-0.1 ± 0.1	-0.53 ± 0.08	0.3 ± 0.1	1.7 ± 0.2	1.2 ± 0.2	-0.9 ± 0.1	-0.4 ± 0.1	0.10 ± 0.09	0.0 ± 0.2	1.2 ± 0.2	W Africa F	E Asia M
28	0.9 ± 0.2	-0.57 ± 0.09	-0.1 ± 0.1	-0.68 ± 0.09	0.1 ± 0.1	1.3 ± 0.2	0.8 ± 0.2	-0.9 ± 0.1	-0.5 ± 0.1	-0.05 ± 0.09	-0.2 ± 0.2	0.9 ± 0.2	W Africa F	E Asia M
29	0.9 ± 0.2	-0.74 ± 0.08	-0.3 ± 0.1	-0.93 ± 0.09	0.1 ± 0.1	1.1 ± 0.2	0.8 ± 0.2	-1.0 ± 0.1	-0.6 ± 0.1	-0.25 ± 0.09	-0.5 ± 0.2	1.1 ± 0.2	W Africa F	E Asia M
30	0.7 ± 0.2	-0.73 ± 0.09	-0.4 ± 0.1	-1.17 ± 0.09	-0.0 ± 0.1	0.7 ± 0.2	0.9 ± 0.2	-1.1 ± 0.1	-0.8 ± 0.1	-0.38 ± 0.09	-0.4 ± 0.2	0.7 ± 0.2	E Africa M	S Asia F
31	0.4 ± 0.2	-0.87 ± 0.09	-0.3 ± 0.1	-1.40 ± 0.10	-0.2 ± 0.1	0.5 ± 0.2	0.6 ± 0.2	-1.2 ± 0.1	-0.9 ± 0.1	-0.48 ± 0.09	-0.4 ± 0.2	0.5 ± 0.2	E Africa M	S Asia F
32	0.4 ± 0.2	-0.88 ± 0.09	-0.4 ± 0.1	-1.5 ± 0.1	-0.3 ± 0.1	0.5 ± 0.2	0.4 ± 0.2	-1.2 ± 0.1	-0.9 ± 0.1	-0.57 ± 0.09	-0.5 ± 0.2	0.4 ± 0.2	W Africa F	S Asia F
33	0.2 ± 0.3	-0.98 ± 0.09	-0.5 ± 0.1	-1.6 ± 0.1	-0.4 ± 0.1	0.3 ± 0.2	0.4 ± 0.2	-1.3 ± 0.1	-0.8 ± 0.1	-0.68 ± 0.09	-0.8 ± 0.2	0.1 ± 0.2	E Africa M	S Asia F
34	0.0 ± 0.3	-0.95 ± 0.09	-0.5 ± 0.1	-1.7 ± 0.1	-0.5 ± 0.1	0.1 ± 0.2	0.0 ± 0.2	-1.3 ± 0.1	-1.0 ± 0.1	-0.71 ± 0.10	-0.7 ± 0.2	0.2 ± 0.2	W Africa M	S Asia F
35	0.2 ± 0.3	-1.11 ± 0.09	-0.6 ± 0.1	-1.8 ± 0.1	-0.6 ± 0.2	-0.3 ± 0.2	0.2 ± 0.3	-1.3 ± 0.1	-0.9 ± 0.2	-0.70 ± 0.10	-0.9 ± 0.2	-0.1 ± 0.2	E Africa F	S Asia F
36	0.1 ± 0.3	-1.04 ± 0.10	-0.5 ± 0.1	-1.9 ± 0.1	-0.5 ± 0.2	-0.3 ± 0.2	-0.0 ± 0.3	-1.4 ± 0.1	-0.8 ± 0.2	-0.81 ± 0.10	-0.6 ± 0.2	-0.2 ± 0.2	E Africa F	S Asia F
37	0.0 ± 0.3	-1.13 ± 0.09	-0.5 ± 0.2	-1.8 ± 0.1	-0.7 ± 0.2	-0.4 ± 0.3	0.0 ± 0.3	-1.3 ± 0.1	-0.9 ± 0.2	-0.9 ± 0.1	-0.8 ± 0.2	-0.4 ± 0.2	E Africa F	S Asia F
38	0.5 ± 0.3	-1.22 ± 0.09	-0.5 ± 0.2	-1.7 ± 0.1	-0.6 ± 0.2	-0.6 ± 0.3	-0.2 ± 0.3	-1.3 ± 0.1	-1.0 ± 0.2	-0.9 ± 0.1	-0.4 ± 0.2	-0.5 ± 0.2	E Africa F	S Asia F
39	0.1 ± 0.3	-1.22 ± 0.09	-0.5 ± 0.2	-1.9 ± 0.1	-0.5 ± 0.2	-0.6 ± 0.3	0.0 ± 0.3	-1.3 ± 0.1	-0.8 ± 0.2	-0.8 ± 0.1	-0.6 ± 0.2	-0.7 ± 0.2	E Africa F	S Asia F
40	-0.1 ± 0.4	-1.24 ± 0.09	-0.3 ± 0.2	-1.7 ± 0.1	-0.7 ± 0.2	-1.0 ± 0.3	0.0 ± 0.3	-1.3 ± 0.1	-0.7 ± 0.2	-0.8 ± 0.1	-0.6 ± 0.2	-0.8 ± 0.2	E Africa M	S Asia F
41	-0.4 ± 0.4	-1.29 ± 0.09	-0.4 ± 0.2	-1.8 ± 0.2	-0.7 ± 0.2	-1.3 ± 0.3	0.2 ± 0.3	-1.3 ± 0.1	-0.7 ± 0.2	-0.8 ± 0.1	-0.5 ± 0.2	-0.8 ± 0.3	E Africa M	S Asia F
42	-0.1 ± 0.4	-1.28 ± 0.09	-0.3 ± 0.2	-1.3 ± 0.2	-0.8 ± 0.2	-1.1 ± 0.3	0.3 ± 0.3	-1.2 ± 0.1	-0.4 ± 0.2	-0.8 ± 0.1	-0.3 ± 0.2	-1.0 ± 0.3	E Africa M	S Asia F
43	0.2 ± 0.4	-1.41 ± 0.09	-0.3 ± 0.2	-1.5 ± 0.2	-0.7 ± 0.2	-1.2 ± 0.3	0.5 ± 0.4	-1.2 ± 0.1	-0.6 ± 0.2	-0.8 ± 0.1	-0.2 ± 0.2	-1.2 ± 0.3	E Africa M	S Asia F
44	0.3 ± 0.4	-1.48 ± 0.10	-0.6 ± 0.2	-1.4 ± 0.2	-0.5 ± 0.2	-1.3 ± 0.4	0.0 ± 0.4	-1.1 ± 0.1	-0.2 ± 0.2	-0.8 ± 0.1	0.1 ± 0.3	-1.1 ± 0.3	E Africa F	E Asia F
45	-0.0 ± 0.5	-1.45 ± 0.10	-0.5 ± 0.2	-1.3 ± 0.2	-0.6 ± 0.2	-1.2 ± 0.3	-0.1 ± 0.4	-1.0 ± 0.1	-0.3 ± 0.2	-0.6 ± 0.2	-0.0 ± 0.3	-1.3 ± 0.3	S E Asia M	E Asia F
46	0.9 ± 0.5	-1.6 ± 0.1	-0.4 ± 0.2	-1.1 ± 0.2	-0.8 ± 0.2	-1.2 ± 0.4	0.2 ± 0.4	-1.0 ± 0.1	-0.2 ± 0.2	-0.4 ± 0.2	0.3 ± 0.3	-1.4 ± 0.3	E Africa F	E Asia F
47	0.7 ± 0.5	-1.4 ± 0.1	-0.4 ± 0.2	-1.2 ± 0.2	-0.4 ± 0.2	-1.3 ± 0.4	0.8 ± 0.4	-0.9 ± 0.1	-0.1 ± 0.2	-0.3 ± 0.2	0.5 ± 0.3	-1.3 ± 0.3	E Africa M	E Asia F
48	0.5 ± 0.5	-1.4 ± 0.1	-0.3 ± 0.2	-0.9 ± 0.2	-0.5 ± 0.2	-1.0 ± 0.4	0.3 ± 0.5	-0.8 ± 0.1	0.1 ± 0.3	-0.2 ± 0.2	0.5 ± 0.3	-1.4 ± 0.4	S E Asia M	E Asia F
49	1.0 ± 0.6	-1.5 ± 0.1	-0.5 ± 0.2	-0.7 ± 0.2	-0.0 ± 0.2	-1.2 ± 0.4	0.2 ± 0.5	-0.7 ± 0.1	0.0 ± 0.2	-0.2 ± 0.2	0.7 ± 0.3	-1.3 ± 0.3	E Africa F	E Asia F
50	0.6 ± 0.6	-1.4 ± 0.1	-0.1 ± 0.2	-0.8 ± 0.2	-0.2 ± 0.2	-1.2 ± 0.4	0.3 ± 0.5	-0.6 ± 0.1	-0.2 ± 0.3	-0.2 ± 0.2	1.1 ± 0.3	-1.6 ± 0.3	S E Asia M	W Africa M
51	0.8 ± 0.5	-1.3 ± 0.1	-0.4 ± 0.2	-0.5 ± 0.2	-0.0 ± 0.2	-1.0 ± 0.4	0.1 ± 0.6	-0.6 ± 0.1	0.2 ± 0.2	0.1 ± 0.2	1.0 ± 0.3	-1.7 ± 0.4	S E Asia M	W Africa M
52	0.6 ± 0.6	-1.3 ± 0.1	-0.1 ± 0.2	-0.5 ± 0.2	0.2 ± 0.2	-1.2 ± 0.4	0.4 ± 0.6	-0.5 ± 0.1	0.2 ± 0.3	0.1 ± 0.2	0.9 ± 0.3	-1.5 ± 0.4	S E Asia M	W Africa M

Table 61. *Mean raw error for Application-type images for algorithm roc-000. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	5.1 ± 0.3	5.4 ± 0.1	3.7 ± 0.2	3.7 ± 0.1	4.5 ± 0.3	5.7 ± 0.3	4.2 ± 0.2	5.4 ± 0.1	2.7 ± 0.2	3.2 ± 0.1	4.5 ± 0.3	4.6 ± 0.3	W Africa F	E Europe M
15	4.8 ± 0.3	5.5 ± 0.1	3.2 ± 0.2	3.8 ± 0.2	4.7 ± 0.3	5.4 ± 0.4	4.1 ± 0.3	5.4 ± 0.1	2.6 ± 0.1	3.2 ± 0.1	4.6 ± 0.2	4.6 ± 0.3	E Asia F	E Europe M
16	4.7 ± 0.3	5.4 ± 0.2	2.8 ± 0.1	3.4 ± 0.2	4.9 ± 0.3	5.6 ± 0.4	4.2 ± 0.2	4.9 ± 0.1	2.3 ± 0.2	3.0 ± 0.1	4.4 ± 0.2	4.2 ± 0.3	W Africa F	E Europe M
17	4.8 ± 0.3	5.0 ± 0.1	2.3 ± 0.2	3.1 ± 0.2	4.5 ± 0.3	5.1 ± 0.3	3.7 ± 0.2	4.7 ± 0.1	1.58 ± 0.10	2.8 ± 0.1	4.2 ± 0.2	4.4 ± 0.4	W Africa F	E Europe M
18	3.9 ± 0.3	4.3 ± 0.1	1.4 ± 0.2	2.2 ± 0.1	4.2 ± 0.2	4.5 ± 0.3	3.4 ± 0.2	4.1 ± 0.1	0.8 ± 0.2	2.1 ± 0.1	3.8 ± 0.2	3.8 ± 0.3	W Africa F	E Europe M
19	3.9 ± 0.3	4.1 ± 0.1	1.1 ± 0.2	2.0 ± 0.1	4.0 ± 0.2	4.7 ± 0.3	3.7 ± 0.3	4.0 ± 0.1	0.3 ± 0.2	2.1 ± 0.1	3.5 ± 0.2	4.0 ± 0.3	W Africa F	E Europe M
20	3.6 ± 0.3	4.0 ± 0.1	0.5 ± 0.2	1.7 ± 0.2	3.7 ± 0.2	4.4 ± 0.3	3.5 ± 0.3	3.8 ± 0.1	0.1 ± 0.2	2.1 ± 0.1	3.6 ± 0.2	4.0 ± 0.3	W Africa F	E Europe M
21	3.2 ± 0.3	3.8 ± 0.1	0.2 ± 0.2	1.2 ± 0.1	3.5 ± 0.2	4.2 ± 0.3	3.6 ± 0.3	3.7 ± 0.1	-0.2 ± 0.2	2.1 ± 0.1	3.6 ± 0.2	4.0 ± 0.3	W Africa F	E Europe M
22	3.2 ± 0.3	3.3 ± 0.1	-0.0 ± 0.2	0.8 ± 0.1	3.4 ± 0.2	3.7 ± 0.3	4.2 ± 0.3	3.5 ± 0.1	-0.1 ± 0.2	2.1 ± 0.2	3.2 ± 0.2	3.7 ± 0.3	E Africa M	E Europe M
23	3.0 ± 0.3	3.2 ± 0.1	-0.2 ± 0.2	0.5 ± 0.1	3.2 ± 0.2	3.7 ± 0.3	3.8 ± 0.3	3.3 ± 0.1	-0.4 ± 0.2	2.1 ± 0.2	3.2 ± 0.2	3.9 ± 0.3	W Africa M	E Europe M
24	2.8 ± 0.3	2.8 ± 0.1	-0.3 ± 0.2	0.1 ± 0.1	2.9 ± 0.1	3.3 ± 0.3	3.9 ± 0.3	3.1 ± 0.1	-0.1 ± 0.2	2.1 ± 0.1	3.0 ± 0.2	3.7 ± 0.3	E Africa M	E Europe F
25	2.4 ± 0.3	2.69 ± 0.10	-0.3 ± 0.2	-0.3 ± 0.1	2.7 ± 0.1	3.2 ± 0.3	3.8 ± 0.3	2.9 ± 0.1	0.0 ± 0.2	1.9 ± 0.1	2.9 ± 0.2	3.6 ± 0.2	E Africa M	E Europe F
26	2.1 ± 0.3	2.35 ± 0.10	-0.3 ± 0.2	-0.6 ± 0.1	2.6 ± 0.1	2.9 ± 0.3	3.7 ± 0.2	2.7 ± 0.1	-0.1 ± 0.2	1.8 ± 0.1	2.7 ± 0.2	3.2 ± 0.2	E Africa M	S Asia F
27	2.3 ± 0.3	2.06 ± 0.09	-0.3 ± 0.2	-0.9 ± 0.1	2.2 ± 0.1	2.7 ± 0.2	3.3 ± 0.2	2.5 ± 0.1	0.2 ± 0.2	1.6 ± 0.1	2.7 ± 0.2	3.0 ± 0.2	E Africa M	S Asia F
28	1.9 ± 0.3	1.78 ± 0.09	-0.2 ± 0.2	-1.1 ± 0.1	2.0 ± 0.1	2.4 ± 0.3	3.2 ± 0.2	2.3 ± 0.1	0.4 ± 0.2	1.4 ± 0.1	2.3 ± 0.2	2.5 ± 0.2	E Africa M	S Asia F
29	2.0 ± 0.3	1.63 ± 0.09	-0.0 ± 0.2	-1.3 ± 0.1	1.8 ± 0.1	2.1 ± 0.2	3.1 ± 0.2	2.1 ± 0.1	0.5 ± 0.2	1.3 ± 0.1	2.1 ± 0.2	2.7 ± 0.2	E Africa M	S Asia F
30	1.6 ± 0.3	1.45 ± 0.09	-0.0 ± 0.2	-1.5 ± 0.1	1.8 ± 0.1	1.8 ± 0.3	3.0 ± 0.2	1.8 ± 0.1	0.5 ± 0.2	1.02 ± 0.10	2.0 ± 0.2	2.3 ± 0.2	E Africa M	S Asia F
31	1.6 ± 0.3	1.19 ± 0.09	0.1 ± 0.2	-1.7 ± 0.1	1.5 ± 0.1	1.6 ± 0.2	3.0 ± 0.2	1.6 ± 0.1	0.4 ± 0.2	0.84 ± 0.10	1.7 ± 0.2	2.2 ± 0.2	E Africa M	S Asia F
32	1.7 ± 0.3	1.00 ± 0.09	0.3 ± 0.2	-1.8 ± 0.1	1.3 ± 0.2	1.6 ± 0.3	2.6 ± 0.2	1.4 ± 0.1	0.5 ± 0.2	0.75 ± 0.10	1.6 ± 0.2	1.9 ± 0.2	E Africa M	S Asia F
33	1.4 ± 0.3	0.80 ± 0.09	0.3 ± 0.2	-1.9 ± 0.1	1.1 ± 0.2	1.2 ± 0.3	2.6 ± 0.3	1.1 ± 0.1	1.0 ± 0.2	0.51 ± 0.10	1.2 ± 0.2	1.7 ± 0.2	E Africa M	S Asia F
34	1.5 ± 0.3	0.66 ± 0.10	0.5 ± 0.2	-2.0 ± 0.1	1.0 ± 0.2	1.2 ± 0.3	2.2 ± 0.3	0.9 ± 0.1	0.7 ± 0.2	0.4 ± 0.1	1.2 ± 0.2	1.6 ± 0.2	E Africa M	S Asia F
35	1.6 ± 0.4	0.38 ± 0.10	0.4 ± 0.2	-2.1 ± 0.1	0.6 ± 0.2	0.7 ± 0.3	2.3 ± 0.3	0.8 ± 0.1	0.7 ± 0.2	0.3 ± 0.1	0.9 ± 0.2	1.2 ± 0.2	E Africa M	S Asia F
36	1.4 ± 0.4	0.4 ± 0.1	0.9 ± 0.2	-2.2 ± 0.1	0.6 ± 0.2	0.8 ± 0.3	2.0 ± 0.3	0.6 ± 0.1	0.9 ± 0.2	0.0 ± 0.1	1.1 ± 0.2	1.1 ± 0.2	E Africa M	S Asia F
37	1.4 ± 0.4	0.2 ± 0.1	1.0 ± 0.2	-2.0 ± 0.2	0.5 ± 0.2	0.8 ± 0.3	2.0 ± 0.3	0.5 ± 0.1	0.6 ± 0.2	-0.1 ± 0.1	0.7 ± 0.2	0.8 ± 0.2	E Africa M	S Asia F
38	1.8 ± 0.4	0.0 ± 0.1	1.3 ± 0.2	-2.0 ± 0.2	0.6 ± 0.2	0.4 ± 0.3	1.6 ± 0.3	0.4 ± 0.1	0.7 ± 0.2	-0.3 ± 0.1	1.0 ± 0.2	0.7 ± 0.2	E Africa F	S Asia F
39	1.5 ± 0.4	-0.0 ± 0.1	1.2 ± 0.2	-2.2 ± 0.2	0.5 ± 0.2	0.6 ± 0.3	1.9 ± 0.3	0.2 ± 0.1	0.7 ± 0.2	-0.3 ± 0.1	1.0 ± 0.2	0.6 ± 0.2	E Africa M	S Asia F
40	1.5 ± 0.4	-0.1 ± 0.1	1.7 ± 0.3	-2.0 ± 0.2	0.3 ± 0.2	0.1 ± 0.3	1.8 ± 0.3	0.1 ± 0.1	0.6 ± 0.2	-0.4 ± 0.1	0.8 ± 0.2	0.4 ± 0.2	E Africa M	S Asia F
41	1.1 ± 0.4	-0.2 ± 0.1	1.7 ± 0.3	-2.0 ± 0.2	0.3 ± 0.2	-0.1 ± 0.4	1.9 ± 0.3	0.1 ± 0.1	0.8 ± 0.2	-0.5 ± 0.1	0.6 ± 0.2	0.3 ± 0.3	E Africa M	S Asia F
42	1.6 ± 0.5	-0.1 ± 0.1	2.0 ± 0.3	-1.5 ± 0.2	0.4 ± 0.2	0.0 ± 0.4	1.8 ± 0.3	0.1 ± 0.1	1.0 ± 0.2	-0.7 ± 0.1	0.9 ± 0.2	0.2 ± 0.3	E Europe F	S Asia F
43	1.6 ± 0.5	-0.3 ± 0.1	2.2 ± 0.3	-1.7 ± 0.2	0.3 ± 0.2	-0.0 ± 0.4	1.9 ± 0.3	0.0 ± 0.1	0.8 ± 0.2	-0.6 ± 0.1	0.8 ± 0.3	-0.2 ± 0.3	E Europe F	S Asia F
44	1.5 ± 0.5	-0.4 ± 0.1	2.3 ± 0.3	-1.6 ± 0.2	0.6 ± 0.2	-0.2 ± 0.4	1.3 ± 0.3	-0.1 ± 0.1	1.0 ± 0.2	-0.7 ± 0.2	1.0 ± 0.3	-0.3 ± 0.3	E Europe F	S Asia F
45	1.3 ± 0.5	-0.3 ± 0.1	2.3 ± 0.3	-1.6 ± 0.2	0.4 ± 0.2	-0.1 ± 0.4	1.2 ± 0.4	-0.1 ± 0.1	0.9 ± 0.2	-0.7 ± 0.2	0.8 ± 0.3	-0.6 ± 0.3	E Europe F	S Asia F
46	2.3 ± 0.6	-0.5 ± 0.1	2.5 ± 0.3	-1.2 ± 0.2	0.3 ± 0.2	0.1 ± 0.4	1.2 ± 0.4	-0.2 ± 0.1	1.1 ± 0.3	-0.6 ± 0.2	0.8 ± 0.3	-0.7 ± 0.3	E Europe F	S Asia F
47	2.0 ± 0.6	-0.3 ± 0.1	2.9 ± 0.3	-1.2 ± 0.2	0.4 ± 0.3	-0.1 ± 0.4	1.5 ± 0.4	-0.1 ± 0.2	1.0 ± 0.3	-0.6 ± 0.2	1.0 ± 0.3	-0.5 ± 0.3	E Europe F	S Asia F
48	1.8 ± 0.6	-0.3 ± 0.1	3.1 ± 0.3	-1.0 ± 0.3	0.6 ± 0.3	-0.2 ± 0.5	0.9 ± 0.5	-0.2 ± 0.1	1.3 ± 0.3	-0.5 ± 0.2	0.9 ± 0.3	-1.0 ± 0.3	E Europe F	S Asia F
49	2.1 ± 0.6	-0.3 ± 0.2	3.0 ± 0.3	-0.9 ± 0.3	0.6 ± 0.3	-0.5 ± 0.5	0.6 ± 0.5	-0.1 ± 0.2	1.0 ± 0.3	-0.7 ± 0.2	1.0 ± 0.3	-0.9 ± 0.3	E Europe F	W Africa M
50	1.5 ± 0.6	-0.2 ± 0.2	3.5 ± 0.3	-0.8 ± 0.2	0.5 ± 0.3	-0.3 ± 0.5	0.5 ± 0.4	-0.0 ± 0.2	1.1 ± 0.3	-0.6 ± 0.2	1.3 ± 0.3	-1.3 ± 0.3	E Europe F	W Africa M
51	2.1 ± 0.6	-0.0 ± 0.2	3.4 ± 0.3	-0.8 ± 0.3	0.6 ± 0.3	-0.0 ± 0.5	0.2 ± 0.5	0.0 ± 0.2	1.3 ± 0.3	-0.6 ± 0.2	1.4 ± 0.3	-1.3 ± 0.4	E Europe F	W Africa M
52	1.5 ± 0.7	-0.0 ± 0.2	3.8 ± 0.3	-0.9 ± 0.3	0.9 ± 0.3	-0.5 ± 0.5	0.3 ± 0.5	0.0 ± 0.2	1.2 ± 0.3	-0.8 ± 0.2	0.9 ± 0.3	-1.4 ± 0.4	E Europe F	W Africa M

Table 62. *Mean raw error for Application-type images for algorithm roc-001. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	4.8 ± 0.2	4.98 ± 0.09	3.4 ± 0.1	4.2 ± 0.1	4.8 ± 0.2	4.9 ± 0.2	3.7 ± 0.1	4.72 ± 0.08	2.79 ± 0.09	3.54 ± 0.08	4.3 ± 0.1	3.7 ± 0.2	E Asia F	E Europe M
15	4.8 ± 0.2	4.8 ± 0.1	2.8 ± 0.1	4.1 ± 0.1	4.7 ± 0.2	4.8 ± 0.3	3.4 ± 0.2	4.43 ± 0.07	2.33 ± 0.09	3.23 ± 0.08	4.0 ± 0.1	3.4 ± 0.2	E Asia F	E Europe M
16	4.6 ± 0.3	4.8 ± 0.1	2.4 ± 0.1	3.8 ± 0.1	4.5 ± 0.3	4.7 ± 0.4	3.4 ± 0.2	4.05 ± 0.08	1.9 ± 0.1	2.82 ± 0.09	3.7 ± 0.2	3.1 ± 0.3	E Asia F	E Europe M
17	4.8 ± 0.3	4.5 ± 0.1	2.0 ± 0.1	3.7 ± 0.2	4.4 ± 0.2	4.6 ± 0.3	3.1 ± 0.2	3.9 ± 0.1	1.2 ± 0.1	2.5 ± 0.1	3.5 ± 0.2	3.6 ± 0.4	E Africa F	E Europe M
18	3.9 ± 0.2	4.0 ± 0.1	1.4 ± 0.2	3.1 ± 0.1	4.0 ± 0.2	4.1 ± 0.3	2.9 ± 0.2	3.55 ± 0.09	0.6 ± 0.1	2.0 ± 0.1	3.2 ± 0.2	3.1 ± 0.3	W Africa F	E Europe M
19	4.2 ± 0.3	3.8 ± 0.1	0.9 ± 0.2	3.1 ± 0.1	3.9 ± 0.2	4.4 ± 0.3	3.3 ± 0.2	3.5 ± 0.1	0.3 ± 0.1	2.1 ± 0.1	3.0 ± 0.2	3.3 ± 0.3	W Africa F	E Europe M
20	4.3 ± 0.3	3.6 ± 0.1	0.7 ± 0.2	2.8 ± 0.2	3.7 ± 0.1	4.4 ± 0.3	3.3 ± 0.3	3.5 ± 0.1	0.3 ± 0.2	2.1 ± 0.1	3.0 ± 0.2	3.5 ± 0.3	W Africa F	E Europe M
21	4.1 ± 0.3	3.5 ± 0.1	0.5 ± 0.2	2.6 ± 0.1	3.4 ± 0.1	4.0 ± 0.3	3.4 ± 0.3	3.36 ± 0.09	0.1 ± 0.2	2.1 ± 0.1	3.0 ± 0.2	3.4 ± 0.3	E Africa F	E Europe M
22	4.2 ± 0.3	3.21 ± 0.10	0.5 ± 0.2	2.5 ± 0.1	3.2 ± 0.1	3.7 ± 0.3	4.0 ± 0.3	3.19 ± 0.10	0.2 ± 0.2	2.1 ± 0.1	2.8 ± 0.1	3.3 ± 0.3	E Africa F	E Europe M
23	4.1 ± 0.3	2.94 ± 0.09	0.5 ± 0.2	2.3 ± 0.1	3.0 ± 0.1	3.6 ± 0.3	3.8 ± 0.3	3.01 ± 0.09	0.2 ± 0.2	2.2 ± 0.1	2.7 ± 0.1	3.5 ± 0.2	E Africa F	E Europe M
24	4.1 ± 0.3	2.66 ± 0.08	0.5 ± 0.1	2.0 ± 0.1	2.7 ± 0.1	3.3 ± 0.2	3.8 ± 0.3	2.76 ± 0.09	0.4 ± 0.2	2.1 ± 0.1	2.5 ± 0.1	3.3 ± 0.2	E Africa F	E Europe M
25	3.6 ± 0.3	2.41 ± 0.08	0.5 ± 0.1	1.77 ± 0.09	2.4 ± 0.1	3.4 ± 0.2	3.7 ± 0.2	2.58 ± 0.09	0.5 ± 0.2	1.9 ± 0.1	2.3 ± 0.1	3.2 ± 0.2	E Africa M	E Europe M
26	3.4 ± 0.2	2.12 ± 0.08	0.7 ± 0.1	1.50 ± 0.09	2.2 ± 0.1	2.9 ± 0.2	3.6 ± 0.2	2.29 ± 0.09	0.5 ± 0.2	1.9 ± 0.1	2.1 ± 0.1	2.9 ± 0.2	E Africa M	E Europe M
27	3.6 ± 0.2	1.88 ± 0.07	0.6 ± 0.1	1.26 ± 0.09	1.9 ± 0.1	2.8 ± 0.2	3.4 ± 0.2	2.11 ± 0.09	0.7 ± 0.1	1.62 ± 0.09	2.0 ± 0.1	2.7 ± 0.2	E Africa F	E Europe F
28	3.4 ± 0.2	1.60 ± 0.07	0.8 ± 0.1	1.16 ± 0.09	1.7 ± 0.1	2.5 ± 0.2	3.1 ± 0.2	1.84 ± 0.10	0.7 ± 0.1	1.47 ± 0.09	1.8 ± 0.1	2.4 ± 0.2	E Africa F	E Europe M
29	3.3 ± 0.3	1.41 ± 0.07	0.8 ± 0.1	0.96 ± 0.09	1.5 ± 0.1	2.2 ± 0.2	3.0 ± 0.2	1.68 ± 0.09	0.7 ± 0.1	1.18 ± 0.09	1.5 ± 0.1	2.5 ± 0.2	E Africa F	E Europe M
30	3.0 ± 0.2	1.25 ± 0.07	0.8 ± 0.1	0.73 ± 0.09	1.4 ± 0.1	2.0 ± 0.2	2.9 ± 0.2	1.38 ± 0.09	0.7 ± 0.1	0.95 ± 0.08	1.3 ± 0.2	2.1 ± 0.2	E Africa F	E Europe M
31	2.9 ± 0.3	1.02 ± 0.07	0.9 ± 0.1	0.51 ± 0.10	1.2 ± 0.1	1.9 ± 0.2	2.8 ± 0.2	1.25 ± 0.09	0.7 ± 0.2	0.81 ± 0.08	1.2 ± 0.2	1.9 ± 0.2	E Africa F	S Asia F
32	3.1 ± 0.3	0.91 ± 0.08	1.0 ± 0.1	0.45 ± 0.10	1.0 ± 0.1	1.9 ± 0.2	2.7 ± 0.2	1.08 ± 0.09	0.8 ± 0.2	0.65 ± 0.08	1.1 ± 0.2	1.7 ± 0.2	E Africa F	S Asia F
33	2.9 ± 0.3	0.71 ± 0.08	1.0 ± 0.1	0.3 ± 0.1	0.9 ± 0.1	1.8 ± 0.2	2.7 ± 0.2	0.87 ± 0.10	1.0 ± 0.2	0.47 ± 0.08	0.8 ± 0.2	1.4 ± 0.2	E Africa F	S Asia F
34	2.6 ± 0.3	0.60 ± 0.08	1.1 ± 0.1	0.3 ± 0.1	0.8 ± 0.1	1.5 ± 0.2	2.4 ± 0.2	0.76 ± 0.10	0.9 ± 0.2	0.36 ± 0.09	0.8 ± 0.2	1.2 ± 0.2	E Africa F	S Asia F
35	2.9 ± 0.3	0.46 ± 0.09	1.0 ± 0.2	0.1 ± 0.1	0.5 ± 0.1	1.2 ± 0.2	2.5 ± 0.2	0.8 ± 0.1	0.8 ± 0.2	0.28 ± 0.09	0.7 ± 0.2	1.0 ± 0.2	E Africa F	S Asia F
36	2.6 ± 0.3	0.44 ± 0.09	1.3 ± 0.2	-0.0 ± 0.1	0.5 ± 0.2	1.4 ± 0.2	2.4 ± 0.3	0.6 ± 0.1	1.1 ± 0.2	0.14 ± 0.09	0.8 ± 0.2	0.8 ± 0.2	E Africa F	S Asia F
37	2.5 ± 0.3	0.27 ± 0.09	1.3 ± 0.2	0.1 ± 0.1	0.5 ± 0.2	1.3 ± 0.3	2.4 ± 0.3	0.6 ± 0.1	1.0 ± 0.2	0.08 ± 0.10	0.6 ± 0.2	0.6 ± 0.2	E Africa F	S Asia F
38	3.0 ± 0.4	0.20 ± 0.09	1.5 ± 0.2	0.0 ± 0.1	0.6 ± 0.2	1.1 ± 0.3	2.1 ± 0.3	0.5 ± 0.1	1.1 ± 0.2	-0.05 ± 0.10	0.8 ± 0.2	0.5 ± 0.2	E Africa F	S Asia M
39	2.6 ± 0.4	0.19 ± 0.09	1.5 ± 0.2	0.0 ± 0.1	0.4 ± 0.2	1.0 ± 0.3	2.3 ± 0.3	0.4 ± 0.1	1.2 ± 0.2	0.0 ± 0.1	0.7 ± 0.2	0.3 ± 0.2	E Africa F	S Asia F
40	2.5 ± 0.4	0.10 ± 0.09	1.8 ± 0.2	0.1 ± 0.1	0.4 ± 0.2	0.6 ± 0.3	2.3 ± 0.3	0.4 ± 0.1	1.4 ± 0.2	0.0 ± 0.1	0.7 ± 0.2	0.1 ± 0.2	E Africa F	S Asia M
41	2.4 ± 0.4	0.09 ± 0.10	1.9 ± 0.2	0.1 ± 0.2	0.4 ± 0.2	0.5 ± 0.3	2.3 ± 0.3	0.3 ± 0.1	1.4 ± 0.2	0.0 ± 0.1	0.7 ± 0.2	-0.2 ± 0.2	E Africa F	W Africa M
42	2.9 ± 0.4	0.06 ± 0.10	2.0 ± 0.2	0.5 ± 0.2	0.5 ± 0.2	0.7 ± 0.3	2.3 ± 0.3	0.5 ± 0.1	1.7 ± 0.2	0.0 ± 0.1	1.1 ± 0.2	-0.1 ± 0.2	E Africa F	W Africa M
43	2.7 ± 0.4	-0.10 ± 0.10	2.1 ± 0.2	0.4 ± 0.2	0.6 ± 0.2	0.4 ± 0.3	2.4 ± 0.4	0.4 ± 0.1	1.7 ± 0.2	0.1 ± 0.1	1.0 ± 0.3	-0.4 ± 0.3	E Africa F	W Africa M
44	3.0 ± 0.5	-0.1 ± 0.1	2.0 ± 0.2	0.5 ± 0.2	0.8 ± 0.2	0.4 ± 0.3	2.0 ± 0.4	0.6 ± 0.1	2.1 ± 0.3	0.1 ± 0.2	1.3 ± 0.3	-0.4 ± 0.3	E Africa F	W Africa M
45	2.5 ± 0.5	-0.1 ± 0.1	2.0 ± 0.2	0.7 ± 0.2	0.6 ± 0.2	0.1 ± 0.3	1.8 ± 0.4	0.5 ± 0.1	2.1 ± 0.3	0.4 ± 0.2	1.2 ± 0.3	-0.6 ± 0.3	E Africa F	W Africa M
46	3.8 ± 0.5	-0.2 ± 0.1	2.5 ± 0.2	0.9 ± 0.2	0.6 ± 0.2	0.2 ± 0.3	1.8 ± 0.4	0.6 ± 0.1	2.6 ± 0.3	0.6 ± 0.2	1.4 ± 0.3	-1.0 ± 0.3	E Africa F	W Africa M
47	3.3 ± 0.6	-0.0 ± 0.1	2.5 ± 0.3	0.9 ± 0.2	0.7 ± 0.2	0.1 ± 0.4	2.1 ± 0.4	0.8 ± 0.1	2.7 ± 0.3	0.6 ± 0.2	1.7 ± 0.3	-0.7 ± 0.3	E Africa F	W Africa M
48	2.9 ± 0.6	-0.0 ± 0.1	2.6 ± 0.2	1.3 ± 0.2	0.7 ± 0.2	-0.0 ± 0.4	1.5 ± 0.4	0.8 ± 0.1	2.9 ± 0.3	0.9 ± 0.2	1.6 ± 0.3	-1.1 ± 0.3	E Europe M	W Africa M
49	3.4 ± 0.6	-0.1 ± 0.1	2.5 ± 0.2	1.4 ± 0.2	1.0 ± 0.2	-0.2 ± 0.4	1.6 ± 0.5	0.8 ± 0.1	2.7 ± 0.3	0.8 ± 0.2	1.7 ± 0.3	-1.1 ± 0.3	E Africa F	W Africa M
50	3.1 ± 0.6	0.1 ± 0.1	2.8 ± 0.2	1.4 ± 0.2	0.8 ± 0.2	-0.2 ± 0.4	1.5 ± 0.4	0.9 ± 0.1	2.7 ± 0.3	1.0 ± 0.2	2.2 ± 0.3	-1.5 ± 0.3	E Africa F	W Africa M
51	3.4 ± 0.6	0.2 ± 0.1	2.5 ± 0.2	1.6 ± 0.2	1.0 ± 0.2	-0.1 ± 0.4	1.2 ± 0.5	1.1 ± 0.1	3.1 ± 0.3	1.1 ± 0.2	2.0 ± 0.3	-1.7 ± 0.4	E Africa F	W Africa M
52	3.3 ± 0.6	0.3 ± 0.1	2.8 ± 0.2	1.6 ± 0.2	1.3 ± 0.2	-0.3 ± 0.4	1.4 ± 0.5	1.0 ± 0.1	2.8 ± 0.3	1.0 ± 0.2	1.9 ± 0.3	-1.5 ± 0.4	E Africa F	W Africa M

Table 63. *Mean raw error for Application-type images for algorithm roc-002. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	2.6 ± 0.2	3.39 ± 0.10	2.5 ± 0.1	2.3 ± 0.1	2.8 ± 0.2	2.8 ± 0.2	1.3 ± 0.2	2.7 ± 0.1	1.5 ± 0.1	1.69 ± 0.10	1.8 ± 0.2	1.5 ± 0.2	E Asia F	E Africa M
15	2.6 ± 0.2	3.5 ± 0.1	2.0 ± 0.1	2.3 ± 0.1	2.8 ± 0.3	2.6 ± 0.3	1.3 ± 0.2	2.85 ± 0.09	1.5 ± 0.1	1.7 ± 0.1	2.1 ± 0.2	1.6 ± 0.3	E Asia F	E Africa M
16	2.4 ± 0.2	3.4 ± 0.1	1.7 ± 0.1	1.9 ± 0.1	2.9 ± 0.3	2.7 ± 0.4	1.5 ± 0.2	2.77 ± 0.09	1.3 ± 0.2	1.59 ± 0.09	2.0 ± 0.2	1.3 ± 0.2	E Asia F	E Europe M
17	2.5 ± 0.3	3.1 ± 0.1	1.3 ± 0.1	1.7 ± 0.1	2.8 ± 0.3	2.3 ± 0.3	1.2 ± 0.2	2.6 ± 0.1	0.8 ± 0.1	1.3 ± 0.1	1.9 ± 0.2	1.8 ± 0.4	E Asia F	E Europe M
18	1.7 ± 0.2	2.5 ± 0.1	0.5 ± 0.2	1.0 ± 0.1	2.3 ± 0.2	1.8 ± 0.3	0.8 ± 0.2	2.18 ± 0.10	0.2 ± 0.1	0.8 ± 0.1	1.6 ± 0.2	1.3 ± 0.3	E Asia F	E Europe M
19	2.1 ± 0.3	2.4 ± 0.1	-0.0 ± 0.2	0.9 ± 0.1	2.1 ± 0.2	2.0 ± 0.3	1.2 ± 0.3	2.1 ± 0.1	-0.0 ± 0.2	0.8 ± 0.1	1.3 ± 0.2	1.5 ± 0.3	E Asia F	E Europe F
20	2.0 ± 0.3	2.3 ± 0.1	-0.3 ± 0.2	0.7 ± 0.1	2.0 ± 0.2	1.9 ± 0.3	1.3 ± 0.3	2.0 ± 0.1	-0.1 ± 0.2	0.8 ± 0.1	1.3 ± 0.2	1.5 ± 0.3	E Asia F	E Europe F
21	1.9 ± 0.3	2.3 ± 0.1	-0.5 ± 0.2	0.5 ± 0.1	1.9 ± 0.2	1.5 ± 0.3	1.7 ± 0.3	1.9 ± 0.1	-0.4 ± 0.2	0.8 ± 0.1	1.2 ± 0.2	1.5 ± 0.3	E Asia F	E Europe F
22	2.0 ± 0.3	2.1 ± 0.1	-0.7 ± 0.1	0.3 ± 0.1	1.7 ± 0.1	1.1 ± 0.3	2.1 ± 0.3	1.7 ± 0.1	-0.2 ± 0.2	0.8 ± 0.1	1.0 ± 0.2	1.3 ± 0.3	E Africa M	E Europe F
23	1.9 ± 0.3	1.85 ± 0.10	-0.6 ± 0.1	0.3 ± 0.1	1.6 ± 0.1	1.1 ± 0.3	1.9 ± 0.3	1.5 ± 0.1	-0.4 ± 0.2	1.0 ± 0.1	0.9 ± 0.2	1.6 ± 0.3	E Africa M	E Europe F
24	1.7 ± 0.3	1.71 ± 0.09	-0.7 ± 0.1	0.0 ± 0.1	1.3 ± 0.1	1.0 ± 0.2	1.9 ± 0.3	1.4 ± 0.1	-0.2 ± 0.2	1.0 ± 0.1	0.9 ± 0.2	1.4 ± 0.2	E Africa M	E Europe F
25	1.3 ± 0.2	1.48 ± 0.08	-0.8 ± 0.1	-0.08 ± 0.10	1.2 ± 0.1	0.9 ± 0.2	1.9 ± 0.2	1.3 ± 0.1	-0.3 ± 0.2	1.0 ± 0.1	0.9 ± 0.2	1.3 ± 0.2	E Africa M	E Europe F
26	1.2 ± 0.2	1.23 ± 0.08	-0.7 ± 0.1	-0.32 ± 0.10	1.1 ± 0.1	0.6 ± 0.2	1.8 ± 0.2	1.13 ± 0.10	-0.2 ± 0.1	0.9 ± 0.1	0.9 ± 0.2	0.9 ± 0.2	E Africa M	E Europe F
27	1.2 ± 0.2	1.00 ± 0.08	-0.7 ± 0.1	-0.50 ± 0.09	0.8 ± 0.1	0.4 ± 0.2	1.6 ± 0.2	1.0 ± 0.1	-0.2 ± 0.1	0.70 ± 0.09	0.9 ± 0.2	0.8 ± 0.2	E Africa M	E Europe F
28	1.0 ± 0.2	0.74 ± 0.07	-0.6 ± 0.1	-0.56 ± 0.10	0.7 ± 0.1	0.1 ± 0.2	1.3 ± 0.2	0.8 ± 0.1	-0.2 ± 0.1	0.59 ± 0.09	0.9 ± 0.2	0.5 ± 0.2	E Africa M	E Europe F
29	1.1 ± 0.3	0.51 ± 0.07	-0.7 ± 0.1	-0.71 ± 0.10	0.5 ± 0.1	-0.0 ± 0.2	1.2 ± 0.2	0.62 ± 0.09	-0.3 ± 0.1	0.34 ± 0.08	0.5 ± 0.2	0.6 ± 0.2	E Africa M	S Asia F
30	0.8 ± 0.2	0.32 ± 0.07	-0.7 ± 0.1	-0.85 ± 0.10	0.3 ± 0.1	-0.4 ± 0.2	1.2 ± 0.2	0.43 ± 0.10	-0.4 ± 0.1	0.09 ± 0.08	0.6 ± 0.2	0.3 ± 0.2	E Africa M	S Asia F
31	0.6 ± 0.3	0.05 ± 0.08	-0.6 ± 0.1	-1.08 ± 0.10	0.2 ± 0.1	-0.4 ± 0.2	1.0 ± 0.2	0.33 ± 0.10	-0.5 ± 0.1	-0.10 ± 0.08	0.3 ± 0.2	-0.0 ± 0.2	E Africa M	S Asia F
32	0.7 ± 0.3	0.01 ± 0.08	-0.6 ± 0.1	-1.1 ± 0.1	0.0 ± 0.1	-0.3 ± 0.2	0.9 ± 0.2	0.14 ± 0.10	-0.5 ± 0.1	-0.26 ± 0.08	0.2 ± 0.2	-0.1 ± 0.2	E Africa M	S Asia F
33	0.6 ± 0.3	-0.18 ± 0.08	-0.7 ± 0.1	-1.2 ± 0.1	-0.1 ± 0.1	-0.6 ± 0.2	0.9 ± 0.2	-0.1 ± 0.1	-0.4 ± 0.1	-0.50 ± 0.08	-0.0 ± 0.2	-0.4 ± 0.2	E Africa M	S Asia F
34	0.4 ± 0.3	-0.24 ± 0.08	-0.6 ± 0.1	-1.2 ± 0.1	-0.1 ± 0.1	-0.8 ± 0.2	0.5 ± 0.2	-0.18 ± 0.10	-0.6 ± 0.1	-0.62 ± 0.09	0.0 ± 0.2	-0.3 ± 0.2	E Africa M	S Asia F
35	0.7 ± 0.3	-0.46 ± 0.09	-0.8 ± 0.1	-1.4 ± 0.1	-0.4 ± 0.1	-1.0 ± 0.3	0.6 ± 0.2	-0.2 ± 0.1	-0.6 ± 0.2	-0.70 ± 0.09	-0.1 ± 0.2	-0.6 ± 0.2	E Africa F	S Asia F
36	0.5 ± 0.3	-0.47 ± 0.09	-0.6 ± 0.2	-1.4 ± 0.1	-0.4 ± 0.1	-0.9 ± 0.2	0.5 ± 0.3	-0.4 ± 0.1	-0.4 ± 0.2	-0.92 ± 0.09	0.0 ± 0.2	-0.8 ± 0.2	E Africa M	S Asia F
37	0.4 ± 0.3	-0.61 ± 0.09	-0.5 ± 0.2	-1.3 ± 0.1	-0.5 ± 0.1	-1.0 ± 0.3	0.5 ± 0.3	-0.5 ± 0.1	-0.7 ± 0.2	-1.01 ± 0.10	-0.2 ± 0.2	-1.0 ± 0.2	E Africa M	S Asia F
38	0.9 ± 0.4	-0.68 ± 0.09	-0.5 ± 0.2	-1.2 ± 0.1	-0.4 ± 0.2	-1.1 ± 0.3	0.2 ± 0.3	-0.5 ± 0.1	-0.6 ± 0.2	-1.14 ± 0.10	-0.1 ± 0.2	-1.1 ± 0.2	E Africa F	S Asia F
39	0.6 ± 0.4	-0.77 ± 0.09	-0.6 ± 0.2	-1.4 ± 0.1	-0.6 ± 0.2	-1.1 ± 0.3	0.5 ± 0.3	-0.6 ± 0.1	-0.5 ± 0.2	-1.15 ± 0.10	-0.3 ± 0.2	-1.2 ± 0.2	E Africa F	S Asia F
40	0.7 ± 0.4	-0.81 ± 0.09	-0.4 ± 0.2	-1.1 ± 0.1	-0.7 ± 0.2	-1.5 ± 0.3	0.5 ± 0.3	-0.6 ± 0.1	-0.6 ± 0.2	-1.2 ± 0.1	-0.3 ± 0.2	-1.5 ± 0.2	E Africa F	W Africa F
41	0.6 ± 0.4	-0.94 ± 0.09	-0.5 ± 0.2	-1.1 ± 0.2	-0.8 ± 0.2	-1.5 ± 0.3	0.5 ± 0.3	-0.8 ± 0.1	-0.6 ± 0.2	-1.2 ± 0.1	-0.5 ± 0.2	-1.5 ± 0.2	E Africa F	W Africa M
42	1.0 ± 0.4	-0.89 ± 0.09	-0.3 ± 0.2	-0.7 ± 0.2	-0.7 ± 0.2	-1.4 ± 0.3	0.4 ± 0.3	-0.7 ± 0.1	-0.5 ± 0.2	-1.1 ± 0.1	-0.3 ± 0.2	-1.7 ± 0.2	E Africa F	W Africa M
43	1.1 ± 0.4	-1.07 ± 0.09	-0.3 ± 0.2	-0.8 ± 0.2	-0.7 ± 0.2	-1.6 ± 0.3	0.6 ± 0.3	-0.8 ± 0.1	-0.6 ± 0.2	-1.1 ± 0.1	-0.4 ± 0.2	-1.9 ± 0.3	E Africa F	W Africa M
44	1.0 ± 0.5	-1.07 ± 0.09	-0.5 ± 0.2	-0.7 ± 0.2	-0.6 ± 0.2	-1.5 ± 0.3	0.1 ± 0.3	-0.8 ± 0.1	-0.3 ± 0.2	-1.1 ± 0.1	-0.2 ± 0.2	-2.1 ± 0.3	E Africa F	W Africa M
45	0.8 ± 0.5	-1.12 ± 0.10	-0.4 ± 0.2	-0.6 ± 0.2	-0.7 ± 0.2	-1.6 ± 0.3	-0.0 ± 0.3	-0.9 ± 0.1	-0.5 ± 0.2	-0.9 ± 0.2	-0.5 ± 0.2	-2.1 ± 0.3	E Africa F	W Africa M
46	1.7 ± 0.5	-1.22 ± 0.10	0.0 ± 0.2	-0.3 ± 0.2	-0.9 ± 0.2	-1.5 ± 0.4	-0.1 ± 0.4	-0.8 ± 0.1	-0.2 ± 0.2	-0.7 ± 0.2	-0.4 ± 0.2	-2.4 ± 0.3	E Africa F	W Africa M
47	1.6 ± 0.5	-1.1 ± 0.1	-0.2 ± 0.3	-0.4 ± 0.2	-0.8 ± 0.2	-1.7 ± 0.4	0.3 ± 0.4	-0.9 ± 0.1	-0.3 ± 0.2	-0.6 ± 0.2	-0.1 ± 0.3	-2.3 ± 0.3	E Africa F	W Africa M
48	1.1 ± 0.6	-1.2 ± 0.1	0.1 ± 0.3	-0.1 ± 0.2	-0.9 ± 0.2	-1.5 ± 0.4	-0.2 ± 0.4	-0.9 ± 0.1	-0.2 ± 0.3	-0.4 ± 0.2	-0.1 ± 0.3	-2.6 ± 0.3	E Africa F	W Africa M
49	1.5 ± 0.6	-1.3 ± 0.1	-0.1 ± 0.3	0.0 ± 0.2	-0.6 ± 0.2	-1.7 ± 0.4	-0.2 ± 0.5	-0.9 ± 0.1	-0.2 ± 0.3	-0.4 ± 0.2	-0.1 ± 0.3	-2.7 ± 0.3	E Africa F	W Africa M
50	1.3 ± 0.6	-1.3 ± 0.1	0.5 ± 0.3	0.0 ± 0.2	-0.8 ± 0.2	-1.8 ± 0.4	-0.3 ± 0.4	-0.9 ± 0.1	-0.3 ± 0.3	-0.3 ± 0.2	0.2 ± 0.3	-2.9 ± 0.3	E Africa F	W Africa M
51	1.4 ± 0.6	-1.3 ± 0.1	0.3 ± 0.3	0.2 ± 0.2	-0.7 ± 0.2	-1.5 ± 0.4	-0.7 ± 0.5	-0.8 ± 0.1	-0.3 ± 0.2	-0.1 ± 0.2	-0.0 ± 0.3	-3.1 ± 0.4	E Africa F	W Africa M
52	1.5 ± 0.6	-1.2 ± 0.1	0.6 ± 0.3	0.1 ± 0.2	-0.4 ± 0.2	-1.8 ± 0.4	-0.6 ± 0.5	-0.9 ± 0.1	-0.4 ± 0.3	-0.1 ± 0.2	-0.1 ± 0.3	-2.8 ± 0.4	E Africa F	W Africa M

Table 64. *Mean raw error for Application-type images for algorithm shufti-000. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	4.4 ± 0.4	3.6 ± 0.1	3.1 ± 0.3	3.9 ± 0.2	3.4 ± 0.3	4.4 ± 0.4	2.9 ± 0.3	2.7 ± 0.1	1.6 ± 0.2	2.4 ± 0.1	2.3 ± 0.2	3.4 ± 0.3	W Africa F	E Europe M
15	4.5 ± 0.4	3.7 ± 0.2	3.6 ± 0.3	4.2 ± 0.2	3.5 ± 0.3	4.4 ± 0.5	2.7 ± 0.4	2.9 ± 0.1	2.1 ± 0.2	2.6 ± 0.1	2.6 ± 0.2	3.2 ± 0.4	E Africa F	E Europe M
16	4.5 ± 0.4	3.4 ± 0.2	3.8 ± 0.4	3.9 ± 0.2	3.7 ± 0.3	4.2 ± 0.5	3.5 ± 0.4	2.8 ± 0.1	2.4 ± 0.2	2.9 ± 0.2	2.7 ± 0.2	3.1 ± 0.4	E Africa F	E Europe M
17	4.5 ± 0.4	3.2 ± 0.2	3.7 ± 0.4	4.0 ± 0.2	3.2 ± 0.3	4.1 ± 0.4	3.4 ± 0.3	2.8 ± 0.1	2.0 ± 0.2	2.8 ± 0.2	2.8 ± 0.2	3.5 ± 0.4	E Africa F	E Europe M
18	3.9 ± 0.4	2.7 ± 0.1	3.0 ± 0.4	3.6 ± 0.2	3.1 ± 0.2	3.5 ± 0.4	3.2 ± 0.3	2.5 ± 0.1	1.8 ± 0.2	3.1 ± 0.2	2.7 ± 0.2	2.7 ± 0.3	E Africa F	E Europe M
19	4.7 ± 0.4	2.6 ± 0.2	3.4 ± 0.4	3.8 ± 0.2	3.2 ± 0.2	3.9 ± 0.4	3.5 ± 0.3	2.9 ± 0.1	2.2 ± 0.3	3.4 ± 0.2	2.9 ± 0.2	3.4 ± 0.4	E Africa F	E Europe M
20	4.4 ± 0.4	2.6 ± 0.2	3.4 ± 0.3	3.6 ± 0.2	3.2 ± 0.2	3.5 ± 0.3	3.6 ± 0.3	2.9 ± 0.1	2.7 ± 0.3	3.8 ± 0.2	3.0 ± 0.2	3.4 ± 0.4	E Africa F	E Asia F
21	4.3 ± 0.3	2.6 ± 0.2	3.4 ± 0.3	3.6 ± 0.2	3.0 ± 0.2	3.9 ± 0.4	4.4 ± 0.3	3.3 ± 0.1	2.9 ± 0.3	4.0 ± 0.2	3.4 ± 0.2	3.6 ± 0.4	E Africa M	E Asia F
22	4.2 ± 0.4	2.5 ± 0.2	3.3 ± 0.2	3.4 ± 0.2	2.9 ± 0.2	3.0 ± 0.4	5.2 ± 0.4	3.5 ± 0.1	3.4 ± 0.3	4.2 ± 0.2	3.3 ± 0.2	3.5 ± 0.3	E Africa M	E Asia F
23	4.3 ± 0.3	2.3 ± 0.1	3.3 ± 0.2	3.3 ± 0.1	2.9 ± 0.2	3.5 ± 0.3	5.0 ± 0.3	3.5 ± 0.1	3.6 ± 0.3	4.4 ± 0.2	3.4 ± 0.2	4.1 ± 0.3	E Africa M	E Asia F
24	4.4 ± 0.3	2.3 ± 0.1	3.2 ± 0.2	3.2 ± 0.1	2.8 ± 0.2	3.1 ± 0.3	5.0 ± 0.3	3.6 ± 0.1	3.8 ± 0.3	4.4 ± 0.2	3.3 ± 0.2	4.1 ± 0.3	E Africa M	E Asia F
25	3.9 ± 0.3	2.1 ± 0.1	3.2 ± 0.2	3.0 ± 0.1	2.8 ± 0.2	2.7 ± 0.3	5.0 ± 0.3	3.4 ± 0.1	3.8 ± 0.2	4.7 ± 0.1	3.4 ± 0.2	3.9 ± 0.3	E Africa M	E Asia F
26	4.1 ± 0.3	2.2 ± 0.1	3.1 ± 0.2	2.9 ± 0.1	2.9 ± 0.2	2.8 ± 0.3	4.8 ± 0.3	3.3 ± 0.1	3.7 ± 0.2	4.7 ± 0.1	3.4 ± 0.2	4.1 ± 0.2	E Africa M	E Asia F
27	4.0 ± 0.3	2.1 ± 0.1	3.3 ± 0.2	2.7 ± 0.1	2.5 ± 0.2	2.7 ± 0.3	4.8 ± 0.3	3.3 ± 0.1	3.8 ± 0.2	4.6 ± 0.1	3.3 ± 0.2	3.8 ± 0.2	E Africa M	E Asia F
28	3.6 ± 0.3	1.9 ± 0.1	3.1 ± 0.2	2.6 ± 0.1	2.6 ± 0.2	2.5 ± 0.3	4.5 ± 0.2	3.2 ± 0.1	4.1 ± 0.2	4.5 ± 0.1	3.2 ± 0.2	3.6 ± 0.2	S Asia M	E Asia F
29	3.8 ± 0.3	1.8 ± 0.1	2.9 ± 0.2	2.4 ± 0.1	2.5 ± 0.2	2.3 ± 0.3	4.5 ± 0.2	3.1 ± 0.1	3.7 ± 0.2	4.5 ± 0.1	2.8 ± 0.2	3.9 ± 0.2	S Asia M	E Asia F
30	3.7 ± 0.3	1.7 ± 0.1	2.8 ± 0.2	2.3 ± 0.1	2.5 ± 0.2	2.1 ± 0.3	4.3 ± 0.2	3.0 ± 0.1	3.7 ± 0.2	4.4 ± 0.1	3.1 ± 0.2	3.5 ± 0.2	S Asia M	E Asia F
31	3.4 ± 0.3	1.6 ± 0.1	2.8 ± 0.2	2.2 ± 0.1	2.3 ± 0.2	1.8 ± 0.3	4.1 ± 0.2	2.8 ± 0.1	3.6 ± 0.2	4.31 ± 0.10	3.1 ± 0.2	3.3 ± 0.2	S Asia M	E Asia F
32	3.4 ± 0.3	1.6 ± 0.1	2.7 ± 0.2	2.1 ± 0.1	2.3 ± 0.2	2.0 ± 0.3	3.8 ± 0.3	2.7 ± 0.1	3.4 ± 0.2	4.19 ± 0.10	3.0 ± 0.2	3.3 ± 0.2	S Asia M	E Asia F
33	3.3 ± 0.3	1.4 ± 0.1	2.5 ± 0.2	2.1 ± 0.1	2.4 ± 0.2	1.7 ± 0.3	4.1 ± 0.3	2.7 ± 0.1	3.4 ± 0.2	4.0 ± 0.1	2.6 ± 0.2	3.0 ± 0.2	E Africa M	E Asia F
34	3.1 ± 0.3	1.4 ± 0.1	2.4 ± 0.2	2.0 ± 0.1	2.2 ± 0.2	1.6 ± 0.3	3.4 ± 0.3	2.5 ± 0.1	3.3 ± 0.2	3.9 ± 0.1	2.8 ± 0.2	3.0 ± 0.2	S Asia M	E Asia F
35	3.3 ± 0.3	1.1 ± 0.1	2.3 ± 0.2	1.9 ± 0.1	1.9 ± 0.2	1.3 ± 0.3	3.7 ± 0.3	2.4 ± 0.1	3.0 ± 0.2	3.8 ± 0.1	2.4 ± 0.2	2.6 ± 0.2	S Asia M	E Asia F
36	2.9 ± 0.3	1.1 ± 0.1	2.4 ± 0.2	1.9 ± 0.1	2.0 ± 0.2	1.4 ± 0.3	3.6 ± 0.3	2.3 ± 0.1	3.3 ± 0.2	3.61 ± 0.10	2.6 ± 0.2	2.4 ± 0.2	S Asia M	E Asia F
37	3.0 ± 0.3	1.2 ± 0.1	2.2 ± 0.2	1.9 ± 0.1	1.8 ± 0.2	1.2 ± 0.3	3.3 ± 0.3	2.2 ± 0.1	2.9 ± 0.2	3.4 ± 0.1	2.4 ± 0.2	2.3 ± 0.2	S Asia M	E Asia F
38	3.3 ± 0.4	1.0 ± 0.1	2.2 ± 0.2	2.0 ± 0.1	1.8 ± 0.2	1.0 ± 0.3	3.0 ± 0.3	2.0 ± 0.1	2.8 ± 0.2	3.3 ± 0.1	2.5 ± 0.2	2.0 ± 0.2	E Africa F	E Asia F
39	2.8 ± 0.4	1.0 ± 0.1	2.0 ± 0.2	1.9 ± 0.1	1.7 ± 0.2	1.1 ± 0.3	3.2 ± 0.3	1.8 ± 0.1	2.9 ± 0.2	3.1 ± 0.1	2.3 ± 0.2	2.0 ± 0.2	E Africa M	E Asia F
40	2.6 ± 0.4	0.8 ± 0.1	2.3 ± 0.2	1.9 ± 0.2	1.5 ± 0.2	1.1 ± 0.3	3.2 ± 0.3	1.8 ± 0.1	2.6 ± 0.2	3.0 ± 0.1	2.1 ± 0.2	1.7 ± 0.3	E Africa M	E Asia F
41	2.4 ± 0.4	0.8 ± 0.1	2.1 ± 0.2	1.8 ± 0.2	1.4 ± 0.2	0.5 ± 0.4	3.1 ± 0.3	1.7 ± 0.1	2.7 ± 0.2	2.8 ± 0.1	2.0 ± 0.2	1.7 ± 0.3	E Africa M	W Africa F
42	2.6 ± 0.4	0.9 ± 0.1	2.1 ± 0.2	1.9 ± 0.2	1.5 ± 0.2	0.8 ± 0.4	3.0 ± 0.3	1.6 ± 0.1	2.8 ± 0.2	2.7 ± 0.1	2.0 ± 0.2	1.3 ± 0.3	E Africa M	W Africa F
43	2.6 ± 0.4	0.6 ± 0.1	2.1 ± 0.3	1.8 ± 0.2	1.4 ± 0.2	0.5 ± 0.4	3.2 ± 0.4	1.5 ± 0.1	2.6 ± 0.2	2.7 ± 0.1	2.0 ± 0.2	1.2 ± 0.3	E Africa M	W Africa F
44	2.4 ± 0.5	0.5 ± 0.1	1.8 ± 0.3	1.8 ± 0.2	1.5 ± 0.2	0.3 ± 0.4	2.7 ± 0.4	1.3 ± 0.1	2.8 ± 0.3	2.3 ± 0.1	2.0 ± 0.2	1.3 ± 0.3	E Europe M	W Africa F
45	2.5 ± 0.5	0.5 ± 0.1	2.0 ± 0.2	1.7 ± 0.2	1.4 ± 0.2	0.5 ± 0.4	2.8 ± 0.4	1.2 ± 0.1	2.6 ± 0.3	2.4 ± 0.2	1.7 ± 0.2	0.9 ± 0.3	E Africa M	W Africa F
46	3.0 ± 0.5	0.3 ± 0.1	2.1 ± 0.3	1.8 ± 0.2	1.3 ± 0.2	0.2 ± 0.5	3.1 ± 0.4	1.0 ± 0.1	2.8 ± 0.3	2.2 ± 0.2	1.8 ± 0.3	0.9 ± 0.3	E Africa M	W Africa F
47	2.7 ± 0.5	0.4 ± 0.1	2.0 ± 0.4	1.8 ± 0.2	1.4 ± 0.2	0.4 ± 0.4	3.0 ± 0.4	1.0 ± 0.1	2.5 ± 0.3	2.3 ± 0.2	1.7 ± 0.3	0.9 ± 0.3	E Africa M	E Asia F
48	2.2 ± 0.6	0.3 ± 0.1	2.3 ± 0.3	1.9 ± 0.2	1.2 ± 0.2	0.3 ± 0.4	2.4 ± 0.5	0.8 ± 0.1	2.6 ± 0.3	2.3 ± 0.2	1.9 ± 0.3	0.8 ± 0.4	E Europe M	E Asia F
49	2.9 ± 0.6	0.1 ± 0.1	2.2 ± 0.3	2.0 ± 0.2	1.5 ± 0.2	0.4 ± 0.4	2.2 ± 0.5	0.8 ± 0.1	2.5 ± 0.3	2.1 ± 0.2	1.7 ± 0.3	0.7 ± 0.4	E Africa F	E Asia F
50	2.4 ± 0.6	0.1 ± 0.1	2.4 ± 0.3	2.0 ± 0.2	1.2 ± 0.2	0.6 ± 0.5	2.3 ± 0.5	0.7 ± 0.1	2.3 ± 0.3	2.1 ± 0.2	2.1 ± 0.3	0.3 ± 0.4	E Africa F	E Asia F
51	2.3 ± 0.5	0.1 ± 0.1	2.3 ± 0.3	1.9 ± 0.2	1.3 ± 0.2	0.4 ± 0.5	1.7 ± 0.6	0.5 ± 0.1	2.3 ± 0.3	2.0 ± 0.2	2.0 ± 0.3	0.6 ± 0.4	E Europe F	E Asia F
52	1.9 ± 0.6	0.1 ± 0.1	2.3 ± 0.3	1.8 ± 0.2	1.6 ± 0.3	0.2 ± 0.5	2.1 ± 0.6	0.4 ± 0.1	2.3 ± 0.3	1.9 ± 0.2	1.7 ± 0.3	0.5 ± 0.5	E Europe M	E Asia F

Table 65. *Mean raw error for Application-type images for algorithm unissey-001. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	2.6 ± 0.3	3.8 ± 0.2	2.3 ± 0.3	2.2 ± 0.2	2.8 ± 0.3	4.1 ± 0.5	2.1 ± 0.3	3.0 ± 0.2	0.8 ± 0.3	1.7 ± 0.2	2.3 ± 0.3	2.6 ± 0.4	W Africa F	E Europe M
15	2.5 ± 0.4	4.1 ± 0.2	2.6 ± 0.3	2.5 ± 0.2	3.0 ± 0.4	3.9 ± 0.6	2.0 ± 0.3	3.6 ± 0.2	1.2 ± 0.3	2.4 ± 0.2	3.0 ± 0.4	2.6 ± 0.4	E Asia F	E Europe M
16	2.3 ± 0.4	4.0 ± 0.2	2.6 ± 0.3	2.4 ± 0.2	3.4 ± 0.4	4.0 ± 0.6	2.9 ± 0.4	3.8 ± 0.2	1.9 ± 0.3	2.8 ± 0.2	3.6 ± 0.4	2.5 ± 0.4	E Asia F	E Europe M
17	2.6 ± 0.4	3.9 ± 0.2	2.9 ± 0.4	2.3 ± 0.2	3.0 ± 0.4	4.2 ± 0.5	3.1 ± 0.4	3.9 ± 0.2	1.2 ± 0.3	3.0 ± 0.2	3.4 ± 0.4	3.1 ± 0.4	W Africa F	E Europe M
18	2.1 ± 0.4	3.4 ± 0.2	2.4 ± 0.4	1.8 ± 0.2	2.6 ± 0.3	3.6 ± 0.5	3.1 ± 0.4	3.4 ± 0.2	1.4 ± 0.3	3.0 ± 0.2	3.2 ± 0.3	2.8 ± 0.4	W Africa F	E Europe M
19	2.2 ± 0.4	3.2 ± 0.2	2.0 ± 0.4	2.0 ± 0.2	2.5 ± 0.3	3.8 ± 0.5	3.7 ± 0.4	3.3 ± 0.2	1.3 ± 0.3	3.3 ± 0.2	2.9 ± 0.3	2.6 ± 0.4	W Africa F	E Europe M
20	2.1 ± 0.4	3.1 ± 0.2	2.3 ± 0.3	1.5 ± 0.2	2.2 ± 0.2	4.0 ± 0.5	3.9 ± 0.4	3.2 ± 0.2	1.7 ± 0.3	3.4 ± 0.2	3.1 ± 0.3	2.8 ± 0.4	W Africa F	S Asia F
21	1.8 ± 0.4	2.8 ± 0.2	2.0 ± 0.3	1.3 ± 0.2	2.0 ± 0.2	3.6 ± 0.5	3.7 ± 0.4	3.1 ± 0.2	1.7 ± 0.3	3.2 ± 0.2	3.0 ± 0.3	2.6 ± 0.4	E Africa M	S Asia F
22	1.5 ± 0.4	2.3 ± 0.2	2.2 ± 0.3	0.9 ± 0.2	1.6 ± 0.2	3.5 ± 0.5	4.0 ± 0.3	2.8 ± 0.2	2.0 ± 0.3	3.1 ± 0.2	2.5 ± 0.3	2.1 ± 0.3	E Africa M	S Asia F
23	1.3 ± 0.3	2.1 ± 0.1	2.2 ± 0.3	0.7 ± 0.2	1.5 ± 0.2	3.1 ± 0.4	3.5 ± 0.3	2.8 ± 0.2	1.7 ± 0.3	2.9 ± 0.2	2.4 ± 0.3	1.8 ± 0.3	E Africa M	S Asia F
24	1.1 ± 0.3	1.6 ± 0.1	2.2 ± 0.2	0.4 ± 0.1	1.2 ± 0.2	2.7 ± 0.4	3.3 ± 0.3	2.4 ± 0.2	2.0 ± 0.3	2.7 ± 0.1	2.1 ± 0.2	1.6 ± 0.3	E Africa M	S Asia F
25	1.0 ± 0.3	1.3 ± 0.1	2.2 ± 0.2	-0.1 ± 0.1	0.6 ± 0.2	2.8 ± 0.4	3.3 ± 0.3	2.2 ± 0.2	2.1 ± 0.2	2.4 ± 0.1	2.0 ± 0.2	1.3 ± 0.3	E Africa M	S Asia F
26	1.1 ± 0.3	0.8 ± 0.1	2.3 ± 0.2	-0.6 ± 0.1	0.4 ± 0.2	2.3 ± 0.3	3.0 ± 0.3	1.8 ± 0.1	1.9 ± 0.2	2.0 ± 0.1	1.8 ± 0.2	0.7 ± 0.2	E Africa M	S Asia F
27	0.7 ± 0.3	0.48 ± 0.10	2.2 ± 0.2	-1.0 ± 0.1	0.0 ± 0.1	2.0 ± 0.3	2.5 ± 0.3	1.6 ± 0.1	2.1 ± 0.2	1.6 ± 0.1	1.6 ± 0.2	0.3 ± 0.2	E Africa M	S Asia F
28	0.2 ± 0.3	0.01 ± 0.10	2.2 ± 0.2	-1.4 ± 0.1	-0.3 ± 0.2	2.1 ± 0.3	2.0 ± 0.3	1.4 ± 0.1	2.1 ± 0.2	1.1 ± 0.1	1.4 ± 0.2	-0.4 ± 0.2	E Europe F	S Asia F
29	0.3 ± 0.3	-0.38 ± 0.10	2.3 ± 0.2	-1.5 ± 0.1	-0.7 ± 0.2	1.7 ± 0.3	1.9 ± 0.3	1.1 ± 0.1	1.8 ± 0.2	0.7 ± 0.1	0.9 ± 0.2	-0.3 ± 0.2	E Europe F	S Asia F
30	-0.1 ± 0.3	-0.81 ± 0.09	2.3 ± 0.2	-1.9 ± 0.1	-0.9 ± 0.2	1.2 ± 0.3	1.6 ± 0.3	0.7 ± 0.1	1.8 ± 0.2	0.2 ± 0.1	0.7 ± 0.2	-1.0 ± 0.2	E Europe F	S Asia F
31	-0.3 ± 0.3	-1.21 ± 0.10	2.6 ± 0.2	-2.3 ± 0.1	-1.3 ± 0.2	0.9 ± 0.3	1.3 ± 0.3	0.5 ± 0.1	1.7 ± 0.2	-0.2 ± 0.1	0.4 ± 0.3	-1.5 ± 0.2	E Europe F	S Asia F
32	-0.2 ± 0.3	-1.56 ± 0.10	2.4 ± 0.2	-2.5 ± 0.1	-1.6 ± 0.2	0.6 ± 0.3	0.9 ± 0.3	0.2 ± 0.1	1.8 ± 0.2	-0.5 ± 0.1	0.2 ± 0.2	-2.0 ± 0.2	E Europe F	S Asia F
33	-0.7 ± 0.4	-1.9 ± 0.1	2.5 ± 0.2	-2.7 ± 0.1	-2.0 ± 0.2	0.6 ± 0.4	0.5 ± 0.3	-0.3 ± 0.1	2.1 ± 0.2	-0.9 ± 0.1	-0.1 ± 0.3	-2.2 ± 0.2	E Europe F	S Asia F
34	-0.8 ± 0.4	-2.2 ± 0.1	2.5 ± 0.3	-2.9 ± 0.1	-2.3 ± 0.2	-0.1 ± 0.4	0.0 ± 0.3	-0.6 ± 0.1	1.9 ± 0.2	-1.1 ± 0.1	-0.6 ± 0.3	-2.7 ± 0.2	E Europe F	S Asia F
35	-0.9 ± 0.4	-2.6 ± 0.1	2.4 ± 0.3	-3.2 ± 0.2	-2.7 ± 0.2	-0.6 ± 0.4	-0.2 ± 0.3	-0.8 ± 0.1	1.5 ± 0.2	-1.4 ± 0.1	-0.7 ± 0.3	-2.9 ± 0.3	E Europe F	S Asia F
36	-1.2 ± 0.4	-2.8 ± 0.1	2.6 ± 0.3	-3.5 ± 0.2	-2.7 ± 0.2	-0.5 ± 0.4	-0.7 ± 0.3	-1.1 ± 0.1	1.6 ± 0.2	-1.7 ± 0.1	-1.0 ± 0.3	-3.5 ± 0.3	E Europe F	W Africa M
37	-1.2 ± 0.4	-3.1 ± 0.1	2.7 ± 0.3	-3.4 ± 0.2	-3.0 ± 0.2	-1.1 ± 0.4	-0.6 ± 0.3	-1.4 ± 0.1	1.3 ± 0.2	-1.9 ± 0.1	-1.3 ± 0.3	-3.8 ± 0.3	E Europe F	W Africa M
38	-1.2 ± 0.4	-3.4 ± 0.1	2.7 ± 0.3	-3.7 ± 0.2	-3.1 ± 0.2	-1.6 ± 0.4	-1.1 ± 0.3	-1.6 ± 0.1	1.2 ± 0.2	-2.2 ± 0.1	-0.9 ± 0.3	-4.2 ± 0.3	E Europe F	W Africa M
39	-1.3 ± 0.5	-3.7 ± 0.1	2.5 ± 0.3	-3.8 ± 0.2	-3.1 ± 0.2	-1.5 ± 0.4	-1.2 ± 0.3	-1.9 ± 0.1	1.0 ± 0.2	-2.3 ± 0.1	-1.1 ± 0.3	-4.7 ± 0.3	E Europe F	W Africa M
40	-1.8 ± 0.5	-3.9 ± 0.1	2.7 ± 0.3	-3.7 ± 0.2	-3.4 ± 0.2	-2.0 ± 0.4	-1.4 ± 0.4	-2.2 ± 0.1	1.1 ± 0.2	-2.5 ± 0.1	-1.3 ± 0.3	-5.0 ± 0.3	E Europe F	W Africa M
41	-2.4 ± 0.5	-4.1 ± 0.1	2.5 ± 0.3	-3.9 ± 0.2	-3.6 ± 0.2	-2.7 ± 0.4	-1.5 ± 0.4	-2.3 ± 0.1	0.8 ± 0.3	-2.7 ± 0.2	-1.5 ± 0.3	-5.2 ± 0.3	E Europe F	W Africa M
42	-2.1 ± 0.5	-4.1 ± 0.1	2.8 ± 0.3	-3.6 ± 0.2	-3.7 ± 0.3	-2.4 ± 0.4	-1.6 ± 0.4	-2.5 ± 0.1	0.8 ± 0.3	-3.0 ± 0.2	-1.4 ± 0.3	-5.5 ± 0.3	E Europe F	W Africa M
43	-2.0 ± 0.5	-4.4 ± 0.1	2.6 ± 0.3	-3.8 ± 0.3	-3.8 ± 0.3	-3.2 ± 0.5	-1.6 ± 0.4	-2.7 ± 0.1	0.6 ± 0.3	-2.9 ± 0.2	-1.7 ± 0.3	-5.9 ± 0.4	E Europe F	W Africa M
44	-1.9 ± 0.6	-4.6 ± 0.1	2.4 ± 0.3	-3.8 ± 0.3	-3.5 ± 0.3	-3.2 ± 0.5	-2.2 ± 0.4	-2.8 ± 0.2	0.8 ± 0.3	-3.1 ± 0.2	-1.6 ± 0.3	-5.9 ± 0.4	E Europe F	W Africa M
45	-2.4 ± 0.6	-4.6 ± 0.1	2.2 ± 0.3	-3.7 ± 0.3	-3.8 ± 0.3	-3.3 ± 0.5	-2.7 ± 0.5	-3.2 ± 0.2	0.6 ± 0.3	-3.0 ± 0.2	-1.9 ± 0.3	-6.2 ± 0.4	E Europe F	W Africa M
46	-1.6 ± 0.6	-4.9 ± 0.1	2.2 ± 0.3	-3.5 ± 0.3	-4.1 ± 0.3	-3.4 ± 0.5	-2.6 ± 0.5	-3.3 ± 0.2	0.7 ± 0.3	-2.9 ± 0.2	-1.9 ± 0.3	-6.6 ± 0.4	E Europe F	W Africa M
47	-1.6 ± 0.7	-4.8 ± 0.2	2.2 ± 0.3	-3.5 ± 0.3	-3.8 ± 0.3	-3.7 ± 0.5	-2.3 ± 0.5	-3.3 ± 0.2	0.3 ± 0.3	-2.8 ± 0.2	-1.8 ± 0.3	-6.1 ± 0.4	E Europe F	W Africa M
48	-2.5 ± 0.7	-4.9 ± 0.2	1.8 ± 0.3	-3.3 ± 0.3	-4.1 ± 0.3	-3.7 ± 0.5	-3.0 ± 0.6	-3.4 ± 0.2	0.4 ± 0.3	-2.8 ± 0.2	-2.2 ± 0.3	-6.8 ± 0.4	E Europe F	W Africa M
49	-2.3 ± 0.7	-5.0 ± 0.2	1.8 ± 0.3	-3.6 ± 0.3	-3.7 ± 0.3	-4.0 ± 0.5	-3.2 ± 0.6	-3.6 ± 0.2	0.3 ± 0.3	-3.0 ± 0.2	-2.0 ± 0.3	-6.9 ± 0.5	E Europe F	W Africa M
50	-2.9 ± 0.8	-5.1 ± 0.2	2.0 ± 0.3	-3.3 ± 0.3	-4.0 ± 0.3	-4.0 ± 0.5	-3.2 ± 0.6	-3.6 ± 0.2	-0.0 ± 0.3	-3.1 ± 0.3	-1.8 ± 0.3	-7.3 ± 0.5	E Europe F	W Africa M
51	-2.3 ± 0.7	-5.1 ± 0.2	1.6 ± 0.3	-3.5 ± 0.3	-4.3 ± 0.3	-4.5 ± 0.6	-3.5 ± 0.6	-3.6 ± 0.2	0.2 ± 0.3	-3.0 ± 0.3	-2.0 ± 0.3	-7.3 ± 0.5	E Europe F	W Africa M
52	-2.9 ± 0.8	-5.2 ± 0.2	1.5 ± 0.3	-3.6 ± 0.3	-3.7 ± 0.3	-5.0 ± 0.6	-2.9 ± 0.6	-3.9 ± 0.2	-0.1 ± 0.3	-3.1 ± 0.3	-2.3 ± 0.4	-7.3 ± 0.5	E Europe F	W Africa M

Table 66. *Mean raw error for Application-type images for algorithm viante-000. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	5.8 ± 0.5	5.3 ± 0.2	2.4 ± 0.3	5.8 ± 0.2	5.5 ± 0.4	7.1 ± 0.5	3.3 ± 0.4	3.6 ± 0.1	0.6 ± 0.1	3.2 ± 0.2	3.7 ± 0.3	4.8 ± 0.5	W Africa F	E Europe M
15	6.9 ± 0.5	5.9 ± 0.1	3.1 ± 0.3	6.8 ± 0.3	6.5 ± 0.4	7.5 ± 0.4	4.1 ± 0.4	4.7 ± 0.1	0.8 ± 0.2	4.7 ± 0.2	5.1 ± 0.3	6.2 ± 0.5	W Africa F	E Europe M
16	7.0 ± 0.4	6.0 ± 0.1	3.8 ± 0.3	7.1 ± 0.2	7.1 ± 0.3	7.4 ± 0.5	6.2 ± 0.4	5.3 ± 0.1	1.7 ± 0.3	5.7 ± 0.2	5.9 ± 0.3	6.4 ± 0.4	W Africa F	E Europe M
17	7.5 ± 0.4	5.9 ± 0.1	4.2 ± 0.3	7.1 ± 0.2	6.7 ± 0.3	7.3 ± 0.3	6.5 ± 0.3	5.4 ± 0.1	2.2 ± 0.3	6.2 ± 0.2	6.2 ± 0.3	7.2 ± 0.4	E Africa F	E Europe M
18	6.8 ± 0.3	5.3 ± 0.1	3.8 ± 0.3	6.4 ± 0.2	6.2 ± 0.2	6.6 ± 0.4	6.2 ± 0.3	5.0 ± 0.1	2.4 ± 0.2	5.8 ± 0.2	5.9 ± 0.2	6.3 ± 0.3	E Africa F	E Europe M
19	6.9 ± 0.3	4.9 ± 0.1	3.6 ± 0.2	6.4 ± 0.1	5.9 ± 0.2	6.8 ± 0.3	6.7 ± 0.3	5.0 ± 0.1	2.6 ± 0.2	6.2 ± 0.1	5.7 ± 0.2	6.6 ± 0.3	E Africa F	E Europe M
20	6.5 ± 0.3	4.7 ± 0.1	3.5 ± 0.2	6.0 ± 0.2	5.5 ± 0.1	6.5 ± 0.2	6.7 ± 0.3	4.9 ± 0.1	2.8 ± 0.2	6.2 ± 0.1	5.6 ± 0.2	6.5 ± 0.3	E Africa M	E Europe M
21	6.2 ± 0.2	4.30 ± 0.09	2.9 ± 0.1	5.7 ± 0.1	5.1 ± 0.1	6.0 ± 0.2	6.6 ± 0.2	4.66 ± 0.09	2.5 ± 0.2	6.0 ± 0.1	5.4 ± 0.2	6.2 ± 0.3	E Africa M	E Europe M
22	6.0 ± 0.2	3.71 ± 0.08	2.5 ± 0.1	5.4 ± 0.1	4.6 ± 0.1	5.4 ± 0.2	6.9 ± 0.2	4.34 ± 0.09	2.3 ± 0.2	5.9 ± 0.1	5.0 ± 0.1	5.9 ± 0.2	E Africa M	E Europe M
23	5.5 ± 0.2	3.29 ± 0.07	2.04 ± 0.09	5.1 ± 0.1	4.20 ± 0.10	5.1 ± 0.2	6.4 ± 0.2	3.95 ± 0.09	1.9 ± 0.1	5.6 ± 0.1	4.8 ± 0.2	5.8 ± 0.2	E Africa M	E Europe M
24	5.1 ± 0.2	2.70 ± 0.06	1.55 ± 0.07	4.70 ± 0.09	3.67 ± 0.09	4.6 ± 0.2	6.2 ± 0.2	3.57 ± 0.09	1.6 ± 0.1	5.5 ± 0.1	4.5 ± 0.1	5.4 ± 0.2	E Africa M	E Europe F
25	4.5 ± 0.2	2.14 ± 0.06	1.01 ± 0.07	4.17 ± 0.09	3.10 ± 0.09	4.2 ± 0.2	5.8 ± 0.2	3.25 ± 0.09	1.3 ± 0.1	5.2 ± 0.1	4.2 ± 0.1	5.1 ± 0.2	E Africa M	E Europe F
26	3.9 ± 0.2	1.62 ± 0.06	0.59 ± 0.07	3.67 ± 0.08	2.78 ± 0.09	3.7 ± 0.2	5.5 ± 0.2	2.85 ± 0.09	1.0 ± 0.1	4.95 ± 0.10	3.9 ± 0.1	4.4 ± 0.2	E Africa M	E Europe F
27	3.7 ± 0.2	1.08 ± 0.06	0.17 ± 0.08	3.19 ± 0.08	2.21 ± 0.09	3.3 ± 0.2	5.1 ± 0.2	2.48 ± 0.08	0.8 ± 0.1	4.65 ± 0.09	3.8 ± 0.1	4.0 ± 0.2	E Africa M	E Europe F
28	3.2 ± 0.2	0.57 ± 0.06	-0.15 ± 0.09	2.78 ± 0.08	1.83 ± 0.09	2.7 ± 0.2	4.7 ± 0.2	2.18 ± 0.09	0.7 ± 0.1	4.29 ± 0.09	3.3 ± 0.1	3.4 ± 0.2	E Africa M	E Europe F
29	3.0 ± 0.2	0.14 ± 0.06	-0.3 ± 0.1	2.32 ± 0.08	1.38 ± 0.10	2.3 ± 0.2	4.4 ± 0.2	1.90 ± 0.09	0.6 ± 0.1	4.04 ± 0.08	3.0 ± 0.2	3.3 ± 0.2	E Africa M	E Europe F
30	2.5 ± 0.2	-0.28 ± 0.06	-0.5 ± 0.1	1.86 ± 0.08	1.1 ± 0.1	1.8 ± 0.2	4.3 ± 0.2	1.48 ± 0.09	0.5 ± 0.2	3.76 ± 0.08	2.9 ± 0.2	2.8 ± 0.2	E Africa M	E Europe F
31	2.2 ± 0.2	-0.68 ± 0.06	-0.5 ± 0.1	1.40 ± 0.09	0.7 ± 0.1	1.4 ± 0.2	4.1 ± 0.2	1.26 ± 0.10	0.5 ± 0.2	3.51 ± 0.09	2.6 ± 0.2	2.3 ± 0.2	E Africa M	E Asia F
32	2.2 ± 0.3	-1.01 ± 0.07	-0.5 ± 0.1	1.06 ± 0.09	0.3 ± 0.1	1.3 ± 0.2	3.7 ± 0.2	1.07 ± 0.10	0.7 ± 0.2	3.41 ± 0.09	2.5 ± 0.2	2.0 ± 0.2	E Africa M	E Asia F
33	1.7 ± 0.3	-1.33 ± 0.07	-0.5 ± 0.1	0.8 ± 0.1	-0.0 ± 0.1	0.8 ± 0.2	3.7 ± 0.2	0.8 ± 0.1	0.9 ± 0.2	3.22 ± 0.09	2.3 ± 0.2	1.6 ± 0.2	E Africa M	E Asia F
34	1.6 ± 0.3	-1.56 ± 0.07	-0.6 ± 0.1	0.5 ± 0.1	-0.2 ± 0.1	0.5 ± 0.2	3.2 ± 0.3	0.6 ± 0.1	0.6 ± 0.2	3.2 ± 0.1	2.3 ± 0.2	1.6 ± 0.2	E Africa M	E Asia F
35	1.6 ± 0.3	-1.89 ± 0.08	-0.7 ± 0.1	0.1 ± 0.1	-0.6 ± 0.1	0.3 ± 0.3	3.4 ± 0.3	0.5 ± 0.1	0.6 ± 0.2	3.0 ± 0.1	2.2 ± 0.2	1.3 ± 0.2	E Africa M	E Asia F
36	1.3 ± 0.3	-1.96 ± 0.09	-0.7 ± 0.1	-0.2 ± 0.1	-0.5 ± 0.2	0.3 ± 0.3	3.0 ± 0.3	0.5 ± 0.1	0.6 ± 0.2	2.8 ± 0.1	2.2 ± 0.2	1.1 ± 0.2	E Africa M	E Asia F
37	1.3 ± 0.3	-2.19 ± 0.09	-0.9 ± 0.1	-0.3 ± 0.1	-0.8 ± 0.2	-0.1 ± 0.3	3.2 ± 0.3	0.5 ± 0.1	0.2 ± 0.2	2.7 ± 0.1	2.0 ± 0.2	0.9 ± 0.2	E Africa M	E Asia F
38	1.8 ± 0.4	-2.31 ± 0.09	-0.9 ± 0.2	-0.4 ± 0.1	-0.6 ± 0.2	-0.2 ± 0.3	2.7 ± 0.3	0.4 ± 0.1	0.2 ± 0.2	2.6 ± 0.1	2.5 ± 0.3	0.7 ± 0.2	E Africa M	E Asia F
39	1.4 ± 0.4	-2.40 ± 0.10	-1.0 ± 0.2	-0.6 ± 0.2	-0.6 ± 0.2	0.0 ± 0.3	3.0 ± 0.3	0.4 ± 0.1	0.3 ± 0.2	2.5 ± 0.1	2.5 ± 0.2	0.6 ± 0.2	E Africa M	E Asia F
40	1.4 ± 0.4	-2.4 ± 0.1	-0.7 ± 0.2	-0.5 ± 0.2	-0.7 ± 0.2	-0.4 ± 0.3	2.9 ± 0.3	0.4 ± 0.1	0.4 ± 0.2	2.5 ± 0.1	2.5 ± 0.2	0.4 ± 0.3	E Africa M	E Asia F
41	0.9 ± 0.4	-2.4 ± 0.1	-0.8 ± 0.2	-0.6 ± 0.2	-0.6 ± 0.2	-0.7 ± 0.4	2.8 ± 0.3	0.5 ± 0.1	0.5 ± 0.2	2.4 ± 0.1	2.4 ± 0.2	0.4 ± 0.3	E Africa M	E Asia F
42	1.5 ± 0.4	-2.2 ± 0.1	-0.4 ± 0.2	-0.3 ± 0.2	-0.7 ± 0.2	-0.4 ± 0.4	2.6 ± 0.3	0.6 ± 0.1	0.7 ± 0.2	2.2 ± 0.1	2.6 ± 0.2	0.2 ± 0.3	S E Asia M	E Asia F
43	1.5 ± 0.4	-2.2 ± 0.1	-0.3 ± 0.2	-0.6 ± 0.2	-0.5 ± 0.2	-0.7 ± 0.4	2.7 ± 0.3	0.7 ± 0.1	0.6 ± 0.2	2.1 ± 0.1	2.7 ± 0.2	-0.1 ± 0.3	E Africa M	E Asia F
44	1.4 ± 0.5	-2.2 ± 0.1	-0.5 ± 0.2	-0.6 ± 0.2	-0.1 ± 0.2	-0.8 ± 0.4	2.1 ± 0.3	0.7 ± 0.1	1.0 ± 0.2	1.9 ± 0.1	2.7 ± 0.3	0.1 ± 0.3	S E Asia M	E Asia F
45	1.2 ± 0.5	-1.9 ± 0.1	-0.2 ± 0.2	-0.7 ± 0.2	-0.3 ± 0.2	-0.6 ± 0.4	1.7 ± 0.3	0.7 ± 0.1	0.8 ± 0.2	1.7 ± 0.1	2.7 ± 0.3	-0.2 ± 0.3	S E Asia M	E Asia F
46	1.8 ± 0.5	-1.9 ± 0.1	-0.1 ± 0.2	-0.7 ± 0.2	-0.4 ± 0.2	-0.7 ± 0.4	1.7 ± 0.4	0.7 ± 0.1	0.9 ± 0.2	1.7 ± 0.1	2.7 ± 0.2	-0.4 ± 0.3	S E Asia M	E Asia F
47	1.5 ± 0.6	-1.6 ± 0.1	-0.1 ± 0.2	-0.9 ± 0.2	0.0 ± 0.2	-0.7 ± 0.4	1.9 ± 0.4	0.8 ± 0.1	0.6 ± 0.2	1.4 ± 0.2	2.7 ± 0.3	-0.2 ± 0.3	S E Asia M	E Asia F
48	1.2 ± 0.5	-1.4 ± 0.1	-0.0 ± 0.2	-0.9 ± 0.2	-0.0 ± 0.2	-1.0 ± 0.4	1.1 ± 0.4	0.8 ± 0.1	0.6 ± 0.2	1.1 ± 0.1	2.5 ± 0.2	-0.7 ± 0.4	S E Asia M	E Asia F
49	1.4 ± 0.6	-1.4 ± 0.1	-0.4 ± 0.2	-1.1 ± 0.2	0.2 ± 0.2	-1.2 ± 0.4	0.8 ± 0.4	0.8 ± 0.1	0.3 ± 0.2	0.8 ± 0.2	2.4 ± 0.2	-0.7 ± 0.3	S E Asia M	E Asia F
50	0.8 ± 0.6	-1.3 ± 0.1	-0.2 ± 0.2	-1.3 ± 0.2	-0.1 ± 0.2	-1.1 ± 0.4	0.7 ± 0.4	0.7 ± 0.1	-0.0 ± 0.2	0.6 ± 0.2	2.6 ± 0.2	-1.1 ± 0.3	S E Asia M	E Asia F
51	1.4 ± 0.5	-1.2 ± 0.1	-0.5 ± 0.2	-1.6 ± 0.2	-0.1 ± 0.2	-1.1 ± 0.5	0.3 ± 0.5	0.7 ± 0.1	0.0 ± 0.2	0.4 ± 0.2	2.3 ± 0.2	-1.4 ± 0.3	S E Asia M	S Asia F
52	1.0 ± 0.6	-1.2 ± 0.1	-0.4 ± 0.2	-1.7 ± 0.2	0.0 ± 0.2	-1.6 ± 0.5	0.5 ± 0.5	0.5 ± 0.1	-0.2 ± 0.3	0.1 ± 0.2	1.8 ± 0.2	-1.4 ± 0.4	S E Asia M	S Asia F

Table 67. *Mean raw error for Application-type images for algorithm yoti-001. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	3.1 ± 0.3	2.0 ± 0.1	1.7 ± 0.3	1.8 ± 0.2	2.1 ± 0.3	3.9 ± 0.4	0.2 ± 0.3	0.59 ± 0.09	-0.0 ± 0.2	-0.5 ± 0.1	0.5 ± 0.1	1.1 ± 0.3	W Africa F	S Asia M
15	3.2 ± 0.4	2.2 ± 0.2	2.5 ± 0.4	2.3 ± 0.3	2.3 ± 0.4	4.1 ± 0.5	0.1 ± 0.3	0.6 ± 0.1	0.1 ± 0.2	-0.3 ± 0.1	0.4 ± 0.2	1.6 ± 0.4	W Africa F	S Asia M
16	3.3 ± 0.4	2.4 ± 0.2	2.7 ± 0.4	2.7 ± 0.3	3.1 ± 0.5	4.5 ± 0.6	1.2 ± 0.3	0.5 ± 0.1	0.4 ± 0.2	-0.3 ± 0.2	0.4 ± 0.2	1.7 ± 0.4	W Africa F	S Asia M
17	3.3 ± 0.5	2.6 ± 0.2	3.5 ± 0.5	3.1 ± 0.3	3.1 ± 0.5	4.2 ± 0.5	0.9 ± 0.3	0.7 ± 0.1	0.3 ± 0.2	-0.1 ± 0.2	0.3 ± 0.3	2.4 ± 0.4	W Africa F	S Asia M
18	3.1 ± 0.4	2.4 ± 0.2	3.2 ± 0.4	3.0 ± 0.2	3.6 ± 0.3	4.4 ± 0.5	1.1 ± 0.3	0.6 ± 0.1	0.2 ± 0.2	-0.1 ± 0.2	0.6 ± 0.3	2.0 ± 0.3	W Africa F	S Asia M
19	3.7 ± 0.4	2.8 ± 0.2	3.5 ± 0.4	3.6 ± 0.2	3.9 ± 0.3	4.7 ± 0.5	1.5 ± 0.3	1.1 ± 0.2	0.6 ± 0.3	0.4 ± 0.2	0.8 ± 0.3	2.5 ± 0.4	W Africa F	S Asia M
20	3.4 ± 0.4	3.2 ± 0.2	3.5 ± 0.3	3.4 ± 0.2	4.2 ± 0.3	4.6 ± 0.4	2.0 ± 0.3	1.5 ± 0.2	1.2 ± 0.3	1.0 ± 0.2	1.4 ± 0.3	2.7 ± 0.4	W Africa F	S Asia M
21	3.8 ± 0.4	3.5 ± 0.2	3.6 ± 0.3	3.8 ± 0.2	4.4 ± 0.3	4.8 ± 0.4	2.2 ± 0.3	1.8 ± 0.2	1.3 ± 0.2	1.5 ± 0.2	1.7 ± 0.3	2.8 ± 0.3	W Africa F	E Europe M
22	3.8 ± 0.4	3.6 ± 0.2	3.7 ± 0.2	3.7 ± 0.2	4.5 ± 0.2	4.5 ± 0.4	2.9 ± 0.3	2.0 ± 0.1	1.7 ± 0.2	1.8 ± 0.2	1.9 ± 0.2	2.7 ± 0.3	W Africa F	E Europe M
23	3.6 ± 0.3	3.7 ± 0.2	3.5 ± 0.2	3.8 ± 0.2	4.5 ± 0.2	4.7 ± 0.4	2.6 ± 0.3	2.0 ± 0.1	1.5 ± 0.2	2.1 ± 0.2	2.2 ± 0.2	3.3 ± 0.3	W Africa F	E Europe M
24	3.8 ± 0.4	3.7 ± 0.1	3.5 ± 0.2	3.7 ± 0.2	4.6 ± 0.2	4.4 ± 0.3	2.7 ± 0.3	2.1 ± 0.1	1.6 ± 0.1	2.3 ± 0.1	2.4 ± 0.2	2.9 ± 0.3	S E Asia F	E Europe M
25	3.6 ± 0.3	3.9 ± 0.1	3.2 ± 0.1	3.6 ± 0.1	4.7 ± 0.2	4.3 ± 0.3	2.6 ± 0.3	2.2 ± 0.1	1.4 ± 0.1	2.3 ± 0.1	2.5 ± 0.2	2.9 ± 0.3	S E Asia F	E Europe M
26	3.7 ± 0.3	3.8 ± 0.1	3.0 ± 0.1	3.4 ± 0.1	4.7 ± 0.2	4.1 ± 0.3	2.6 ± 0.2	2.1 ± 0.1	1.1 ± 0.1	2.3 ± 0.1	2.6 ± 0.2	2.7 ± 0.2	S E Asia F	E Europe M
27	3.9 ± 0.3	3.9 ± 0.1	2.9 ± 0.1	3.3 ± 0.1	4.5 ± 0.2	4.2 ± 0.3	2.4 ± 0.2	2.1 ± 0.1	1.0 ± 0.1	2.2 ± 0.1	2.7 ± 0.2	2.7 ± 0.2	S E Asia F	E Europe M
28	3.5 ± 0.3	3.8 ± 0.1	2.6 ± 0.1	3.2 ± 0.1	4.5 ± 0.2	3.8 ± 0.3	2.1 ± 0.2	2.2 ± 0.1	1.0 ± 0.1	2.1 ± 0.1	2.6 ± 0.2	2.4 ± 0.2	S E Asia F	E Europe M
29	3.9 ± 0.3	3.8 ± 0.1	2.5 ± 0.1	3.1 ± 0.1	4.6 ± 0.2	3.8 ± 0.3	2.2 ± 0.2	2.1 ± 0.1	0.7 ± 0.1	1.98 ± 0.10	2.4 ± 0.2	2.7 ± 0.2	S E Asia F	E Europe M
30	3.6 ± 0.3	3.8 ± 0.1	2.3 ± 0.1	2.9 ± 0.1	4.5 ± 0.2	3.5 ± 0.3	2.1 ± 0.2	2.1 ± 0.1	0.5 ± 0.1	1.98 ± 0.10	2.7 ± 0.2	2.4 ± 0.2	S E Asia F	E Europe M
31	3.4 ± 0.3	3.7 ± 0.1	2.2 ± 0.1	2.8 ± 0.1	4.5 ± 0.2	3.1 ± 0.3	2.2 ± 0.2	2.0 ± 0.1	0.4 ± 0.1	1.87 ± 0.09	2.5 ± 0.2	2.2 ± 0.2	S E Asia F	E Europe M
32	3.6 ± 0.3	3.6 ± 0.1	2.0 ± 0.1	2.7 ± 0.1	4.1 ± 0.2	3.3 ± 0.3	1.9 ± 0.2	2.1 ± 0.1	0.4 ± 0.2	1.87 ± 0.09	2.7 ± 0.2	2.2 ± 0.2	S E Asia F	E Europe M
33	3.4 ± 0.3	3.5 ± 0.1	1.8 ± 0.2	2.6 ± 0.1	4.2 ± 0.2	3.1 ± 0.3	2.0 ± 0.3	2.1 ± 0.1	0.5 ± 0.2	1.69 ± 0.09	2.4 ± 0.2	2.1 ± 0.2	S E Asia F	E Europe M
34	3.2 ± 0.3	3.4 ± 0.1	1.7 ± 0.2	2.5 ± 0.1	4.1 ± 0.2	2.8 ± 0.3	1.7 ± 0.3	2.1 ± 0.1	0.3 ± 0.2	1.68 ± 0.10	2.5 ± 0.2	2.1 ± 0.2	S E Asia F	E Europe M
35	3.7 ± 0.3	3.2 ± 0.1	1.7 ± 0.2	2.3 ± 0.1	3.7 ± 0.2	2.5 ± 0.3	2.1 ± 0.3	2.2 ± 0.1	0.4 ± 0.2	1.67 ± 0.10	2.6 ± 0.2	1.8 ± 0.2	S E Asia F	E Europe M
36	3.0 ± 0.3	3.1 ± 0.1	1.6 ± 0.2	2.2 ± 0.1	3.7 ± 0.2	2.8 ± 0.3	1.9 ± 0.3	2.2 ± 0.1	0.5 ± 0.2	1.57 ± 0.10	2.6 ± 0.2	1.7 ± 0.2	S E Asia F	E Europe M
37	2.9 ± 0.4	2.97 ± 0.10	1.7 ± 0.2	2.1 ± 0.1	3.4 ± 0.2	2.5 ± 0.3	2.0 ± 0.3	2.3 ± 0.1	0.3 ± 0.2	1.5 ± 0.1	2.3 ± 0.2	1.6 ± 0.2	S E Asia F	E Europe M
38	3.1 ± 0.4	2.79 ± 0.10	1.5 ± 0.2	2.0 ± 0.1	3.4 ± 0.2	2.3 ± 0.4	1.5 ± 0.3	2.1 ± 0.1	0.4 ± 0.2	1.4 ± 0.1	2.6 ± 0.2	1.6 ± 0.3	S E Asia F	E Europe M
39	2.6 ± 0.3	2.63 ± 0.10	1.4 ± 0.2	1.8 ± 0.1	3.3 ± 0.2	2.1 ± 0.4	1.8 ± 0.3	2.1 ± 0.1	0.5 ± 0.2	1.4 ± 0.1	2.6 ± 0.2	1.5 ± 0.3	S E Asia F	E Europe M
40	2.4 ± 0.4	2.47 ± 0.10	1.6 ± 0.2	1.7 ± 0.1	2.9 ± 0.2	2.0 ± 0.3	1.7 ± 0.3	2.1 ± 0.1	0.5 ± 0.2	1.3 ± 0.1	2.5 ± 0.2	1.3 ± 0.3	S E Asia F	E Europe M
41	2.0 ± 0.4	2.18 ± 0.09	1.4 ± 0.2	1.5 ± 0.1	2.7 ± 0.2	1.1 ± 0.4	1.7 ± 0.3	2.0 ± 0.1	0.6 ± 0.2	1.3 ± 0.1	2.3 ± 0.2	1.3 ± 0.3	S E Asia F	E Europe M
42	2.4 ± 0.4	2.19 ± 0.09	1.5 ± 0.2	1.6 ± 0.2	2.5 ± 0.2	1.6 ± 0.4	1.7 ± 0.3	1.9 ± 0.1	0.8 ± 0.2	1.2 ± 0.1	2.4 ± 0.2	0.9 ± 0.3	S E Asia F	E Europe M
43	2.2 ± 0.4	1.91 ± 0.10	1.3 ± 0.2	1.2 ± 0.2	2.3 ± 0.2	0.9 ± 0.4	1.6 ± 0.3	1.8 ± 0.1	0.6 ± 0.2	1.2 ± 0.1	2.4 ± 0.2	0.6 ± 0.3	S E Asia M	E Europe M
44	1.9 ± 0.5	1.63 ± 0.10	1.0 ± 0.2	1.1 ± 0.2	2.3 ± 0.2	0.9 ± 0.4	1.2 ± 0.3	1.7 ± 0.1	0.9 ± 0.2	1.0 ± 0.1	2.4 ± 0.2	0.7 ± 0.3	S E Asia M	W Africa M
45	1.4 ± 0.4	1.61 ± 0.10	1.2 ± 0.2	0.9 ± 0.2	2.1 ± 0.2	0.7 ± 0.4	1.1 ± 0.4	1.6 ± 0.1	0.8 ± 0.2	1.1 ± 0.1	1.9 ± 0.2	0.2 ± 0.3	S E Asia F	W Africa M
46	1.9 ± 0.4	1.32 ± 0.10	1.2 ± 0.2	0.9 ± 0.2	1.8 ± 0.2	0.4 ± 0.4	1.0 ± 0.4	1.5 ± 0.1	0.9 ± 0.3	1.2 ± 0.2	2.0 ± 0.2	-0.0 ± 0.3	S E Asia M	W Africa M
47	1.6 ± 0.5	1.3 ± 0.1	1.3 ± 0.3	0.8 ± 0.2	1.8 ± 0.2	0.3 ± 0.4	1.2 ± 0.4	1.3 ± 0.1	1.2 ± 0.3	1.2 ± 0.2	2.1 ± 0.2	0.2 ± 0.3	S E Asia M	W Africa M
48	0.6 ± 0.5	1.1 ± 0.1	1.3 ± 0.2	0.8 ± 0.2	1.7 ± 0.2	0.2 ± 0.4	0.6 ± 0.4	1.2 ± 0.1	1.2 ± 0.3	1.1 ± 0.2	1.8 ± 0.2	-0.3 ± 0.3	S E Asia M	W Africa M
49	0.8 ± 0.5	0.9 ± 0.1	1.1 ± 0.2	0.5 ± 0.2	1.8 ± 0.2	-0.0 ± 0.4	0.4 ± 0.5	1.0 ± 0.1	1.1 ± 0.3	1.1 ± 0.2	1.8 ± 0.2	-0.3 ± 0.3	S E Asia M	W Africa M
50	0.9 ± 0.6	0.9 ± 0.1	1.4 ± 0.2	0.4 ± 0.2	1.5 ± 0.2	-0.1 ± 0.5	0.4 ± 0.4	0.9 ± 0.1	0.9 ± 0.3	0.9 ± 0.2	1.9 ± 0.2	-0.9 ± 0.3	S E Asia M	W Africa M
51	0.3 ± 0.5	0.6 ± 0.1	1.2 ± 0.2	0.2 ± 0.2	1.4 ± 0.2	-0.4 ± 0.5	-0.3 ± 0.5	0.7 ± 0.1	1.2 ± 0.3	0.9 ± 0.2	1.7 ± 0.2	-1.1 ± 0.4	S E Asia M	W Africa M
52	0.5 ± 0.6	0.6 ± 0.1	1.3 ± 0.2	-0.1 ± 0.2	1.5 ± 0.2	-1.0 ± 0.5	-0.1 ± 0.5	0.5 ± 0.1	1.1 ± 0.3	0.6 ± 0.2	1.4 ± 0.3	-1.3 ± 0.4	S E Asia F	W Africa M

Table 68. *Mean raw error for Application-type images for algorithm yoti-002. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	2.1 ± 0.3	2.2 ± 0.1	0.6 ± 0.2	1.6 ± 0.2	2.2 ± 0.3	2.8 ± 0.4	-0.4 ± 0.2	0.29 ± 0.09	-0.2 ± 0.1	-0.44 ± 0.10	0.0 ± 0.1	0.3 ± 0.3	W Africa F	S Asia M
15	2.4 ± 0.4	2.5 ± 0.2	1.0 ± 0.3	2.3 ± 0.2	2.5 ± 0.4	2.6 ± 0.4	-0.4 ± 0.3	0.3 ± 0.1	-0.3 ± 0.1	-0.4 ± 0.1	-0.0 ± 0.2	1.0 ± 0.4	W Africa F	S Asia M
16	2.1 ± 0.4	2.8 ± 0.2	1.1 ± 0.3	2.6 ± 0.3	3.2 ± 0.4	3.2 ± 0.6	0.4 ± 0.3	0.2 ± 0.1	-0.4 ± 0.2	-0.3 ± 0.1	-0.1 ± 0.2	0.9 ± 0.3	S E Asia F	E Europe M
17	2.1 ± 0.4	3.1 ± 0.2	1.0 ± 0.3	2.8 ± 0.3	3.1 ± 0.4	2.8 ± 0.4	0.3 ± 0.3	0.4 ± 0.1	-0.7 ± 0.2	-0.2 ± 0.2	-0.3 ± 0.3	1.5 ± 0.4	S E Asia F	E Europe M
18	1.6 ± 0.3	2.7 ± 0.2	0.7 ± 0.3	2.6 ± 0.2	3.3 ± 0.3	2.3 ± 0.4	0.2 ± 0.3	0.1 ± 0.1	-1.0 ± 0.2	-0.2 ± 0.1	-0.2 ± 0.3	0.8 ± 0.3	S E Asia F	E Europe M
19	2.2 ± 0.4	3.0 ± 0.2	1.0 ± 0.3	3.0 ± 0.2	3.5 ± 0.2	2.9 ± 0.4	0.7 ± 0.3	0.6 ± 0.2	-0.8 ± 0.2	0.3 ± 0.2	0.1 ± 0.3	1.5 ± 0.4	S E Asia F	E Europe M
20	2.0 ± 0.3	3.2 ± 0.2	1.0 ± 0.3	3.0 ± 0.2	3.7 ± 0.2	2.9 ± 0.4	1.0 ± 0.3	0.9 ± 0.1	-0.2 ± 0.2	0.8 ± 0.2	0.6 ± 0.3	1.6 ± 0.4	S E Asia F	E Europe M
21	2.1 ± 0.3	3.2 ± 0.1	1.1 ± 0.2	3.0 ± 0.2	3.8 ± 0.2	3.0 ± 0.4	1.5 ± 0.3	1.2 ± 0.1	-0.0 ± 0.2	1.3 ± 0.2	1.0 ± 0.3	1.9 ± 0.4	S E Asia F	E Europe M
22	2.5 ± 0.3	3.0 ± 0.1	1.1 ± 0.2	3.0 ± 0.2	3.5 ± 0.2	2.7 ± 0.4	2.4 ± 0.3	1.5 ± 0.1	0.6 ± 0.2	1.5 ± 0.2	1.1 ± 0.2	1.7 ± 0.3	S E Asia F	E Europe M
23	2.2 ± 0.3	3.0 ± 0.1	1.1 ± 0.2	2.9 ± 0.1	3.5 ± 0.2	3.2 ± 0.3	2.2 ± 0.3	1.4 ± 0.1	0.7 ± 0.2	1.9 ± 0.1	1.4 ± 0.2	2.4 ± 0.3	S E Asia F	E Europe M
24	2.5 ± 0.3	2.8 ± 0.1	1.1 ± 0.1	2.7 ± 0.1	3.3 ± 0.1	2.7 ± 0.3	2.2 ± 0.3	1.5 ± 0.1	0.8 ± 0.2	2.0 ± 0.1	1.5 ± 0.2	2.5 ± 0.3	S E Asia F	E Europe M
25	2.2 ± 0.3	2.68 ± 0.10	0.9 ± 0.1	2.4 ± 0.1	3.2 ± 0.1	2.9 ± 0.3	2.3 ± 0.3	1.5 ± 0.1	0.7 ± 0.1	2.0 ± 0.1	1.5 ± 0.2	2.7 ± 0.3	S E Asia F	E Europe M
26	2.2 ± 0.3	2.47 ± 0.10	0.8 ± 0.1	2.04 ± 0.10	3.2 ± 0.1	2.6 ± 0.3	2.4 ± 0.2	1.4 ± 0.1	0.6 ± 0.1	1.92 ± 0.10	1.5 ± 0.2	2.6 ± 0.2	S E Asia F	E Europe M
27	2.2 ± 0.3	2.38 ± 0.09	0.6 ± 0.1	1.78 ± 0.10	2.9 ± 0.1	2.9 ± 0.3	2.3 ± 0.2	1.3 ± 0.1	0.5 ± 0.1	1.68 ± 0.09	1.6 ± 0.2	2.6 ± 0.2	S E Asia F	E Europe M
28	2.0 ± 0.3	2.13 ± 0.09	0.4 ± 0.1	1.56 ± 0.10	2.8 ± 0.1	2.5 ± 0.3	2.1 ± 0.2	1.3 ± 0.1	0.3 ± 0.1	1.54 ± 0.09	1.5 ± 0.2	2.3 ± 0.2	S E Asia F	E Europe M
29	2.4 ± 0.3	2.02 ± 0.09	0.2 ± 0.1	1.19 ± 0.10	2.9 ± 0.1	2.4 ± 0.2	2.0 ± 0.2	1.1 ± 0.1	0.1 ± 0.1	1.35 ± 0.08	1.3 ± 0.2	2.8 ± 0.2	S E Asia F	E Europe M
30	2.0 ± 0.3	1.95 ± 0.09	-0.1 ± 0.1	0.96 ± 0.10	2.6 ± 0.1	2.0 ± 0.3	2.1 ± 0.2	1.1 ± 0.1	-0.1 ± 0.1	1.20 ± 0.08	1.5 ± 0.2	2.6 ± 0.2	S E Asia F	E Europe M
31	1.5 ± 0.3	1.84 ± 0.09	-0.1 ± 0.1	0.72 ± 0.10	2.5 ± 0.1	1.9 ± 0.3	2.1 ± 0.2	1.0 ± 0.1	-0.2 ± 0.1	1.08 ± 0.08	1.4 ± 0.2	2.5 ± 0.2	S E Asia F	E Europe M
32	1.9 ± 0.3	1.78 ± 0.09	-0.3 ± 0.1	0.52 ± 0.10	2.4 ± 0.2	1.9 ± 0.3	1.9 ± 0.2	1.2 ± 0.1	-0.3 ± 0.1	1.02 ± 0.08	1.4 ± 0.2	2.4 ± 0.2	W Africa M	E Europe F
33	1.7 ± 0.3	1.72 ± 0.09	-0.4 ± 0.1	0.3 ± 0.1	2.5 ± 0.1	1.7 ± 0.3	1.9 ± 0.2	1.2 ± 0.1	-0.1 ± 0.2	0.83 ± 0.08	1.3 ± 0.2	2.3 ± 0.2	S E Asia F	E Europe F
34	1.4 ± 0.3	1.70 ± 0.09	-0.4 ± 0.1	0.1 ± 0.1	2.2 ± 0.1	1.4 ± 0.3	1.7 ± 0.2	1.3 ± 0.1	-0.3 ± 0.2	0.80 ± 0.09	1.5 ± 0.2	2.4 ± 0.2	W Africa M	E Europe F
35	1.6 ± 0.3	1.55 ± 0.09	-0.4 ± 0.2	-0.1 ± 0.1	2.0 ± 0.2	0.9 ± 0.3	1.8 ± 0.2	1.5 ± 0.1	-0.1 ± 0.2	0.72 ± 0.09	1.6 ± 0.2	2.1 ± 0.2	W Africa M	E Europe F
36	1.2 ± 0.3	1.50 ± 0.09	-0.3 ± 0.2	-0.2 ± 0.1	2.0 ± 0.2	1.2 ± 0.3	1.6 ± 0.3	1.6 ± 0.1	0.1 ± 0.2	0.64 ± 0.09	1.6 ± 0.2	2.1 ± 0.2	W Africa M	E Europe F
37	1.2 ± 0.3	1.47 ± 0.09	-0.4 ± 0.2	-0.3 ± 0.1	1.9 ± 0.2	0.9 ± 0.3	1.7 ± 0.3	1.7 ± 0.1	-0.1 ± 0.2	0.66 ± 0.10	1.5 ± 0.2	1.9 ± 0.2	W Africa M	E Europe F
38	1.5 ± 0.3	1.29 ± 0.09	-0.4 ± 0.2	-0.4 ± 0.1	1.8 ± 0.2	0.6 ± 0.3	1.4 ± 0.3	1.7 ± 0.1	0.0 ± 0.2	0.50 ± 0.10	1.8 ± 0.2	1.7 ± 0.2	S E Asia M	E Europe F
39	1.0 ± 0.3	1.20 ± 0.09	-0.3 ± 0.2	-0.6 ± 0.1	1.7 ± 0.1	0.5 ± 0.3	1.6 ± 0.3	1.7 ± 0.1	0.1 ± 0.2	0.56 ± 0.10	1.8 ± 0.2	1.6 ± 0.2	S E Asia M	S Asia F
40	0.9 ± 0.4	1.01 ± 0.09	0.0 ± 0.2	-0.6 ± 0.1	1.5 ± 0.2	0.1 ± 0.3	1.5 ± 0.3	1.7 ± 0.1	0.1 ± 0.2	0.5 ± 0.1	1.6 ± 0.2	1.3 ± 0.2	E Asia M	S Asia F
41	0.4 ± 0.4	0.85 ± 0.09	-0.2 ± 0.2	-0.6 ± 0.1	1.3 ± 0.2	-0.2 ± 0.3	1.5 ± 0.3	1.7 ± 0.1	0.3 ± 0.2	0.4 ± 0.1	1.7 ± 0.2	1.3 ± 0.2	E Asia M	S Asia F
42	0.9 ± 0.4	0.84 ± 0.09	-0.1 ± 0.2	-0.3 ± 0.2	1.2 ± 0.2	0.0 ± 0.3	1.2 ± 0.3	1.7 ± 0.1	0.3 ± 0.2	0.4 ± 0.1	1.8 ± 0.2	0.8 ± 0.2	S E Asia M	S Asia F
43	0.8 ± 0.4	0.57 ± 0.09	-0.1 ± 0.2	-0.6 ± 0.2	1.0 ± 0.2	-0.7 ± 0.3	1.4 ± 0.3	1.7 ± 0.1	0.2 ± 0.2	0.4 ± 0.1	1.7 ± 0.2	0.6 ± 0.3	S E Asia M	W Africa F
44	0.9 ± 0.5	0.37 ± 0.09	-0.4 ± 0.2	-0.5 ± 0.2	1.3 ± 0.2	-0.9 ± 0.4	0.9 ± 0.3	1.6 ± 0.1	0.5 ± 0.2	0.2 ± 0.1	1.9 ± 0.2	0.6 ± 0.2	S E Asia M	W Africa F
45	0.5 ± 0.5	0.40 ± 0.09	-0.3 ± 0.2	-0.6 ± 0.2	1.1 ± 0.2	-1.0 ± 0.3	0.7 ± 0.4	1.6 ± 0.1	0.4 ± 0.2	0.4 ± 0.1	1.5 ± 0.2	0.2 ± 0.3	E Asia M	W Africa F
46	1.2 ± 0.5	0.18 ± 0.10	-0.2 ± 0.2	-0.4 ± 0.2	0.8 ± 0.2	-1.1 ± 0.4	0.7 ± 0.4	1.4 ± 0.1	0.5 ± 0.2	0.5 ± 0.1	1.6 ± 0.2	-0.2 ± 0.3	S E Asia M	W Africa F
47	0.7 ± 0.5	0.22 ± 0.10	-0.1 ± 0.2	-0.4 ± 0.2	1.0 ± 0.2	-1.3 ± 0.4	1.1 ± 0.4	1.3 ± 0.1	0.6 ± 0.2	0.5 ± 0.2	1.9 ± 0.2	-0.1 ± 0.3	S E Asia M	W Africa F
48	0.4 ± 0.6	0.1 ± 0.1	0.0 ± 0.2	-0.4 ± 0.2	0.8 ± 0.2	-1.5 ± 0.4	0.6 ± 0.5	1.2 ± 0.1	0.7 ± 0.3	0.5 ± 0.2	1.8 ± 0.2	-0.5 ± 0.3	S E Asia M	W Africa F
49	0.5 ± 0.6	-0.1 ± 0.1	-0.1 ± 0.2	-0.3 ± 0.2	1.1 ± 0.2	-1.6 ± 0.5	0.2 ± 0.5	1.1 ± 0.1	0.6 ± 0.2	0.5 ± 0.2	1.6 ± 0.2	-0.6 ± 0.3	S E Asia M	W Africa F
50	0.3 ± 0.6	-0.1 ± 0.1	0.2 ± 0.2	-0.2 ± 0.2	0.8 ± 0.2	-2.2 ± 0.4	0.1 ± 0.4	1.0 ± 0.1	0.4 ± 0.3	0.5 ± 0.2	1.9 ± 0.2	-1.2 ± 0.3	S E Asia M	W Africa F
51	-0.1 ± 0.6	-0.1 ± 0.1	0.1 ± 0.2	-0.1 ± 0.2	0.8 ± 0.2	-2.1 ± 0.5	-0.3 ± 0.5	0.7 ± 0.1	0.8 ± 0.2	0.5 ± 0.2	1.6 ± 0.2	-1.1 ± 0.3	S E Asia M	W Africa F
52	-0.3 ± 0.7	-0.1 ± 0.1	0.2 ± 0.2	-0.4 ± 0.2	1.0 ± 0.2	-2.2 ± 0.5	-0.2 ± 0.5	0.5 ± 0.1	0.7 ± 0.3	0.4 ± 0.2	1.3 ± 0.2	-1.3 ± 0.4	S E Asia M	W Africa F

Table 69. *Mean raw error for Application-type images for algorithm yoti-003. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	2.7 ± 0.3	2.5 ± 0.1	1.0 ± 0.2	2.3 ± 0.2	2.8 ± 0.3	3.3 ± 0.3	0.6 ± 0.2	1.0 ± 0.1	0.1 ± 0.1	0.3 ± 0.1	0.7 ± 0.2	1.1 ± 0.3	W Africa F	E Europe M
15	3.0 ± 0.3	2.8 ± 0.2	1.1 ± 0.2	2.8 ± 0.2	3.1 ± 0.4	3.0 ± 0.3	0.6 ± 0.2	1.2 ± 0.1	0.0 ± 0.1	0.5 ± 0.1	0.9 ± 0.2	1.5 ± 0.3	S E Asia F	E Europe M
16	2.9 ± 0.3	3.0 ± 0.2	1.1 ± 0.3	2.7 ± 0.2	3.4 ± 0.4	3.5 ± 0.5	1.1 ± 0.2	1.2 ± 0.1	-0.1 ± 0.2	0.6 ± 0.1	1.1 ± 0.2	1.1 ± 0.3	W Africa F	E Europe M
17	2.9 ± 0.4	3.2 ± 0.2	1.0 ± 0.3	3.0 ± 0.2	3.6 ± 0.4	3.1 ± 0.4	0.8 ± 0.2	1.3 ± 0.1	-0.4 ± 0.1	0.8 ± 0.1	1.3 ± 0.2	1.5 ± 0.3	S E Asia F	E Europe M
18	2.0 ± 0.3	2.7 ± 0.2	0.5 ± 0.3	2.6 ± 0.2	3.4 ± 0.2	2.5 ± 0.4	0.6 ± 0.2	1.0 ± 0.1	-0.7 ± 0.2	0.6 ± 0.1	1.1 ± 0.2	0.8 ± 0.3	S E Asia F	E Europe M
19	2.8 ± 0.4	3.0 ± 0.2	0.7 ± 0.3	3.0 ± 0.2	3.5 ± 0.2	2.9 ± 0.4	0.9 ± 0.3	1.4 ± 0.1	-0.6 ± 0.2	1.0 ± 0.1	1.3 ± 0.2	1.3 ± 0.4	S E Asia F	E Europe M
20	2.7 ± 0.4	3.2 ± 0.1	0.7 ± 0.2	3.0 ± 0.2	3.9 ± 0.2	2.9 ± 0.4	1.2 ± 0.3	1.7 ± 0.1	0.1 ± 0.2	1.4 ± 0.1	1.7 ± 0.2	1.3 ± 0.4	S E Asia F	E Europe M
21	3.1 ± 0.3	3.3 ± 0.1	0.9 ± 0.2	3.1 ± 0.2	3.8 ± 0.2	3.1 ± 0.4	1.6 ± 0.3	2.0 ± 0.1	0.1 ± 0.2	1.8 ± 0.1	2.0 ± 0.2	1.5 ± 0.4	S E Asia F	E Europe M
22	3.1 ± 0.3	3.1 ± 0.1	0.9 ± 0.2	3.0 ± 0.1	3.7 ± 0.2	2.7 ± 0.3	2.3 ± 0.3	2.0 ± 0.1	0.7 ± 0.2	2.0 ± 0.1	2.0 ± 0.2	1.5 ± 0.3	S E Asia F	E Europe M
23	3.2 ± 0.3	3.1 ± 0.1	0.9 ± 0.2	2.9 ± 0.1	3.6 ± 0.1	3.0 ± 0.3	2.2 ± 0.3	1.9 ± 0.1	0.8 ± 0.2	2.2 ± 0.1	2.2 ± 0.2	2.3 ± 0.3	S E Asia F	E Europe M
24	3.3 ± 0.3	2.9 ± 0.1	1.0 ± 0.1	2.9 ± 0.1	3.4 ± 0.1	2.8 ± 0.3	2.4 ± 0.3	2.0 ± 0.1	0.9 ± 0.1	2.3 ± 0.1	2.2 ± 0.2	2.2 ± 0.3	S E Asia F	E Europe M
25	2.9 ± 0.3	2.83 ± 0.09	0.8 ± 0.1	2.53 ± 0.10	3.2 ± 0.1	2.9 ± 0.3	2.5 ± 0.3	1.9 ± 0.1	0.9 ± 0.1	2.3 ± 0.1	2.2 ± 0.2	2.5 ± 0.3	S E Asia F	E Europe F
26	2.9 ± 0.3	2.62 ± 0.09	0.7 ± 0.1	2.23 ± 0.09	3.2 ± 0.1	2.6 ± 0.3	2.4 ± 0.2	1.78 ± 0.10	0.6 ± 0.1	2.27 ± 0.10	2.2 ± 0.2	2.4 ± 0.2	S E Asia F	E Europe M
27	2.9 ± 0.3	2.46 ± 0.09	0.6 ± 0.1	2.06 ± 0.09	2.9 ± 0.1	2.8 ± 0.3	2.4 ± 0.2	1.7 ± 0.1	0.5 ± 0.1	2.11 ± 0.09	2.2 ± 0.2	2.5 ± 0.2	S E Asia F	E Europe M
28	2.6 ± 0.3	2.24 ± 0.08	0.36 ± 0.10	1.83 ± 0.09	2.7 ± 0.1	2.6 ± 0.3	2.1 ± 0.2	1.7 ± 0.1	0.4 ± 0.1	2.03 ± 0.09	2.2 ± 0.2	2.2 ± 0.2	S E Asia F	E Europe F
29	2.7 ± 0.3	2.07 ± 0.08	0.2 ± 0.1	1.54 ± 0.09	2.7 ± 0.1	2.4 ± 0.2	2.1 ± 0.2	1.5 ± 0.1	0.2 ± 0.1	1.83 ± 0.08	1.9 ± 0.2	2.7 ± 0.2	E Africa F	E Europe M
30	2.5 ± 0.3	1.94 ± 0.08	-0.0 ± 0.1	1.37 ± 0.09	2.5 ± 0.1	2.1 ± 0.3	2.2 ± 0.2	1.41 ± 0.10	0.1 ± 0.1	1.75 ± 0.08	2.1 ± 0.2	2.5 ± 0.2	E Africa F	E Europe F
31	2.1 ± 0.3	1.76 ± 0.08	0.0 ± 0.1	1.13 ± 0.09	2.4 ± 0.1	2.1 ± 0.2	2.2 ± 0.2	1.4 ± 0.1	0.0 ± 0.1	1.65 ± 0.08	1.9 ± 0.2	2.3 ± 0.2	S E Asia F	E Europe M
32	2.3 ± 0.3	1.64 ± 0.09	-0.2 ± 0.1	1.04 ± 0.09	2.2 ± 0.1	2.0 ± 0.3	1.9 ± 0.2	1.4 ± 0.1	-0.1 ± 0.1	1.59 ± 0.08	1.8 ± 0.2	2.4 ± 0.2	W Africa M	E Europe F
33	2.1 ± 0.3	1.47 ± 0.09	-0.2 ± 0.1	0.80 ± 0.10	2.2 ± 0.1	1.8 ± 0.3	1.9 ± 0.2	1.3 ± 0.1	0.1 ± 0.1	1.40 ± 0.08	1.7 ± 0.2	2.2 ± 0.2	S E Asia F	E Europe F
34	1.8 ± 0.3	1.40 ± 0.09	-0.1 ± 0.1	0.73 ± 0.10	2.1 ± 0.1	1.8 ± 0.3	1.7 ± 0.2	1.4 ± 0.1	-0.1 ± 0.1	1.33 ± 0.08	1.8 ± 0.2	2.3 ± 0.2	W Africa M	E Europe M
35	2.1 ± 0.3	1.22 ± 0.09	-0.2 ± 0.1	0.45 ± 0.10	1.8 ± 0.1	1.4 ± 0.3	1.8 ± 0.2	1.5 ± 0.1	0.0 ± 0.2	1.24 ± 0.08	1.8 ± 0.2	2.0 ± 0.2	E Africa F	E Europe F
36	1.5 ± 0.3	1.16 ± 0.09	-0.0 ± 0.1	0.39 ± 0.10	1.7 ± 0.2	1.6 ± 0.3	1.6 ± 0.2	1.5 ± 0.1	0.2 ± 0.2	1.09 ± 0.09	1.8 ± 0.2	2.1 ± 0.2	W Africa M	E Europe F
37	1.6 ± 0.3	1.05 ± 0.09	-0.0 ± 0.2	0.3 ± 0.1	1.6 ± 0.1	1.3 ± 0.3	1.5 ± 0.3	1.6 ± 0.1	0.1 ± 0.2	1.04 ± 0.09	1.7 ± 0.2	1.8 ± 0.2	W Africa M	E Europe F
38	1.8 ± 0.3	0.86 ± 0.09	-0.1 ± 0.2	0.3 ± 0.1	1.5 ± 0.1	1.3 ± 0.3	1.3 ± 0.3	1.6 ± 0.1	0.1 ± 0.2	0.86 ± 0.09	2.0 ± 0.2	1.7 ± 0.2	S E Asia M	E Europe F
39	1.4 ± 0.3	0.81 ± 0.09	-0.0 ± 0.2	0.1 ± 0.1	1.4 ± 0.1	1.1 ± 0.3	1.6 ± 0.3	1.6 ± 0.1	0.2 ± 0.2	0.83 ± 0.09	1.8 ± 0.2	1.6 ± 0.2	S E Asia M	E Europe F
40	1.3 ± 0.3	0.67 ± 0.09	0.3 ± 0.2	0.1 ± 0.1	1.2 ± 0.2	1.0 ± 0.3	1.3 ± 0.3	1.7 ± 0.1	0.2 ± 0.2	0.76 ± 0.10	1.9 ± 0.2	1.3 ± 0.2	S E Asia M	S Asia F
41	1.0 ± 0.4	0.57 ± 0.09	0.1 ± 0.2	-0.0 ± 0.1	1.1 ± 0.2	0.5 ± 0.3	1.4 ± 0.3	1.7 ± 0.1	0.3 ± 0.2	0.65 ± 0.10	1.9 ± 0.2	1.4 ± 0.2	S E Asia M	S Asia F
42	1.3 ± 0.4	0.62 ± 0.09	0.2 ± 0.2	0.1 ± 0.2	1.0 ± 0.2	0.6 ± 0.3	1.3 ± 0.3	1.7 ± 0.1	0.3 ± 0.2	0.6 ± 0.1	2.0 ± 0.2	0.9 ± 0.2	S E Asia M	S Asia F
43	1.1 ± 0.4	0.38 ± 0.09	0.2 ± 0.2	-0.1 ± 0.2	0.9 ± 0.2	0.1 ± 0.3	1.3 ± 0.3	1.7 ± 0.1	0.3 ± 0.2	0.6 ± 0.1	1.9 ± 0.2	0.7 ± 0.3	S E Asia M	S Asia F
44	1.1 ± 0.4	0.26 ± 0.09	-0.1 ± 0.2	0.0 ± 0.2	1.1 ± 0.2	-0.0 ± 0.4	0.9 ± 0.3	1.7 ± 0.1	0.6 ± 0.2	0.4 ± 0.1	2.1 ± 0.2	0.8 ± 0.3	S E Asia M	E Europe F
45	1.0 ± 0.4	0.38 ± 0.10	0.0 ± 0.2	-0.0 ± 0.2	1.0 ± 0.2	-0.1 ± 0.3	0.7 ± 0.4	1.7 ± 0.1	0.4 ± 0.2	0.5 ± 0.1	1.7 ± 0.2	0.4 ± 0.3	S E Asia M	W Africa F
46	1.3 ± 0.5	0.17 ± 0.10	0.1 ± 0.2	0.0 ± 0.2	0.8 ± 0.2	-0.4 ± 0.4	0.7 ± 0.4	1.6 ± 0.1	0.5 ± 0.2	0.5 ± 0.1	2.0 ± 0.2	0.2 ± 0.3	S E Asia M	W Africa F
47	1.1 ± 0.5	0.2 ± 0.1	0.2 ± 0.2	-0.0 ± 0.2	0.9 ± 0.2	-0.5 ± 0.4	1.1 ± 0.4	1.5 ± 0.1	0.7 ± 0.2	0.5 ± 0.2	2.1 ± 0.2	0.4 ± 0.3	S E Asia M	W Africa F
48	0.6 ± 0.5	0.14 ± 0.10	0.3 ± 0.2	0.1 ± 0.2	0.8 ± 0.2	-0.4 ± 0.4	0.6 ± 0.4	1.4 ± 0.1	0.7 ± 0.3	0.5 ± 0.2	2.1 ± 0.2	0.1 ± 0.3	S E Asia M	W Africa F
49	0.9 ± 0.5	0.0 ± 0.1	0.3 ± 0.2	0.2 ± 0.2	1.0 ± 0.2	-0.5 ± 0.4	0.1 ± 0.5	1.3 ± 0.1	0.7 ± 0.2	0.5 ± 0.2	1.8 ± 0.2	0.2 ± 0.3	S E Asia M	W Africa F
50	0.8 ± 0.6	0.0 ± 0.1	0.5 ± 0.2	0.1 ± 0.2	0.8 ± 0.2	-1.1 ± 0.4	0.3 ± 0.4	1.2 ± 0.1	0.4 ± 0.2	0.4 ± 0.2	2.1 ± 0.2	-0.5 ± 0.3	S E Asia M	W Africa F
51	0.4 ± 0.5	-0.0 ± 0.1	0.4 ± 0.2	0.2 ± 0.2	0.8 ± 0.2	-1.0 ± 0.4	-0.1 ± 0.5	1.0 ± 0.1	0.9 ± 0.2	0.5 ± 0.2	1.9 ± 0.2	-0.2 ± 0.3	S E Asia M	W Africa F
52	0.5 ± 0.6	-0.1 ± 0.1	0.5 ± 0.2	0.0 ± 0.2	1.1 ± 0.2	-1.2 ± 0.4	-0.2 ± 0.5	0.8 ± 0.1	0.7 ± 0.3	0.4 ± 0.2	1.6 ± 0.2	-0.5 ± 0.4	S E Asia M	W Africa F

Table 70. *Mean raw error for Application-type images for algorithm yoti-004. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	2.6 ± 0.3	2.3 ± 0.1	1.2 ± 0.2	2.2 ± 0.2	2.5 ± 0.3	3.3 ± 0.3	1.0 ± 0.2	0.59 ± 0.09	0.2 ± 0.1	0.50 ± 0.10	0.7 ± 0.2	1.5 ± 0.3	W Africa F	E Europe M
15	2.8 ± 0.3	2.7 ± 0.2	1.3 ± 0.2	2.9 ± 0.2	3.1 ± 0.3	3.2 ± 0.4	1.0 ± 0.3	0.75 ± 0.10	0.2 ± 0.1	0.7 ± 0.1	1.0 ± 0.2	1.9 ± 0.3	W Africa F	E Europe M
16	2.6 ± 0.3	3.0 ± 0.2	1.4 ± 0.2	3.0 ± 0.2	3.4 ± 0.3	3.5 ± 0.4	1.7 ± 0.2	1.0 ± 0.1	0.2 ± 0.2	1.0 ± 0.1	1.2 ± 0.2	1.8 ± 0.3	W Africa F	E Europe M
17	2.7 ± 0.3	3.2 ± 0.2	1.4 ± 0.2	3.1 ± 0.2	3.5 ± 0.3	3.1 ± 0.3	1.5 ± 0.2	1.2 ± 0.1	0.0 ± 0.2	1.1 ± 0.1	1.5 ± 0.2	2.2 ± 0.3	S E Asia F	E Europe M
18	2.2 ± 0.3	2.8 ± 0.1	1.0 ± 0.3	2.8 ± 0.1	3.5 ± 0.2	2.6 ± 0.3	1.3 ± 0.2	1.1 ± 0.1	-0.2 ± 0.2	1.1 ± 0.1	1.5 ± 0.2	1.5 ± 0.3	S E Asia F	E Europe M
19	2.5 ± 0.3	2.9 ± 0.1	1.2 ± 0.3	2.9 ± 0.1	3.4 ± 0.2	2.9 ± 0.3	1.5 ± 0.2	1.4 ± 0.1	-0.0 ± 0.2	1.4 ± 0.1	1.6 ± 0.2	1.9 ± 0.3	S E Asia F	E Europe M
20	2.2 ± 0.3	2.9 ± 0.1	1.0 ± 0.2	2.7 ± 0.2	3.4 ± 0.2	2.8 ± 0.3	1.7 ± 0.2	1.5 ± 0.1	0.5 ± 0.2	1.6 ± 0.1	1.6 ± 0.2	1.8 ± 0.3	S E Asia F	E Europe M
21	2.2 ± 0.3	2.8 ± 0.1	0.8 ± 0.2	2.5 ± 0.1	3.1 ± 0.1	2.7 ± 0.3	1.8 ± 0.2	1.48 ± 0.10	0.4 ± 0.2	1.6 ± 0.1	1.7 ± 0.2	1.8 ± 0.3	S E Asia F	E Europe M
22	2.2 ± 0.3	2.4 ± 0.1	0.7 ± 0.1	2.2 ± 0.1	2.9 ± 0.1	2.3 ± 0.3	2.1 ± 0.2	1.39 ± 0.09	0.5 ± 0.2	1.6 ± 0.1	1.5 ± 0.1	1.5 ± 0.3	S E Asia F	E Europe M
23	2.0 ± 0.2	2.18 ± 0.09	0.4 ± 0.1	2.0 ± 0.1	2.6 ± 0.1	2.3 ± 0.3	1.7 ± 0.3	1.13 ± 0.09	0.4 ± 0.1	1.5 ± 0.1	1.4 ± 0.1	1.9 ± 0.3	S E Asia F	E Europe M
24	1.9 ± 0.3	1.82 ± 0.08	0.3 ± 0.1	1.67 ± 0.10	2.3 ± 0.1	1.8 ± 0.3	1.7 ± 0.2	0.97 ± 0.09	0.3 ± 0.1	1.38 ± 0.10	1.3 ± 0.1	1.7 ± 0.2	S E Asia F	E Europe F
25	1.5 ± 0.2	1.59 ± 0.08	0.01 ± 0.09	1.31 ± 0.09	2.0 ± 0.1	1.9 ± 0.2	1.6 ± 0.2	0.77 ± 0.09	0.0 ± 0.1	1.23 ± 0.09	1.1 ± 0.1	1.7 ± 0.2	S E Asia F	E Europe F
26	1.3 ± 0.2	1.30 ± 0.08	-0.27 ± 0.09	0.95 ± 0.09	1.9 ± 0.1	1.6 ± 0.2	1.4 ± 0.2	0.63 ± 0.09	-0.2 ± 0.1	1.08 ± 0.09	1.0 ± 0.1	1.5 ± 0.2	S E Asia F	E Europe F
27	1.3 ± 0.2	1.11 ± 0.08	-0.50 ± 0.09	0.71 ± 0.08	1.6 ± 0.1	1.7 ± 0.2	1.3 ± 0.2	0.44 ± 0.09	-0.4 ± 0.1	0.82 ± 0.08	1.0 ± 0.1	1.4 ± 0.2	W Africa F	E Europe F
28	1.0 ± 0.2	0.87 ± 0.08	-0.74 ± 0.09	0.49 ± 0.09	1.4 ± 0.1	1.5 ± 0.2	0.9 ± 0.2	0.4 ± 0.1	-0.6 ± 0.1	0.73 ± 0.08	0.9 ± 0.2	1.2 ± 0.2	W Africa F	E Europe F
29	1.2 ± 0.2	0.69 ± 0.08	-0.96 ± 0.10	0.23 ± 0.09	1.4 ± 0.1	1.2 ± 0.2	0.9 ± 0.2	0.3 ± 0.1	-0.8 ± 0.1	0.56 ± 0.08	0.5 ± 0.2	1.6 ± 0.2	W Africa M	E Europe F
30	1.0 ± 0.2	0.60 ± 0.08	-1.2 ± 0.1	0.06 ± 0.09	1.3 ± 0.1	1.0 ± 0.2	1.0 ± 0.2	0.2 ± 0.1	-0.9 ± 0.1	0.55 ± 0.08	0.8 ± 0.2	1.4 ± 0.2	W Africa M	E Europe F
31	0.5 ± 0.2	0.46 ± 0.08	-1.2 ± 0.1	-0.10 ± 0.09	1.2 ± 0.1	0.9 ± 0.2	0.9 ± 0.2	0.2 ± 0.1	-0.9 ± 0.1	0.48 ± 0.08	0.7 ± 0.2	1.3 ± 0.2	W Africa M	E Europe F
32	0.7 ± 0.3	0.41 ± 0.09	-1.3 ± 0.1	-0.13 ± 0.10	1.1 ± 0.1	0.8 ± 0.2	0.7 ± 0.2	0.3 ± 0.1	-0.9 ± 0.2	0.49 ± 0.08	0.7 ± 0.2	1.2 ± 0.2	W Africa M	E Europe F
33	0.5 ± 0.3	0.35 ± 0.09	-1.2 ± 0.1	-0.3 ± 0.1	1.2 ± 0.1	0.7 ± 0.3	0.9 ± 0.2	0.3 ± 0.1	-0.6 ± 0.2	0.41 ± 0.09	0.5 ± 0.2	1.2 ± 0.2	W Africa M	E Europe F
34	0.3 ± 0.3	0.37 ± 0.09	-1.1 ± 0.2	-0.2 ± 0.1	1.0 ± 0.1	0.6 ± 0.3	0.6 ± 0.2	0.5 ± 0.1	-0.6 ± 0.2	0.48 ± 0.09	0.8 ± 0.2	1.3 ± 0.2	W Africa M	E Europe F
35	0.6 ± 0.3	0.25 ± 0.09	-1.0 ± 0.2	-0.4 ± 0.1	0.9 ± 0.2	0.0 ± 0.3	0.8 ± 0.2	0.7 ± 0.1	-0.3 ± 0.2	0.51 ± 0.09	0.9 ± 0.2	1.1 ± 0.2	W Africa M	E Europe F
36	0.2 ± 0.3	0.26 ± 0.10	-0.7 ± 0.2	-0.4 ± 0.1	0.9 ± 0.2	0.3 ± 0.3	0.6 ± 0.3	0.7 ± 0.1	-0.1 ± 0.2	0.46 ± 0.09	0.9 ± 0.2	1.1 ± 0.2	W Africa M	E Europe F
37	0.3 ± 0.3	0.36 ± 0.09	-0.6 ± 0.2	-0.4 ± 0.1	0.8 ± 0.2	-0.0 ± 0.3	0.7 ± 0.3	0.9 ± 0.1	-0.1 ± 0.2	0.54 ± 0.09	0.9 ± 0.2	0.9 ± 0.2	S E Asia M	E Europe F
38	0.4 ± 0.3	0.24 ± 0.09	-0.6 ± 0.2	-0.3 ± 0.1	0.9 ± 0.2	-0.2 ± 0.3	0.4 ± 0.3	0.8 ± 0.1	-0.0 ± 0.2	0.43 ± 0.09	1.3 ± 0.2	0.7 ± 0.2	S E Asia M	E Europe F
39	-0.0 ± 0.3	0.29 ± 0.09	-0.4 ± 0.2	-0.5 ± 0.1	0.9 ± 0.2	-0.2 ± 0.3	0.7 ± 0.3	0.9 ± 0.1	0.1 ± 0.2	0.47 ± 0.09	1.2 ± 0.2	0.6 ± 0.2	S E Asia M	S Asia F
40	-0.3 ± 0.4	0.17 ± 0.09	-0.1 ± 0.2	-0.4 ± 0.1	0.7 ± 0.2	-0.5 ± 0.3	0.6 ± 0.3	1.0 ± 0.1	0.2 ± 0.2	0.4 ± 0.1	1.3 ± 0.2	0.4 ± 0.2	S E Asia M	W Africa F
41	-0.6 ± 0.4	0.12 ± 0.09	-0.2 ± 0.2	-0.5 ± 0.1	0.6 ± 0.2	-1.0 ± 0.3	0.7 ± 0.3	1.0 ± 0.1	0.3 ± 0.2	0.4 ± 0.1	1.3 ± 0.2	0.4 ± 0.2	S E Asia M	W Africa F
42	-0.3 ± 0.4	0.20 ± 0.09	-0.0 ± 0.2	-0.3 ± 0.2	0.5 ± 0.2	-0.8 ± 0.3	0.5 ± 0.3	1.0 ± 0.1	0.5 ± 0.2	0.3 ± 0.1	1.4 ± 0.2	0.1 ± 0.2	S E Asia M	W Africa F
43	-0.5 ± 0.4	0.00 ± 0.09	-0.2 ± 0.2	-0.5 ± 0.2	0.5 ± 0.2	-1.5 ± 0.3	0.6 ± 0.3	1.1 ± 0.1	0.3 ± 0.2	0.3 ± 0.1	1.5 ± 0.2	-0.3 ± 0.3	S E Asia M	W Africa F
44	-0.3 ± 0.5	-0.11 ± 0.09	-0.4 ± 0.2	-0.4 ± 0.2	0.7 ± 0.2	-1.6 ± 0.4	0.2 ± 0.3	1.1 ± 0.1	0.6 ± 0.2	0.2 ± 0.1	1.7 ± 0.2	-0.0 ± 0.3	S E Asia M	W Africa F
45	-0.6 ± 0.5	-0.05 ± 0.09	-0.2 ± 0.2	-0.6 ± 0.2	0.5 ± 0.2	-1.8 ± 0.3	0.1 ± 0.3	1.1 ± 0.1	0.4 ± 0.2	0.3 ± 0.1	1.3 ± 0.2	-0.5 ± 0.3	S E Asia M	W Africa F
46	-0.1 ± 0.5	-0.24 ± 0.09	-0.2 ± 0.2	-0.5 ± 0.2	0.3 ± 0.2	-1.8 ± 0.4	-0.0 ± 0.4	1.1 ± 0.1	0.4 ± 0.2	0.4 ± 0.1	1.4 ± 0.2	-0.8 ± 0.3	S E Asia M	W Africa F
47	-0.4 ± 0.6	-0.19 ± 0.09	-0.1 ± 0.2	-0.6 ± 0.2	0.3 ± 0.2	-2.1 ± 0.4	0.4 ± 0.4	1.0 ± 0.1	0.5 ± 0.2	0.4 ± 0.2	1.6 ± 0.2	-0.5 ± 0.3	S E Asia M	W Africa F
48	-0.8 ± 0.6	-0.30 ± 0.09	-0.0 ± 0.2	-0.4 ± 0.2	0.3 ± 0.2	-2.0 ± 0.4	-0.1 ± 0.4	0.9 ± 0.1	0.6 ± 0.2	0.3 ± 0.2	1.6 ± 0.2	-0.9 ± 0.3	S E Asia M	W Africa F
49	-0.5 ± 0.6	-0.5 ± 0.1	-0.1 ± 0.2	-0.4 ± 0.2	0.5 ± 0.2	-2.1 ± 0.4	-0.5 ± 0.4	0.8 ± 0.1	0.5 ± 0.2	0.3 ± 0.2	1.4 ± 0.2	-0.9 ± 0.3	S E Asia M	W Africa F
50	-0.9 ± 0.7	-0.44 ± 0.10	0.1 ± 0.2	-0.4 ± 0.2	0.3 ± 0.2	-2.7 ± 0.4	-0.5 ± 0.4	0.7 ± 0.1	0.2 ± 0.2	0.3 ± 0.2	1.5 ± 0.2	-1.3 ± 0.3	S E Asia M	W Africa F
51	-1.3 ± 0.6	-0.5 ± 0.1	0.0 ± 0.2	-0.3 ± 0.2	0.2 ± 0.2	-2.8 ± 0.5	-0.9 ± 0.5	0.5 ± 0.1	0.5 ± 0.2	0.4 ± 0.2	1.4 ± 0.2	-1.4 ± 0.3	S E Asia M	W Africa F
52	-1.0 ± 0.6	-0.6 ± 0.1	0.1 ± 0.2	-0.5 ± 0.2	0.5 ± 0.2	-2.8 ± 0.5	-0.7 ± 0.5	0.3 ± 0.1	0.5 ± 0.3	0.3 ± 0.2	1.2 ± 0.2	-1.4 ± 0.4	S E Asia M	W Africa F

Table 71. *Mean raw error for Application-type images for algorithm youverse-000. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	3.5 ± 0.3	2.7 ± 0.1	3.9 ± 0.3	3.9 ± 0.2	2.4 ± 0.2	4.2 ± 0.5	2.7 ± 0.3	2.40 ± 0.08	2.4 ± 0.2	2.9 ± 0.1	2.3 ± 0.2	2.9 ± 0.4	W Africa F	S E Asia M
15	3.6 ± 0.4	2.5 ± 0.1	4.0 ± 0.3	3.9 ± 0.2	2.1 ± 0.3	4.5 ± 0.5	2.5 ± 0.3	2.04 ± 0.09	2.3 ± 0.2	2.7 ± 0.1	2.2 ± 0.2	3.4 ± 0.4	W Africa F	E Asia M
16	3.7 ± 0.4	2.0 ± 0.1	4.1 ± 0.3	3.3 ± 0.2	2.0 ± 0.3	3.9 ± 0.5	3.0 ± 0.3	1.6 ± 0.1	2.4 ± 0.3	2.7 ± 0.2	2.2 ± 0.2	3.1 ± 0.5	E Europe F	E Asia M
17	3.8 ± 0.5	1.5 ± 0.1	3.8 ± 0.3	2.9 ± 0.2	1.3 ± 0.3	4.0 ± 0.5	3.2 ± 0.4	1.3 ± 0.1	2.0 ± 0.3	2.9 ± 0.2	1.8 ± 0.3	3.5 ± 0.5	W Africa F	E Asia M
18	3.0 ± 0.3	1.0 ± 0.1	3.2 ± 0.3	2.7 ± 0.2	1.3 ± 0.2	3.2 ± 0.4	3.6 ± 0.4	0.7 ± 0.1	1.8 ± 0.2	2.7 ± 0.1	1.3 ± 0.2	3.6 ± 0.4	E Africa M	E Asia M
19	2.8 ± 0.4	0.4 ± 0.1	2.6 ± 0.3	2.3 ± 0.2	0.6 ± 0.2	3.3 ± 0.4	3.5 ± 0.3	0.5 ± 0.1	1.7 ± 0.3	2.9 ± 0.2	0.9 ± 0.2	3.4 ± 0.4	E Africa M	E Asia F
20	2.7 ± 0.4	-0.0 ± 0.1	2.8 ± 0.2	1.8 ± 0.2	-0.1 ± 0.2	3.1 ± 0.4	3.7 ± 0.4	0.1 ± 0.1	1.7 ± 0.3	2.8 ± 0.2	0.8 ± 0.2	3.7 ± 0.4	E Africa M	S E Asia F
21	2.1 ± 0.3	-0.6 ± 0.1	2.1 ± 0.2	1.4 ± 0.1	-0.7 ± 0.2	2.5 ± 0.4	3.7 ± 0.3	-0.2 ± 0.1	1.5 ± 0.3	2.5 ± 0.2	0.6 ± 0.2	4.0 ± 0.4	W Africa M	S E Asia F
22	1.7 ± 0.3	-1.1 ± 0.1	2.0 ± 0.2	0.9 ± 0.1	-1.3 ± 0.2	2.1 ± 0.4	3.8 ± 0.3	-0.5 ± 0.1	1.6 ± 0.3	2.5 ± 0.2	0.1 ± 0.2	3.5 ± 0.3	E Africa M	S E Asia F
23	1.2 ± 0.3	-1.6 ± 0.1	1.6 ± 0.2	0.7 ± 0.1	-1.8 ± 0.1	1.9 ± 0.3	3.6 ± 0.3	-0.7 ± 0.1	1.5 ± 0.3	2.3 ± 0.2	-0.2 ± 0.2	3.2 ± 0.3	E Africa M	S E Asia F
24	0.8 ± 0.3	-2.3 ± 0.1	1.4 ± 0.2	0.2 ± 0.1	-2.2 ± 0.1	1.1 ± 0.3	3.2 ± 0.3	-1.0 ± 0.1	1.5 ± 0.2	2.1 ± 0.1	-0.4 ± 0.2	3.1 ± 0.3	E Africa M	E Asia F
25	0.5 ± 0.3	-2.8 ± 0.1	1.0 ± 0.1	-0.2 ± 0.1	-2.8 ± 0.1	0.8 ± 0.3	2.9 ± 0.3	-1.2 ± 0.1	1.3 ± 0.2	1.9 ± 0.1	-0.7 ± 0.2	2.6 ± 0.3	E Africa M	E Asia F
26	-0.2 ± 0.3	-3.4 ± 0.1	0.7 ± 0.1	-0.7 ± 0.1	-3.3 ± 0.1	0.0 ± 0.3	2.7 ± 0.3	-1.7 ± 0.1	0.9 ± 0.2	1.5 ± 0.1	-0.8 ± 0.2	2.5 ± 0.2	E Africa M	E Asia F
27	-0.5 ± 0.3	-3.93 ± 0.10	0.4 ± 0.1	-1.3 ± 0.1	-3.6 ± 0.1	-0.5 ± 0.2	2.2 ± 0.2	-1.9 ± 0.1	1.0 ± 0.2	1.2 ± 0.1	-1.2 ± 0.2	2.2 ± 0.2	W Africa M	E Asia F
28	-0.9 ± 0.3	-4.41 ± 0.10	0.2 ± 0.1	-1.7 ± 0.1	-4.2 ± 0.1	-0.9 ± 0.3	1.8 ± 0.2	-2.1 ± 0.1	0.9 ± 0.2	0.6 ± 0.1	-1.5 ± 0.2	1.5 ± 0.2	E Africa M	E Asia F
29	-1.2 ± 0.3	-4.82 ± 0.10	-0.1 ± 0.1	-2.1 ± 0.1	-4.6 ± 0.1	-1.6 ± 0.3	1.5 ± 0.2	-2.4 ± 0.1	0.7 ± 0.2	0.2 ± 0.1	-1.6 ± 0.2	1.3 ± 0.2	E Africa M	E Asia F
30	-1.8 ± 0.3	-5.36 ± 0.10	-0.3 ± 0.2	-2.6 ± 0.1	-4.9 ± 0.1	-2.1 ± 0.3	0.9 ± 0.2	-2.7 ± 0.1	0.4 ± 0.2	-0.27 ± 0.10	-2.0 ± 0.2	1.0 ± 0.2	W Africa M	E Asia F
31	-2.2 ± 0.3	-5.7 ± 0.1	-0.4 ± 0.2	-3.1 ± 0.1	-5.5 ± 0.2	-2.6 ± 0.3	0.8 ± 0.2	-2.9 ± 0.1	0.3 ± 0.2	-0.6 ± 0.1	-2.4 ± 0.3	0.5 ± 0.2	E Africa M	E Asia F
32	-2.3 ± 0.3	-6.1 ± 0.1	-0.7 ± 0.2	-3.4 ± 0.1	-5.9 ± 0.2	-3.1 ± 0.3	0.3 ± 0.2	-3.2 ± 0.1	0.2 ± 0.2	-1.0 ± 0.1	-2.4 ± 0.3	0.2 ± 0.2	E Africa M	E Asia F
33	-3.2 ± 0.3	-6.4 ± 0.1	-0.8 ± 0.2	-3.7 ± 0.1	-6.3 ± 0.2	-3.4 ± 0.3	-0.0 ± 0.3	-3.5 ± 0.2	0.1 ± 0.2	-1.45 ± 0.10	-2.9 ± 0.3	-0.2 ± 0.2	E Europe M	E Asia F
34	-3.6 ± 0.3	-6.8 ± 0.1	-1.1 ± 0.2	-4.0 ± 0.1	-6.8 ± 0.2	-4.0 ± 0.3	-0.5 ± 0.3	-3.9 ± 0.1	-0.3 ± 0.2	-1.8 ± 0.1	-3.0 ± 0.3	-0.6 ± 0.2	E Europe M	E Asia F
35	-3.9 ± 0.3	-7.3 ± 0.1	-1.3 ± 0.2	-4.5 ± 0.1	-7.2 ± 0.2	-4.6 ± 0.3	-0.8 ± 0.3	-4.0 ± 0.2	-0.5 ± 0.2	-2.1 ± 0.1	-3.2 ± 0.3	-1.1 ± 0.2	E Europe M	E Asia F
36	-4.3 ± 0.3	-7.7 ± 0.1	-1.4 ± 0.2	-4.8 ± 0.1	-7.3 ± 0.2	-5.0 ± 0.3	-1.4 ± 0.3	-4.2 ± 0.2	-0.3 ± 0.2	-2.4 ± 0.1	-3.4 ± 0.3	-1.8 ± 0.2	E Europe M	E Asia F
37	-4.6 ± 0.3	-8.0 ± 0.1	-1.6 ± 0.2	-5.0 ± 0.1	-7.8 ± 0.2	-5.5 ± 0.3	-1.5 ± 0.3	-4.5 ± 0.2	-0.8 ± 0.2	-2.6 ± 0.1	-3.6 ± 0.3	-2.3 ± 0.2	E Europe M	E Asia F
38	-4.9 ± 0.4	-8.3 ± 0.1	-1.6 ± 0.3	-5.3 ± 0.2	-8.0 ± 0.2	-5.8 ± 0.3	-2.2 ± 0.3	-4.6 ± 0.2	-0.9 ± 0.2	-3.0 ± 0.1	-3.5 ± 0.3	-2.4 ± 0.3	E Europe M	E Asia F
39	-5.1 ± 0.4	-8.6 ± 0.1	-2.1 ± 0.3	-5.8 ± 0.2	-8.2 ± 0.2	-6.2 ± 0.3	-2.0 ± 0.3	-4.9 ± 0.2	-1.1 ± 0.2	-3.3 ± 0.1	-3.6 ± 0.3	-3.1 ± 0.3	E Europe M	E Asia F
40	-5.5 ± 0.4	-8.9 ± 0.1	-2.1 ± 0.3	-5.9 ± 0.2	-8.2 ± 0.2	-6.9 ± 0.3	-2.4 ± 0.3	-5.1 ± 0.2	-1.1 ± 0.3	-3.6 ± 0.1	-3.7 ± 0.3	-3.5 ± 0.3	E Europe M	E Asia F
41	-6.2 ± 0.4	-9.2 ± 0.1	-2.4 ± 0.3	-6.2 ± 0.2	-8.7 ± 0.2	-7.8 ± 0.4	-2.8 ± 0.3	-5.2 ± 0.2	-1.5 ± 0.3	-3.9 ± 0.1	-3.8 ± 0.3	-3.7 ± 0.3	E Europe M	E Asia F
42	-6.0 ± 0.5	-9.4 ± 0.1	-2.4 ± 0.3	-6.2 ± 0.2	-8.7 ± 0.3	-8.0 ± 0.4	-3.3 ± 0.3	-5.4 ± 0.2	-1.4 ± 0.3	-4.2 ± 0.2	-3.6 ± 0.3	-4.2 ± 0.3	E Europe M	E Asia F
43	-6.8 ± 0.5	-9.8 ± 0.1	-2.7 ± 0.3	-6.6 ± 0.2	-9.2 ± 0.3	-8.7 ± 0.4	-3.3 ± 0.4	-5.6 ± 0.2	-2.2 ± 0.3	-4.3 ± 0.2	-3.9 ± 0.3	-5.2 ± 0.3	E Europe M	E Asia F
44	-6.7 ± 0.5	-10.2 ± 0.1	-3.3 ± 0.3	-6.8 ± 0.2	-9.2 ± 0.3	-8.4 ± 0.4	-4.1 ± 0.4	-5.8 ± 0.2	-1.9 ± 0.3	-4.7 ± 0.2	-3.8 ± 0.3	-5.3 ± 0.3	E Europe M	E Asia F
45	-7.1 ± 0.5	-10.3 ± 0.2	-3.2 ± 0.3	-6.8 ± 0.2	-9.6 ± 0.3	-9.0 ± 0.4	-4.8 ± 0.4	-6.0 ± 0.2	-2.5 ± 0.3	-4.7 ± 0.2	-4.1 ± 0.3	-6.0 ± 0.3	E Europe M	E Asia F
46	-6.7 ± 0.6	-10.7 ± 0.2	-3.9 ± 0.3	-6.9 ± 0.2	-9.8 ± 0.3	-9.6 ± 0.4	-4.7 ± 0.4	-6.3 ± 0.2	-2.1 ± 0.3	-4.9 ± 0.2	-4.4 ± 0.3	-6.1 ± 0.3	E Europe M	E Asia F
47	-7.5 ± 0.6	-10.9 ± 0.2	-4.0 ± 0.4	-7.3 ± 0.3	-10.1 ± 0.3	-9.9 ± 0.4	-4.9 ± 0.4	-6.5 ± 0.2	-2.6 ± 0.3	-5.1 ± 0.2	-4.1 ± 0.3	-6.5 ± 0.4	E Europe M	E Asia F
48	-8.1 ± 0.6	-11.2 ± 0.2	-4.3 ± 0.3	-7.4 ± 0.3	-10.1 ± 0.3	-10.4 ± 0.5	-5.6 ± 0.5	-6.8 ± 0.2	-2.4 ± 0.4	-5.2 ± 0.2	-4.5 ± 0.4	-6.9 ± 0.4	E Europe M	E Asia F
49	-7.9 ± 0.6	-11.6 ± 0.2	-4.5 ± 0.3	-7.6 ± 0.3	-10.4 ± 0.3	-10.7 ± 0.5	-6.0 ± 0.5	-7.0 ± 0.2	-3.0 ± 0.3	-5.5 ± 0.2	-4.6 ± 0.4	-7.6 ± 0.4	E Europe M	E Asia F
50	-8.6 ± 0.7	-11.7 ± 0.2	-4.6 ± 0.4	-7.6 ± 0.3	-10.7 ± 0.3	-11.0 ± 0.5	-6.5 ± 0.5	-7.1 ± 0.2	-3.0 ± 0.4	-5.7 ± 0.3	-4.9 ± 0.4	-7.8 ± 0.4	E Europe M	E Asia F
51	-9.1 ± 0.7	-12.0 ± 0.2	-4.9 ± 0.4	-8.1 ± 0.3	-11.0 ± 0.3	-11.5 ± 0.5	-6.7 ± 0.6	-7.3 ± 0.2	-3.0 ± 0.4	-5.8 ± 0.3	-4.7 ± 0.4	-8.8 ± 0.4	E Europe M	E Asia F
52	-8.9 ± 0.7	-12.2 ± 0.2	-5.1 ± 0.4	-8.4 ± 0.3	-10.9 ± 0.3	-11.8 ± 0.5	-6.5 ± 0.5	-7.7 ± 0.2	-3.1 ± 0.4	-6.2 ± 0.3	-5.2 ± 0.4	-8.8 ± 0.4	E Europe M	E Asia F

Table 72. *Mean absolute error for Application-type images for algorithm cognitec-000. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	3.0 ± 0.2	2.01 ± 0.08	1.8 ± 0.1	1.93 ± 0.10	1.9 ± 0.2	3.4 ± 0.3	2.3 ± 0.2	1.86 ± 0.08	1.4 ± 0.1	1.92 ± 0.08	1.9 ± 0.1	2.1 ± 0.2	W Africa F	E Europe M
15	3.2 ± 0.3	2.02 ± 0.09	1.8 ± 0.1	2.1 ± 0.1	2.1 ± 0.2	3.2 ± 0.3	2.2 ± 0.2	1.82 ± 0.08	1.4 ± 0.1	1.88 ± 0.09	2.0 ± 0.1	2.2 ± 0.2	W Africa F	E Europe M
16	3.2 ± 0.3	2.2 ± 0.1	1.6 ± 0.1	2.0 ± 0.1	2.4 ± 0.2	3.8 ± 0.4	2.3 ± 0.2	1.71 ± 0.07	1.5 ± 0.1	1.94 ± 0.10	1.9 ± 0.2	2.4 ± 0.2	W Africa F	E Europe M
17	3.3 ± 0.3	2.15 ± 0.10	1.6 ± 0.2	2.1 ± 0.1	2.2 ± 0.2	3.6 ± 0.3	2.1 ± 0.2	1.72 ± 0.08	1.3 ± 0.1	1.9 ± 0.1	2.0 ± 0.2	2.5 ± 0.3	W Africa F	E Europe M
18	3.2 ± 0.2	2.24 ± 0.08	1.9 ± 0.2	2.34 ± 0.09	2.3 ± 0.1	3.5 ± 0.3	2.3 ± 0.2	1.77 ± 0.07	1.6 ± 0.1	2.02 ± 0.09	2.0 ± 0.2	2.3 ± 0.2	W Africa F	E Europe M
19	3.4 ± 0.2	2.23 ± 0.08	1.9 ± 0.2	2.4 ± 0.1	2.5 ± 0.1	3.5 ± 0.3	2.5 ± 0.2	1.93 ± 0.08	1.6 ± 0.1	2.10 ± 0.09	2.0 ± 0.1	2.4 ± 0.2	W Africa F	E Europe M
20	3.5 ± 0.2	2.37 ± 0.09	1.9 ± 0.1	2.5 ± 0.1	2.5 ± 0.1	3.3 ± 0.2	2.7 ± 0.2	1.98 ± 0.08	1.6 ± 0.1	2.22 ± 0.09	2.2 ± 0.1	2.5 ± 0.2	E Africa F	E Europe M
21	3.4 ± 0.2	2.43 ± 0.08	2.1 ± 0.1	2.63 ± 0.08	2.5 ± 0.1	3.5 ± 0.2	2.6 ± 0.2	2.06 ± 0.07	1.7 ± 0.1	2.34 ± 0.09	2.3 ± 0.1	2.5 ± 0.2	W Africa F	E Europe M
22	3.4 ± 0.2	2.57 ± 0.07	2.31 ± 0.09	2.69 ± 0.08	2.65 ± 0.10	3.4 ± 0.2	3.1 ± 0.2	2.27 ± 0.08	1.8 ± 0.1	2.42 ± 0.10	2.2 ± 0.1	2.5 ± 0.2	E Africa F	E Europe M
23	3.5 ± 0.2	2.59 ± 0.07	2.54 ± 0.09	2.84 ± 0.08	2.65 ± 0.09	3.3 ± 0.2	3.3 ± 0.2	2.42 ± 0.08	1.9 ± 0.1	2.52 ± 0.09	2.4 ± 0.1	2.7 ± 0.2	E Africa F	E Europe M
24	3.7 ± 0.2	2.66 ± 0.06	2.63 ± 0.08	2.99 ± 0.07	2.70 ± 0.08	3.4 ± 0.2	3.2 ± 0.2	2.53 ± 0.08	2.05 ± 0.09	2.67 ± 0.08	2.5 ± 0.1	2.8 ± 0.2	E Africa F	E Europe M
25	3.7 ± 0.2	2.77 ± 0.06	2.79 ± 0.08	3.09 ± 0.07	2.76 ± 0.08	3.4 ± 0.2	3.4 ± 0.2	2.66 ± 0.08	2.17 ± 0.10	2.64 ± 0.08	2.6 ± 0.1	3.0 ± 0.2	E Africa F	E Europe M
26	3.7 ± 0.2	2.84 ± 0.06	2.92 ± 0.08	3.23 ± 0.06	2.81 ± 0.08	3.4 ± 0.2	3.4 ± 0.1	2.65 ± 0.08	2.27 ± 0.10	2.69 ± 0.07	2.7 ± 0.1	3.1 ± 0.1	E Africa F	E Europe M
27	3.9 ± 0.2	2.88 ± 0.06	3.08 ± 0.08	3.38 ± 0.06	2.91 ± 0.08	3.6 ± 0.1	3.4 ± 0.1	2.72 ± 0.07	2.30 ± 0.09	2.70 ± 0.07	2.7 ± 0.1	3.2 ± 0.1	E Africa F	E Europe M
28	3.9 ± 0.2	2.92 ± 0.06	3.00 ± 0.08	3.51 ± 0.06	3.00 ± 0.08	3.6 ± 0.1	3.3 ± 0.1	2.76 ± 0.08	2.36 ± 0.09	2.73 ± 0.06	2.7 ± 0.1	3.3 ± 0.1	E Africa F	E Europe M
29	4.1 ± 0.2	2.97 ± 0.06	3.02 ± 0.08	3.62 ± 0.07	3.13 ± 0.08	3.7 ± 0.1	3.3 ± 0.1	2.69 ± 0.08	2.44 ± 0.09	2.75 ± 0.06	2.7 ± 0.1	3.4 ± 0.1	E Africa F	E Europe M
30	4.1 ± 0.2	3.05 ± 0.06	3.09 ± 0.09	3.78 ± 0.07	3.10 ± 0.09	3.8 ± 0.1	3.5 ± 0.1	2.82 ± 0.07	2.43 ± 0.10	2.77 ± 0.06	2.8 ± 0.1	3.6 ± 0.1	E Africa F	E Europe M
31	4.1 ± 0.2	3.07 ± 0.06	3.02 ± 0.09	3.91 ± 0.07	3.21 ± 0.09	3.9 ± 0.1	3.5 ± 0.1	2.82 ± 0.08	2.51 ± 0.10	2.80 ± 0.06	3.0 ± 0.1	3.6 ± 0.1	E Africa F	E Europe M
32	4.2 ± 0.2	3.13 ± 0.06	2.99 ± 0.09	3.98 ± 0.07	3.38 ± 0.10	4.1 ± 0.2	3.6 ± 0.1	2.77 ± 0.07	2.4 ± 0.1	2.83 ± 0.06	2.8 ± 0.1	3.7 ± 0.1	E Africa F	E Europe M
33	4.5 ± 0.2	3.23 ± 0.06	3.08 ± 0.10	4.00 ± 0.08	3.3 ± 0.1	4.2 ± 0.2	3.7 ± 0.2	2.87 ± 0.08	2.30 ± 0.10	2.88 ± 0.06	2.9 ± 0.1	3.8 ± 0.1	E Africa F	E Europe M
34	4.5 ± 0.2	3.23 ± 0.06	3.0 ± 0.1	4.07 ± 0.08	3.4 ± 0.1	4.3 ± 0.2	3.6 ± 0.2	2.90 ± 0.07	2.5 ± 0.1	2.89 ± 0.06	3.0 ± 0.1	3.9 ± 0.1	E Africa F	E Europe M
35	4.6 ± 0.2	3.30 ± 0.07	3.1 ± 0.1	4.06 ± 0.08	3.5 ± 0.1	4.4 ± 0.2	3.6 ± 0.2	2.90 ± 0.08	2.5 ± 0.1	2.89 ± 0.06	3.1 ± 0.1	4.1 ± 0.1	E Africa F	E Europe M
36	4.8 ± 0.2	3.36 ± 0.07	3.0 ± 0.1	4.06 ± 0.09	3.4 ± 0.1	4.4 ± 0.2	3.7 ± 0.2	2.91 ± 0.08	2.5 ± 0.1	2.93 ± 0.06	3.0 ± 0.1	4.1 ± 0.2	E Africa F	E Europe M
37	4.6 ± 0.2	3.29 ± 0.07	3.0 ± 0.1	4.08 ± 0.09	3.4 ± 0.1	4.8 ± 0.2	3.8 ± 0.2	2.93 ± 0.08	2.6 ± 0.1	2.98 ± 0.06	2.9 ± 0.1	4.1 ± 0.2	W Africa F	E Europe M
38	4.5 ± 0.2	3.42 ± 0.07	2.9 ± 0.1	4.04 ± 0.10	3.4 ± 0.1	4.8 ± 0.2	3.7 ± 0.2	2.99 ± 0.08	2.5 ± 0.1	2.97 ± 0.06	3.0 ± 0.1	4.2 ± 0.2	W Africa F	E Europe M
39	4.6 ± 0.2	3.37 ± 0.07	3.0 ± 0.1	4.2 ± 0.1	3.4 ± 0.1	4.4 ± 0.2	3.6 ± 0.2	3.00 ± 0.08	2.6 ± 0.1	2.96 ± 0.07	3.1 ± 0.1	4.1 ± 0.2	E Africa F	E Europe M
40	4.6 ± 0.2	3.32 ± 0.07	3.0 ± 0.1	4.0 ± 0.1	3.5 ± 0.1	4.8 ± 0.2	3.4 ± 0.2	2.92 ± 0.08	2.7 ± 0.1	3.09 ± 0.07	2.9 ± 0.1	4.2 ± 0.2	W Africa F	E Europe M
41	4.7 ± 0.3	3.40 ± 0.07	2.9 ± 0.1	4.0 ± 0.1	3.4 ± 0.1	4.9 ± 0.2	3.7 ± 0.2	2.91 ± 0.08	2.7 ± 0.1	3.09 ± 0.07	3.0 ± 0.1	4.3 ± 0.2	W Africa F	E Europe M
42	4.6 ± 0.3	3.28 ± 0.07	3.0 ± 0.1	3.9 ± 0.1	3.4 ± 0.1	4.6 ± 0.2	3.5 ± 0.2	2.93 ± 0.08	2.6 ± 0.1	3.11 ± 0.08	2.9 ± 0.1	4.2 ± 0.2	W Africa F	E Europe M
43	4.5 ± 0.3	3.35 ± 0.07	3.1 ± 0.1	3.9 ± 0.1	3.4 ± 0.1	4.7 ± 0.2	3.5 ± 0.2	2.93 ± 0.08	2.8 ± 0.1	3.19 ± 0.09	3.1 ± 0.1	4.4 ± 0.2	W Africa F	E Europe M
44	4.7 ± 0.3	3.38 ± 0.07	3.2 ± 0.1	4.1 ± 0.1	3.4 ± 0.1	4.9 ± 0.3	3.5 ± 0.2	2.93 ± 0.08	2.6 ± 0.1	3.26 ± 0.09	3.1 ± 0.2	4.2 ± 0.2	W Africa F	E Europe M
45	4.7 ± 0.3	3.38 ± 0.07	2.9 ± 0.1	4.0 ± 0.1	3.3 ± 0.1	4.8 ± 0.3	3.6 ± 0.2	3.00 ± 0.08	2.8 ± 0.1	3.23 ± 0.10	3.1 ± 0.2	4.5 ± 0.2	W Africa F	E Europe M
46	4.8 ± 0.3	3.34 ± 0.08	3.1 ± 0.2	3.8 ± 0.1	3.5 ± 0.1	4.8 ± 0.3	3.7 ± 0.3	3.06 ± 0.08	2.9 ± 0.1	3.2 ± 0.1	3.2 ± 0.2	4.4 ± 0.2	W Africa F	E Europe M
47	4.7 ± 0.3	3.34 ± 0.08	3.2 ± 0.2	3.9 ± 0.1	3.3 ± 0.1	4.9 ± 0.3	3.8 ± 0.2	3.05 ± 0.09	2.7 ± 0.1	3.4 ± 0.1	3.2 ± 0.2	4.5 ± 0.2	W Africa F	E Europe M
48	4.6 ± 0.3	3.30 ± 0.08	3.2 ± 0.1	3.9 ± 0.1	3.3 ± 0.1	5.0 ± 0.3	4.0 ± 0.3	3.10 ± 0.08	2.7 ± 0.2	3.4 ± 0.1	3.2 ± 0.2	4.7 ± 0.3	W Africa F	E Europe M
49	4.6 ± 0.4	3.44 ± 0.08	3.2 ± 0.2	3.9 ± 0.1	3.4 ± 0.1	5.4 ± 0.3	4.0 ± 0.3	3.10 ± 0.09	2.7 ± 0.1	3.5 ± 0.1	3.2 ± 0.2	4.3 ± 0.2	W Africa F	E Europe M
50	5.0 ± 0.4	3.40 ± 0.08	3.1 ± 0.1	3.9 ± 0.1	3.4 ± 0.1	5.2 ± 0.3	3.8 ± 0.3	3.15 ± 0.09	2.8 ± 0.1	3.5 ± 0.1	3.3 ± 0.2	4.7 ± 0.2	W Africa F	E Europe M
51	4.6 ± 0.3	3.46 ± 0.09	3.2 ± 0.2	3.9 ± 0.1	3.3 ± 0.1	5.2 ± 0.3	4.3 ± 0.4	3.20 ± 0.09	2.7 ± 0.1	3.6 ± 0.1	3.4 ± 0.2	4.9 ± 0.3	W Africa F	E Europe M
52	4.9 ± 0.4	3.44 ± 0.09	3.2 ± 0.2	4.0 ± 0.1	3.4 ± 0.1	5.4 ± 0.3	4.0 ± 0.3	3.25 ± 0.09	2.8 ± 0.2	3.6 ± 0.1	3.4 ± 0.2	4.9 ± 0.3	W Africa F	E Europe M

Table 73. *Mean absolute error for Application-type images for algorithm cvut-001. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	6.6 ± 0.4	3.4 ± 0.1	2.7 ± 0.2	3.2 ± 0.1	3.0 ± 0.2	6.3 ± 0.4	3.8 ± 0.3	2.5 ± 0.1	1.9 ± 0.1	1.8 ± 0.1	2.2 ± 0.2	4.2 ± 0.4	E Africa F	S Asia M
15	6.5 ± 0.4	3.5 ± 0.1	2.5 ± 0.2	3.4 ± 0.2	3.2 ± 0.3	5.4 ± 0.4	3.4 ± 0.3	2.9 ± 0.1	1.7 ± 0.2	2.2 ± 0.1	2.8 ± 0.2	4.5 ± 0.4	E Africa F	E Europe M
16	6.3 ± 0.4	3.5 ± 0.2	2.3 ± 0.2	3.2 ± 0.2	3.2 ± 0.3	5.5 ± 0.6	3.8 ± 0.3	3.0 ± 0.1	1.8 ± 0.2	2.6 ± 0.1	3.0 ± 0.2	4.3 ± 0.4	E Africa F	E Europe M
17	6.4 ± 0.4	3.2 ± 0.1	1.9 ± 0.2	3.1 ± 0.2	2.8 ± 0.2	5.3 ± 0.4	3.9 ± 0.3	2.9 ± 0.1	1.7 ± 0.2	2.9 ± 0.2	3.0 ± 0.2	4.4 ± 0.4	E Africa F	E Europe M
18	5.8 ± 0.3	2.9 ± 0.1	1.9 ± 0.2	2.9 ± 0.1	2.6 ± 0.2	4.8 ± 0.4	4.0 ± 0.3	2.68 ± 0.08	2.1 ± 0.2	2.9 ± 0.1	2.5 ± 0.2	4.1 ± 0.3	E Africa F	E Europe F
19	6.2 ± 0.3	2.7 ± 0.1	2.3 ± 0.2	3.0 ± 0.1	2.5 ± 0.1	5.4 ± 0.4	4.2 ± 0.3	2.47 ± 0.09	2.6 ± 0.2	3.0 ± 0.1	2.3 ± 0.1	4.3 ± 0.3	E Africa F	S E Asia M
20	5.9 ± 0.3	2.7 ± 0.1	2.6 ± 0.1	3.1 ± 0.1	2.5 ± 0.1	5.3 ± 0.4	4.4 ± 0.3	2.07 ± 0.09	2.8 ± 0.2	3.1 ± 0.1	2.0 ± 0.2	4.4 ± 0.3	E Africa F	S E Asia M
21	5.7 ± 0.3	2.64 ± 0.09	2.9 ± 0.1	3.2 ± 0.1	2.5 ± 0.1	5.4 ± 0.3	4.4 ± 0.2	2.04 ± 0.10	3.1 ± 0.2	3.0 ± 0.1	1.9 ± 0.1	4.1 ± 0.2	E Africa F	S E Asia M
22	5.6 ± 0.2	2.46 ± 0.07	3.1 ± 0.1	3.32 ± 0.09	2.6 ± 0.1	5.5 ± 0.3	4.9 ± 0.2	2.15 ± 0.08	3.3 ± 0.2	3.2 ± 0.1	2.2 ± 0.1	4.2 ± 0.2	E Africa F	E Asia M
23	5.4 ± 0.2	2.52 ± 0.06	3.3 ± 0.1	3.37 ± 0.09	2.68 ± 0.09	5.5 ± 0.2	4.7 ± 0.2	2.41 ± 0.09	3.3 ± 0.2	3.4 ± 0.1	2.6 ± 0.1	4.3 ± 0.2	W Africa F	E Asia M
24	5.1 ± 0.2	2.50 ± 0.07	3.3 ± 0.1	3.35 ± 0.08	2.77 ± 0.08	5.4 ± 0.2	4.5 ± 0.2	2.74 ± 0.10	3.3 ± 0.1	3.4 ± 0.1	2.7 ± 0.1	4.0 ± 0.2	W Africa F	E Asia F
25	4.7 ± 0.2	2.55 ± 0.06	3.7 ± 0.1	3.45 ± 0.08	3.11 ± 0.09	5.0 ± 0.2	4.4 ± 0.2	3.21 ± 0.10	3.3 ± 0.1	3.39 ± 0.10	3.3 ± 0.1	3.7 ± 0.2	W Africa F	E Asia F
26	4.5 ± 0.2	2.59 ± 0.07	4.0 ± 0.1	3.28 ± 0.07	3.36 ± 0.09	4.9 ± 0.2	4.0 ± 0.2	3.30 ± 0.08	3.4 ± 0.1	3.30 ± 0.09	3.8 ± 0.1	3.5 ± 0.2	W Africa F	E Asia F
27	4.3 ± 0.2	2.84 ± 0.07	4.1 ± 0.1	3.37 ± 0.07	3.63 ± 0.10	4.7 ± 0.2	3.6 ± 0.2	3.62 ± 0.09	3.3 ± 0.1	3.23 ± 0.09	4.1 ± 0.1	3.2 ± 0.1	W Africa F	E Asia F
28	4.1 ± 0.2	3.26 ± 0.07	4.2 ± 0.1	3.55 ± 0.08	4.1 ± 0.1	4.7 ± 0.2	3.3 ± 0.1	3.9 ± 0.1	3.0 ± 0.1	3.05 ± 0.08	4.1 ± 0.1	2.9 ± 0.1	W Africa F	W Africa M
29	3.9 ± 0.2	3.69 ± 0.07	4.2 ± 0.1	3.80 ± 0.08	4.4 ± 0.1	4.3 ± 0.2	3.3 ± 0.2	3.8 ± 0.1	2.9 ± 0.1	3.01 ± 0.07	4.2 ± 0.2	3.0 ± 0.1	S E Asia F	E Europe M
30	3.8 ± 0.2	4.15 ± 0.06	4.3 ± 0.1	4.00 ± 0.08	4.8 ± 0.1	4.2 ± 0.2	3.3 ± 0.2	3.9 ± 0.1	2.7 ± 0.1	3.08 ± 0.07	4.3 ± 0.2	2.8 ± 0.1	S E Asia F	E Europe M
31	3.6 ± 0.2	4.66 ± 0.07	4.2 ± 0.1	4.38 ± 0.09	5.3 ± 0.1	4.0 ± 0.2	3.3 ± 0.1	4.2 ± 0.1	2.8 ± 0.1	3.12 ± 0.06	4.5 ± 0.2	2.9 ± 0.1	S E Asia F	E Europe M
32	3.4 ± 0.2	5.09 ± 0.07	4.3 ± 0.1	4.54 ± 0.09	5.7 ± 0.1	4.1 ± 0.2	3.2 ± 0.1	4.2 ± 0.1	3.0 ± 0.1	3.28 ± 0.06	4.6 ± 0.2	3.1 ± 0.1	S E Asia F	E Europe M
33	3.7 ± 0.2	5.55 ± 0.08	4.6 ± 0.1	4.89 ± 0.09	6.0 ± 0.1	3.9 ± 0.2	3.3 ± 0.1	4.3 ± 0.1	2.9 ± 0.1	3.30 ± 0.07	4.5 ± 0.2	3.1 ± 0.1	S E Asia F	E Europe M
34	3.6 ± 0.2	6.04 ± 0.08	4.6 ± 0.2	5.02 ± 0.10	6.2 ± 0.1	3.8 ± 0.2	3.1 ± 0.1	4.3 ± 0.1	2.9 ± 0.1	3.44 ± 0.08	4.4 ± 0.2	3.2 ± 0.1	S E Asia F	E Europe M
35	3.7 ± 0.2	6.47 ± 0.08	4.8 ± 0.2	5.3 ± 0.1	6.5 ± 0.2	3.6 ± 0.2	3.3 ± 0.2	4.2 ± 0.1	2.9 ± 0.1	3.57 ± 0.08	4.4 ± 0.2	3.3 ± 0.1	S E Asia F	E Europe M
36	3.9 ± 0.2	6.72 ± 0.09	4.6 ± 0.2	5.5 ± 0.1	6.7 ± 0.2	3.9 ± 0.2	3.5 ± 0.2	4.0 ± 0.1	2.9 ± 0.1	3.70 ± 0.08	4.3 ± 0.2	3.4 ± 0.1	E Asia F	E Europe M
37	4.3 ± 0.3	7.0 ± 0.1	4.9 ± 0.2	5.6 ± 0.1	6.9 ± 0.2	4.2 ± 0.2	3.6 ± 0.2	3.7 ± 0.1	2.9 ± 0.1	3.96 ± 0.08	3.9 ± 0.2	3.8 ± 0.1	E Asia F	E Europe M
38	4.2 ± 0.2	7.2 ± 0.1	5.0 ± 0.2	5.8 ± 0.1	6.8 ± 0.2	4.4 ± 0.2	3.9 ± 0.2	3.3 ± 0.1	3.1 ± 0.2	4.15 ± 0.09	3.5 ± 0.2	4.1 ± 0.2	E Asia F	E Europe M
39	4.4 ± 0.2	7.4 ± 0.1	5.0 ± 0.2	6.1 ± 0.1	6.7 ± 0.2	4.1 ± 0.2	3.9 ± 0.2	3.0 ± 0.1	2.9 ± 0.1	4.28 ± 0.09	3.3 ± 0.2	4.4 ± 0.2	E Asia F	E Europe M
40	4.7 ± 0.3	7.6 ± 0.1	5.0 ± 0.2	5.9 ± 0.1	7.0 ± 0.2	4.3 ± 0.2	4.1 ± 0.2	3.1 ± 0.1	3.0 ± 0.1	4.4 ± 0.1	3.4 ± 0.2	4.7 ± 0.2	E Asia F	E Europe M
41	5.3 ± 0.3	7.7 ± 0.1	5.2 ± 0.2	6.2 ± 0.2	7.1 ± 0.2	4.8 ± 0.2	4.1 ± 0.2	3.4 ± 0.1	3.2 ± 0.2	4.6 ± 0.1	3.8 ± 0.2	5.1 ± 0.2	E Asia F	E Europe M
42	5.0 ± 0.3	7.8 ± 0.1	5.1 ± 0.2	6.0 ± 0.2	7.1 ± 0.2	5.1 ± 0.2	4.3 ± 0.2	3.8 ± 0.1	3.3 ± 0.2	4.7 ± 0.1	3.9 ± 0.2	5.4 ± 0.2	E Asia F	E Europe M
43	5.4 ± 0.3	8.0 ± 0.1	5.4 ± 0.2	6.5 ± 0.2	7.1 ± 0.2	5.4 ± 0.2	4.1 ± 0.3	4.1 ± 0.1	3.6 ± 0.2	4.7 ± 0.1	4.3 ± 0.2	6.1 ± 0.2	E Asia F	E Europe M
44	5.4 ± 0.3	8.2 ± 0.1	5.4 ± 0.2	6.3 ± 0.2	6.7 ± 0.2	5.6 ± 0.3	4.7 ± 0.3	4.6 ± 0.1	3.8 ± 0.2	4.7 ± 0.1	4.7 ± 0.2	6.0 ± 0.2	E Asia F	E Europe M
45	5.8 ± 0.3	8.2 ± 0.1	5.3 ± 0.2	6.3 ± 0.2	6.7 ± 0.3	5.6 ± 0.3	4.9 ± 0.3	5.1 ± 0.1	4.0 ± 0.2	4.7 ± 0.2	5.0 ± 0.2	6.4 ± 0.2	E Asia F	E Europe M
46	5.9 ± 0.4	8.5 ± 0.1	5.3 ± 0.2	6.1 ± 0.2	6.7 ± 0.3	6.1 ± 0.3	5.1 ± 0.3	5.5 ± 0.1	4.2 ± 0.2	4.8 ± 0.2	5.3 ± 0.2	6.8 ± 0.2	E Asia F	E Europe M
47	6.2 ± 0.5	8.5 ± 0.1	5.1 ± 0.2	5.9 ± 0.2	6.7 ± 0.3	6.1 ± 0.3	5.0 ± 0.3	6.0 ± 0.1	4.5 ± 0.2	4.8 ± 0.2	5.5 ± 0.2	6.8 ± 0.3	E Asia F	E Europe M
48	6.3 ± 0.5	8.7 ± 0.1	5.0 ± 0.3	5.9 ± 0.2	6.6 ± 0.3	6.2 ± 0.3	5.5 ± 0.3	6.5 ± 0.1	4.5 ± 0.3	4.9 ± 0.2	5.9 ± 0.3	7.4 ± 0.3	E Asia F	E Europe M
49	5.9 ± 0.5	8.8 ± 0.1	4.8 ± 0.3	5.4 ± 0.2	6.5 ± 0.3	6.6 ± 0.4	5.7 ± 0.4	6.9 ± 0.1	4.3 ± 0.3	4.7 ± 0.2	5.9 ± 0.3	7.1 ± 0.3	E Asia F	E Europe M
50	6.6 ± 0.5	8.8 ± 0.2	4.4 ± 0.3	5.6 ± 0.2	6.5 ± 0.3	6.6 ± 0.4	5.7 ± 0.4	7.1 ± 0.1	4.3 ± 0.3	4.8 ± 0.2	6.1 ± 0.3	7.3 ± 0.3	E Asia F	E Europe M
51	6.1 ± 0.5	9.0 ± 0.2	4.5 ± 0.3	5.4 ± 0.2	6.7 ± 0.3	6.9 ± 0.4	5.8 ± 0.4	7.2 ± 0.1	4.0 ± 0.2	4.9 ± 0.2	6.2 ± 0.3	7.8 ± 0.4	E Asia F	E Europe M
52	6.7 ± 0.5	8.8 ± 0.2	4.7 ± 0.2	5.6 ± 0.2	6.4 ± 0.3	7.4 ± 0.4	5.7 ± 0.5	7.5 ± 0.2	3.8 ± 0.2	5.0 ± 0.2	6.3 ± 0.3	7.8 ± 0.4	E Asia F	E Europe M

Table 74. *Mean absolute error for Application-type images for algorithm cvut-002. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	4.5 ± 0.2	3.69 ± 0.09	2.9 ± 0.1	3.1 ± 0.1	3.3 ± 0.2	5.1 ± 0.3	2.6 ± 0.2	2.69 ± 0.09	1.68 ± 0.09	1.99 ± 0.09	2.2 ± 0.2	2.7 ± 0.3	W Africa F	E Europe M
15	4.4 ± 0.3	3.49 ± 0.10	2.9 ± 0.2	3.1 ± 0.2	3.3 ± 0.3	4.7 ± 0.3	2.3 ± 0.2	2.67 ± 0.09	1.7 ± 0.2	2.0 ± 0.1	2.4 ± 0.2	2.6 ± 0.3	W Africa F	E Europe M
16	4.0 ± 0.3	3.2 ± 0.1	2.6 ± 0.2	2.8 ± 0.1	3.0 ± 0.2	4.7 ± 0.4	2.8 ± 0.3	2.44 ± 0.08	1.7 ± 0.2	2.2 ± 0.1	2.3 ± 0.2	2.6 ± 0.3	W Africa F	E Europe M
17	3.9 ± 0.3	2.60 ± 0.09	2.4 ± 0.2	2.7 ± 0.1	2.5 ± 0.2	4.3 ± 0.3	2.8 ± 0.3	2.23 ± 0.08	1.6 ± 0.1	2.7 ± 0.1	2.4 ± 0.2	3.3 ± 0.4	W Africa F	E Europe M
18	3.5 ± 0.2	2.14 ± 0.08	2.2 ± 0.2	2.5 ± 0.1	2.0 ± 0.1	4.0 ± 0.3	2.9 ± 0.2	2.01 ± 0.07	2.1 ± 0.2	2.8 ± 0.1	2.1 ± 0.2	3.4 ± 0.3	W Africa F	E Asia M
19	3.5 ± 0.3	1.70 ± 0.08	2.1 ± 0.2	2.4 ± 0.1	2.0 ± 0.1	4.0 ± 0.3	3.0 ± 0.2	1.70 ± 0.07	2.1 ± 0.2	2.8 ± 0.1	1.9 ± 0.1	3.4 ± 0.3	W Africa F	E Asia M
20	3.5 ± 0.3	1.53 ± 0.10	2.2 ± 0.2	2.2 ± 0.1	1.8 ± 0.1	3.8 ± 0.3	3.2 ± 0.3	1.35 ± 0.08	2.2 ± 0.2	2.7 ± 0.1	1.7 ± 0.1	3.6 ± 0.3	W Africa F	E Asia M
21	3.3 ± 0.2	1.64 ± 0.08	2.2 ± 0.1	2.36 ± 0.09	1.90 ± 0.10	3.8 ± 0.3	3.4 ± 0.3	1.33 ± 0.07	2.3 ± 0.2	2.6 ± 0.1	1.5 ± 0.1	3.5 ± 0.3	W Africa F	E Asia M
22	3.7 ± 0.2	2.00 ± 0.06	2.4 ± 0.1	2.48 ± 0.08	2.34 ± 0.10	3.6 ± 0.2	3.5 ± 0.2	1.73 ± 0.06	2.3 ± 0.1	2.7 ± 0.1	1.84 ± 0.10	3.5 ± 0.2	E Africa F	E Asia M
23	3.6 ± 0.2	2.47 ± 0.06	2.6 ± 0.1	2.61 ± 0.08	2.71 ± 0.09	3.6 ± 0.2	3.7 ± 0.2	2.17 ± 0.06	2.3 ± 0.1	2.8 ± 0.1	2.2 ± 0.1	3.6 ± 0.2	E Africa M	E Asia M
24	3.5 ± 0.2	2.91 ± 0.06	2.51 ± 0.10	2.70 ± 0.07	2.96 ± 0.07	3.4 ± 0.2	3.6 ± 0.2	2.56 ± 0.08	2.3 ± 0.1	2.7 ± 0.1	2.4 ± 0.1	3.4 ± 0.2	E Africa M	E Europe M
25	3.6 ± 0.2	3.26 ± 0.07	2.73 ± 0.09	2.88 ± 0.07	3.39 ± 0.09	3.5 ± 0.2	3.7 ± 0.2	2.96 ± 0.08	2.4 ± 0.1	2.73 ± 0.09	2.8 ± 0.1	3.5 ± 0.2	E Africa M	E Europe M
26	3.6 ± 0.2	3.63 ± 0.07	2.89 ± 0.10	3.00 ± 0.06	3.65 ± 0.09	3.3 ± 0.2	3.6 ± 0.2	3.09 ± 0.07	2.6 ± 0.2	2.73 ± 0.08	3.1 ± 0.1	3.3 ± 0.2	S E Asia F	E Europe M
27	3.8 ± 0.2	3.89 ± 0.07	3.09 ± 0.10	3.35 ± 0.07	4.00 ± 0.10	3.3 ± 0.1	3.6 ± 0.2	3.42 ± 0.09	2.8 ± 0.1	2.86 ± 0.08	3.2 ± 0.1	3.3 ± 0.2	S E Asia F	E Europe M
28	4.0 ± 0.2	4.30 ± 0.08	3.42 ± 0.10	3.71 ± 0.07	4.3 ± 0.1	3.5 ± 0.1	3.5 ± 0.1	3.7 ± 0.1	2.9 ± 0.1	2.99 ± 0.07	3.4 ± 0.1	3.1 ± 0.1	S E Asia F	E Europe M
29	4.2 ± 0.2	4.60 ± 0.08	3.67 ± 0.10	4.06 ± 0.07	4.6 ± 0.1	3.7 ± 0.2	3.6 ± 0.2	3.81 ± 0.10	3.0 ± 0.1	3.09 ± 0.07	3.8 ± 0.1	3.3 ± 0.1	S E Asia F	E Europe M
30	4.3 ± 0.2	4.94 ± 0.08	3.9 ± 0.1	4.38 ± 0.08	4.9 ± 0.1	3.8 ± 0.1	3.5 ± 0.1	4.3 ± 0.1	3.0 ± 0.1	3.26 ± 0.07	4.0 ± 0.2	3.0 ± 0.1	E Asia F	E Europe M
31	4.4 ± 0.2	5.30 ± 0.08	3.9 ± 0.1	4.74 ± 0.08	5.3 ± 0.1	3.8 ± 0.2	3.5 ± 0.2	4.5 ± 0.1	3.1 ± 0.1	3.40 ± 0.07	4.3 ± 0.2	2.9 ± 0.1	E Asia F	W Africa M
32	4.4 ± 0.2	5.57 ± 0.09	4.1 ± 0.1	5.06 ± 0.09	5.5 ± 0.1	4.0 ± 0.2	3.4 ± 0.2	4.7 ± 0.1	3.2 ± 0.2	3.64 ± 0.07	4.3 ± 0.2	2.9 ± 0.1	E Asia F	W Africa M
33	4.6 ± 0.2	5.82 ± 0.09	4.1 ± 0.1	5.29 ± 0.09	5.7 ± 0.2	4.0 ± 0.2	3.5 ± 0.2	4.9 ± 0.1	2.7 ± 0.1	3.78 ± 0.08	4.4 ± 0.2	2.8 ± 0.1	E Asia F	E Europe M
34	4.6 ± 0.2	6.00 ± 0.09	4.2 ± 0.1	5.4 ± 0.1	5.6 ± 0.2	4.1 ± 0.2	3.2 ± 0.2	5.2 ± 0.1	2.8 ± 0.1	3.91 ± 0.08	4.8 ± 0.2	3.0 ± 0.1	E Asia F	E Europe M
35	4.9 ± 0.2	6.3 ± 0.1	4.3 ± 0.1	5.7 ± 0.1	6.0 ± 0.2	4.1 ± 0.2	3.4 ± 0.2	5.2 ± 0.1	2.8 ± 0.1	3.99 ± 0.08	4.8 ± 0.2	3.2 ± 0.2	E Asia F	E Europe M
36	4.9 ± 0.2	6.4 ± 0.1	4.1 ± 0.2	6.0 ± 0.1	6.0 ± 0.2	4.1 ± 0.2	3.6 ± 0.2	5.2 ± 0.1	2.8 ± 0.2	4.15 ± 0.09	4.8 ± 0.2	3.2 ± 0.2	E Asia F	E Europe M
37	4.8 ± 0.2	6.5 ± 0.1	4.2 ± 0.2	6.1 ± 0.1	6.3 ± 0.2	4.6 ± 0.2	3.4 ± 0.2	5.3 ± 0.1	2.8 ± 0.1	4.39 ± 0.10	4.9 ± 0.2	3.4 ± 0.2	E Asia F	E Europe M
38	4.8 ± 0.3	6.7 ± 0.1	4.1 ± 0.2	6.2 ± 0.1	6.0 ± 0.2	4.8 ± 0.2	3.6 ± 0.2	5.3 ± 0.1	2.9 ± 0.2	4.42 ± 0.10	4.8 ± 0.2	3.6 ± 0.2	E Asia F	E Europe M
39	4.9 ± 0.3	6.9 ± 0.1	4.3 ± 0.2	6.3 ± 0.1	6.1 ± 0.2	4.7 ± 0.2	3.6 ± 0.2	5.5 ± 0.1	2.9 ± 0.1	4.6 ± 0.1	4.8 ± 0.2	3.9 ± 0.2	E Asia F	E Europe M
40	5.1 ± 0.3	7.0 ± 0.1	4.0 ± 0.2	6.4 ± 0.2	6.4 ± 0.2	5.0 ± 0.3	3.7 ± 0.2	5.7 ± 0.1	3.3 ± 0.2	4.7 ± 0.1	5.0 ± 0.2	4.4 ± 0.2	E Asia F	E Europe M
41	5.4 ± 0.3	7.1 ± 0.1	4.4 ± 0.2	6.5 ± 0.2	6.4 ± 0.2	5.3 ± 0.2	4.0 ± 0.2	5.7 ± 0.1	3.2 ± 0.2	4.9 ± 0.1	5.1 ± 0.2	4.7 ± 0.2	E Asia F	E Europe M
42	5.2 ± 0.3	7.3 ± 0.1	4.5 ± 0.2	6.3 ± 0.2	6.5 ± 0.2	5.3 ± 0.3	4.2 ± 0.2	5.9 ± 0.1	3.4 ± 0.2	5.0 ± 0.1	5.1 ± 0.2	4.7 ± 0.2	E Asia F	E Europe M
43	5.3 ± 0.3	7.5 ± 0.1	4.6 ± 0.2	6.6 ± 0.2	6.8 ± 0.2	5.7 ± 0.3	4.2 ± 0.3	6.0 ± 0.1	3.4 ± 0.2	4.9 ± 0.1	5.4 ± 0.3	5.5 ± 0.2	E Asia F	E Europe M
44	5.6 ± 0.3	7.7 ± 0.1	4.6 ± 0.2	6.5 ± 0.2	6.4 ± 0.2	6.2 ± 0.4	4.1 ± 0.2	6.1 ± 0.1	3.4 ± 0.2	5.1 ± 0.2	5.4 ± 0.3	5.5 ± 0.3	E Asia F	E Europe M
45	5.6 ± 0.3	7.8 ± 0.1	4.5 ± 0.2	6.4 ± 0.2	6.6 ± 0.2	6.2 ± 0.3	4.5 ± 0.3	6.2 ± 0.1	3.3 ± 0.2	4.9 ± 0.1	5.4 ± 0.3	5.9 ± 0.3	E Asia F	E Europe M
46	5.5 ± 0.3	7.9 ± 0.1	4.5 ± 0.2	6.1 ± 0.2	6.8 ± 0.2	6.3 ± 0.3	4.4 ± 0.3	6.4 ± 0.1	3.8 ± 0.3	5.0 ± 0.2	5.4 ± 0.3	6.1 ± 0.3	E Asia F	E Europe M
47	5.5 ± 0.4	7.8 ± 0.1	4.5 ± 0.3	6.0 ± 0.2	6.6 ± 0.3	6.4 ± 0.4	4.6 ± 0.4	6.4 ± 0.2	3.5 ± 0.2	5.1 ± 0.2	5.2 ± 0.3	6.0 ± 0.3	E Asia F	E Europe M
48	5.6 ± 0.5	7.9 ± 0.1	4.2 ± 0.3	6.1 ± 0.2	6.6 ± 0.2	6.5 ± 0.4	5.0 ± 0.4	6.3 ± 0.2	3.6 ± 0.2	5.1 ± 0.2	5.2 ± 0.3	6.7 ± 0.3	E Asia F	E Europe M
49	5.4 ± 0.4	8.1 ± 0.2	4.6 ± 0.3	6.0 ± 0.3	6.7 ± 0.3	6.9 ± 0.4	4.9 ± 0.3	6.3 ± 0.2	3.5 ± 0.2	5.1 ± 0.2	5.1 ± 0.3	6.7 ± 0.3	E Asia F	E Europe M
50	5.9 ± 0.5	8.1 ± 0.2	4.3 ± 0.3	5.7 ± 0.2	6.7 ± 0.3	6.7 ± 0.4	5.1 ± 0.4	6.3 ± 0.2	3.7 ± 0.2	5.2 ± 0.2	5.0 ± 0.3	6.8 ± 0.3	E Asia F	E Europe M
51	5.7 ± 0.5	8.1 ± 0.2	4.2 ± 0.2	5.8 ± 0.2	6.7 ± 0.3	7.1 ± 0.4	5.4 ± 0.4	6.4 ± 0.2	3.5 ± 0.2	5.4 ± 0.2	4.9 ± 0.2	7.0 ± 0.3	E Asia F	E Europe M
52	6.0 ± 0.6	8.2 ± 0.2	4.3 ± 0.2	5.7 ± 0.2	6.2 ± 0.2	7.4 ± 0.4	5.2 ± 0.5	6.3 ± 0.2	3.5 ± 0.2	5.3 ± 0.2	5.3 ± 0.3	7.5 ± 0.4	E Asia F	E Europe M

Table 75. *Mean absolute error for Application-type images for algorithm cvut-003. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	4.8 ± 0.2	3.73 ± 0.08	3.1 ± 0.1	3.4 ± 0.1	3.5 ± 0.2	5.5 ± 0.3	2.6 ± 0.2	2.46 ± 0.08	1.42 ± 0.10	1.90 ± 0.09	2.0 ± 0.1	2.8 ± 0.2	W Africa F	E Europe M
15	4.3 ± 0.2	3.57 ± 0.09	3.0 ± 0.2	3.4 ± 0.2	3.4 ± 0.2	5.1 ± 0.3	2.3 ± 0.2	2.54 ± 0.09	1.5 ± 0.1	2.1 ± 0.1	2.3 ± 0.2	2.7 ± 0.3	W Africa F	E Europe M
16	4.1 ± 0.3	3.24 ± 0.10	2.7 ± 0.2	2.9 ± 0.1	3.2 ± 0.2	5.0 ± 0.4	2.7 ± 0.2	2.44 ± 0.08	1.8 ± 0.2	2.4 ± 0.1	2.4 ± 0.2	2.6 ± 0.3	W Africa F	E Europe M
17	4.0 ± 0.3	2.80 ± 0.09	2.4 ± 0.2	2.8 ± 0.1	2.8 ± 0.2	4.7 ± 0.3	2.7 ± 0.2	2.30 ± 0.08	1.8 ± 0.1	2.8 ± 0.1	2.5 ± 0.2	3.1 ± 0.3	W Africa F	E Europe M
18	3.3 ± 0.2	2.24 ± 0.07	2.2 ± 0.2	2.42 ± 0.10	2.2 ± 0.1	4.3 ± 0.3	2.9 ± 0.2	1.97 ± 0.05	2.0 ± 0.1	2.74 ± 0.08	2.1 ± 0.1	3.1 ± 0.2	W Africa F	E Asia M
19	3.4 ± 0.3	1.81 ± 0.07	2.0 ± 0.2	2.4 ± 0.1	2.0 ± 0.1	4.4 ± 0.3	2.9 ± 0.2	1.64 ± 0.06	1.9 ± 0.1	2.63 ± 0.09	1.8 ± 0.1	3.2 ± 0.3	W Africa F	E Asia M
20	3.3 ± 0.3	1.57 ± 0.09	1.9 ± 0.1	2.2 ± 0.1	1.8 ± 0.1	4.3 ± 0.3	3.1 ± 0.3	1.34 ± 0.06	1.9 ± 0.2	2.5 ± 0.1	1.5 ± 0.1	3.3 ± 0.3	W Africa F	E Asia M
21	3.3 ± 0.2	1.63 ± 0.07	2.1 ± 0.1	2.26 ± 0.09	1.9 ± 0.1	4.1 ± 0.3	3.2 ± 0.2	1.24 ± 0.05	1.9 ± 0.1	2.32 ± 0.10	1.40 ± 0.10	3.4 ± 0.3	W Africa F	E Asia M
22	3.8 ± 0.2	1.82 ± 0.05	2.32 ± 0.10	2.38 ± 0.07	2.18 ± 0.08	4.0 ± 0.2	3.6 ± 0.2	1.56 ± 0.05	1.9 ± 0.1	2.3 ± 0.1	1.63 ± 0.09	3.4 ± 0.2	W Africa F	E Asia M
23	3.7 ± 0.2	2.16 ± 0.05	2.52 ± 0.09	2.42 ± 0.07	2.41 ± 0.08	4.0 ± 0.2	3.6 ± 0.2	1.84 ± 0.05	1.9 ± 0.1	2.4 ± 0.1	1.93 ± 0.09	3.6 ± 0.2	W Africa F	E Asia M
24	3.8 ± 0.2	2.51 ± 0.05	2.50 ± 0.08	2.55 ± 0.06	2.60 ± 0.06	3.9 ± 0.2	3.7 ± 0.2	2.13 ± 0.06	2.0 ± 0.1	2.48 ± 0.09	2.08 ± 0.09	3.5 ± 0.2	W Africa F	E Europe M
25	3.8 ± 0.2	2.72 ± 0.05	2.74 ± 0.08	2.67 ± 0.06	2.95 ± 0.07	3.8 ± 0.2	3.8 ± 0.2	2.49 ± 0.07	2.1 ± 0.1	2.53 ± 0.08	2.48 ± 0.10	3.5 ± 0.2	E Africa F	E Europe M
26	3.9 ± 0.2	3.05 ± 0.06	2.89 ± 0.08	2.79 ± 0.06	3.16 ± 0.08	3.6 ± 0.2	3.7 ± 0.2	2.61 ± 0.07	2.3 ± 0.1	2.61 ± 0.07	2.8 ± 0.1	3.4 ± 0.1	E Africa F	E Europe M
27	4.1 ± 0.2	3.27 ± 0.06	3.08 ± 0.09	3.17 ± 0.06	3.43 ± 0.08	3.6 ± 0.1	3.7 ± 0.2	2.90 ± 0.07	2.7 ± 0.1	2.83 ± 0.07	3.0 ± 0.1	3.4 ± 0.1	E Africa F	E Europe M
28	4.2 ± 0.2	3.61 ± 0.06	3.36 ± 0.08	3.56 ± 0.06	3.68 ± 0.09	3.7 ± 0.1	3.6 ± 0.1	3.15 ± 0.08	2.82 ± 0.10	2.99 ± 0.06	3.2 ± 0.1	3.3 ± 0.1	E Africa F	E Europe M
29	4.3 ± 0.2	3.83 ± 0.06	3.59 ± 0.09	3.87 ± 0.06	3.95 ± 0.09	3.7 ± 0.1	3.6 ± 0.1	3.30 ± 0.08	2.93 ± 0.10	3.09 ± 0.05	3.6 ± 0.1	3.3 ± 0.1	E Africa F	E Europe M
30	4.3 ± 0.2	4.16 ± 0.06	3.74 ± 0.09	4.17 ± 0.06	4.1 ± 0.1	3.6 ± 0.1	3.5 ± 0.1	3.53 ± 0.08	2.9 ± 0.1	3.27 ± 0.05	3.6 ± 0.1	3.1 ± 0.1	E Africa F	E Europe M
31	4.2 ± 0.2	4.38 ± 0.07	3.81 ± 0.10	4.50 ± 0.07	4.4 ± 0.1	3.5 ± 0.1	3.4 ± 0.1	3.72 ± 0.09	3.0 ± 0.1	3.40 ± 0.06	3.9 ± 0.2	2.9 ± 0.1	S Asia F	W Africa M
32	4.1 ± 0.2	4.60 ± 0.07	3.8 ± 0.1	4.68 ± 0.08	4.5 ± 0.1	3.6 ± 0.1	3.2 ± 0.1	3.78 ± 0.09	2.9 ± 0.1	3.50 ± 0.06	3.8 ± 0.1	2.9 ± 0.1	S Asia F	W Africa M
33	4.3 ± 0.2	4.71 ± 0.08	3.9 ± 0.1	4.89 ± 0.08	4.5 ± 0.1	3.4 ± 0.1	3.3 ± 0.1	3.79 ± 0.09	2.6 ± 0.1	3.55 ± 0.07	3.8 ± 0.2	2.7 ± 0.1	S Asia F	E Europe M
34	4.0 ± 0.2	4.81 ± 0.08	3.8 ± 0.1	4.96 ± 0.09	4.4 ± 0.1	3.5 ± 0.1	3.1 ± 0.1	3.81 ± 0.10	2.6 ± 0.1	3.68 ± 0.07	3.8 ± 0.2	2.7 ± 0.1	S Asia F	E Europe M
35	4.2 ± 0.2	5.00 ± 0.09	3.8 ± 0.1	5.12 ± 0.10	4.7 ± 0.2	3.5 ± 0.2	3.1 ± 0.2	3.8 ± 0.1	2.7 ± 0.1	3.82 ± 0.08	3.8 ± 0.2	2.9 ± 0.1	S Asia F	E Europe M
36	4.2 ± 0.2	4.91 ± 0.09	3.5 ± 0.1	5.3 ± 0.1	4.6 ± 0.2	3.4 ± 0.2	3.2 ± 0.2	3.8 ± 0.1	2.7 ± 0.1	3.97 ± 0.08	3.7 ± 0.2	2.9 ± 0.1	S Asia F	E Europe M
37	4.1 ± 0.2	4.99 ± 0.09	3.6 ± 0.1	5.4 ± 0.1	4.8 ± 0.2	3.8 ± 0.2	3.1 ± 0.2	3.8 ± 0.1	2.8 ± 0.1	4.18 ± 0.09	3.7 ± 0.2	3.0 ± 0.1	S Asia F	E Europe M
38	4.2 ± 0.2	5.10 ± 0.09	3.5 ± 0.1	5.4 ± 0.1	4.5 ± 0.2	3.9 ± 0.2	3.4 ± 0.2	3.86 ± 0.10	2.9 ± 0.1	4.32 ± 0.09	3.6 ± 0.2	3.2 ± 0.1	S Asia F	E Europe M
39	4.3 ± 0.2	5.20 ± 0.09	3.5 ± 0.2	5.6 ± 0.1	4.6 ± 0.2	4.0 ± 0.2	3.4 ± 0.2	4.0 ± 0.1	2.9 ± 0.1	4.44 ± 0.09	3.7 ± 0.2	3.6 ± 0.1	S Asia F	E Europe M
40	4.4 ± 0.3	5.31 ± 0.09	3.4 ± 0.1	5.5 ± 0.1	4.8 ± 0.2	4.2 ± 0.2	3.4 ± 0.2	4.25 ± 0.10	3.2 ± 0.1	4.49 ± 0.10	3.8 ± 0.2	3.9 ± 0.1	S Asia F	E Europe M
41	4.9 ± 0.3	5.41 ± 0.10	3.6 ± 0.1	5.7 ± 0.1	4.9 ± 0.2	4.6 ± 0.2	3.8 ± 0.2	4.36 ± 0.09	3.2 ± 0.1	4.7 ± 0.1	4.2 ± 0.2	4.3 ± 0.2	S Asia F	E Europe M
42	4.7 ± 0.3	5.53 ± 0.09	3.9 ± 0.2	5.5 ± 0.1	5.1 ± 0.2	4.6 ± 0.2	3.9 ± 0.2	4.58 ± 0.10	3.3 ± 0.2	4.8 ± 0.1	4.2 ± 0.2	4.5 ± 0.2	S Asia F	E Europe M
43	4.9 ± 0.3	5.79 ± 0.09	4.1 ± 0.2	5.8 ± 0.2	5.3 ± 0.2	5.1 ± 0.2	3.8 ± 0.2	4.68 ± 0.10	3.4 ± 0.2	4.7 ± 0.1	4.4 ± 0.2	5.0 ± 0.2	S Asia F	E Europe M
44	5.2 ± 0.3	6.01 ± 0.09	4.2 ± 0.2	5.7 ± 0.2	5.1 ± 0.2	5.3 ± 0.2	4.0 ± 0.2	4.8 ± 0.1	3.3 ± 0.2	4.8 ± 0.1	4.5 ± 0.2	5.0 ± 0.2	E Asia F	E Europe M
45	5.2 ± 0.3	6.14 ± 0.09	4.0 ± 0.2	5.8 ± 0.2	5.3 ± 0.2	5.3 ± 0.2	4.0 ± 0.2	5.0 ± 0.1	3.4 ± 0.2	4.6 ± 0.1	4.6 ± 0.2	5.4 ± 0.2	E Asia F	E Europe M
46	5.3 ± 0.3	6.3 ± 0.1	4.0 ± 0.2	5.5 ± 0.2	5.5 ± 0.2	5.7 ± 0.2	4.1 ± 0.3	5.1 ± 0.1	3.6 ± 0.2	4.6 ± 0.1	4.7 ± 0.2	5.7 ± 0.2	E Asia F	E Europe M
47	5.1 ± 0.4	6.3 ± 0.1	3.9 ± 0.2	5.5 ± 0.2	5.3 ± 0.2	5.7 ± 0.3	4.2 ± 0.3	5.2 ± 0.1	3.3 ± 0.2	4.7 ± 0.1	4.5 ± 0.2	5.7 ± 0.2	E Asia F	E Europe M
48	5.3 ± 0.4	6.4 ± 0.1	3.7 ± 0.2	5.5 ± 0.2	5.5 ± 0.2	5.9 ± 0.3	4.6 ± 0.3	5.2 ± 0.1	3.5 ± 0.2	4.7 ± 0.2	4.7 ± 0.2	6.5 ± 0.3	W Africa M	E Europe M
49	5.0 ± 0.4	6.5 ± 0.1	3.9 ± 0.2	5.4 ± 0.2	5.4 ± 0.2	6.4 ± 0.3	4.7 ± 0.3	5.4 ± 0.1	3.4 ± 0.2	4.8 ± 0.2	4.5 ± 0.2	6.4 ± 0.3	E Asia F	E Europe M
50	5.7 ± 0.5	6.6 ± 0.1	3.8 ± 0.2	5.3 ± 0.2	5.5 ± 0.2	6.1 ± 0.4	4.8 ± 0.3	5.4 ± 0.1	3.6 ± 0.2	4.9 ± 0.2	4.5 ± 0.2	6.6 ± 0.3	E Asia F	E Europe M
51	5.3 ± 0.4	6.6 ± 0.1	4.0 ± 0.2	5.4 ± 0.2	5.6 ± 0.2	6.6 ± 0.4	5.0 ± 0.4	5.4 ± 0.1	3.4 ± 0.2	5.0 ± 0.2	4.5 ± 0.2	6.9 ± 0.3	W Africa M	E Europe M
52	5.6 ± 0.5	6.7 ± 0.1	4.0 ± 0.2	5.4 ± 0.2	5.4 ± 0.2	6.8 ± 0.4	4.7 ± 0.4	5.4 ± 0.1	3.5 ± 0.2	5.0 ± 0.2	4.7 ± 0.2	7.1 ± 0.3	W Africa M	E Europe M

Table 76. *Mean absolute error for Application-type images for algorithm cyberlink-000. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	5.9 ± 0.3	5.3 ± 0.1	4.7 ± 0.2	5.0 ± 0.1	5.6 ± 0.2	6.6 ± 0.3	5.1 ± 0.3	4.2 ± 0.1	3.2 ± 0.2	3.8 ± 0.1	4.1 ± 0.2	5.1 ± 0.3	W Africa F	E Europe M
15	5.6 ± 0.3	5.2 ± 0.1	4.7 ± 0.2	5.0 ± 0.2	5.7 ± 0.3	6.3 ± 0.4	4.7 ± 0.3	4.3 ± 0.1	3.3 ± 0.2	3.9 ± 0.1	4.5 ± 0.3	4.8 ± 0.4	W Africa F	E Europe M
16	5.5 ± 0.3	5.2 ± 0.1	4.9 ± 0.2	4.7 ± 0.2	5.3 ± 0.3	6.3 ± 0.5	5.0 ± 0.3	4.2 ± 0.1	3.6 ± 0.2	3.9 ± 0.2	4.5 ± 0.3	5.0 ± 0.3	W Africa F	E Europe M
17	5.7 ± 0.4	4.8 ± 0.1	4.3 ± 0.2	4.5 ± 0.2	5.1 ± 0.2	5.8 ± 0.4	5.0 ± 0.3	4.3 ± 0.1	3.3 ± 0.2	4.3 ± 0.2	4.5 ± 0.3	5.2 ± 0.3	W Africa F	E Europe M
18	4.9 ± 0.3	4.38 ± 0.10	4.0 ± 0.2	4.1 ± 0.1	4.7 ± 0.1	5.3 ± 0.3	4.9 ± 0.2	4.05 ± 0.10	3.3 ± 0.2	4.2 ± 0.1	4.4 ± 0.2	4.7 ± 0.2	W Africa F	E Europe M
19	4.9 ± 0.3	4.08 ± 0.09	3.5 ± 0.2	3.8 ± 0.1	4.4 ± 0.1	5.4 ± 0.3	4.8 ± 0.3	4.05 ± 0.10	3.3 ± 0.2	4.3 ± 0.1	4.3 ± 0.2	4.9 ± 0.3	W Africa F	E Europe M
20	4.7 ± 0.3	3.67 ± 0.10	3.1 ± 0.2	3.4 ± 0.1	3.9 ± 0.1	4.8 ± 0.3	4.9 ± 0.2	3.9 ± 0.1	3.0 ± 0.2	4.3 ± 0.1	4.3 ± 0.2	4.6 ± 0.3	E Africa M	E Europe M
21	4.5 ± 0.3	3.14 ± 0.09	2.8 ± 0.1	3.0 ± 0.1	3.3 ± 0.1	4.5 ± 0.3	4.7 ± 0.2	3.76 ± 0.10	2.8 ± 0.2	4.2 ± 0.1	4.1 ± 0.2	4.4 ± 0.3	E Africa M	E Europe F
22	4.4 ± 0.3	2.71 ± 0.08	2.5 ± 0.1	2.56 ± 0.10	3.0 ± 0.1	4.4 ± 0.3	5.0 ± 0.2	3.6 ± 0.1	2.8 ± 0.2	3.9 ± 0.1	3.7 ± 0.2	4.1 ± 0.2	E Africa M	E Europe F
23	3.9 ± 0.2	2.45 ± 0.07	2.3 ± 0.1	2.42 ± 0.09	2.67 ± 0.10	4.2 ± 0.3	4.5 ± 0.2	3.37 ± 0.10	2.5 ± 0.1	3.8 ± 0.1	3.5 ± 0.2	4.1 ± 0.2	E Africa M	E Europe F
24	3.9 ± 0.2	2.22 ± 0.06	2.41 ± 0.10	2.55 ± 0.07	2.53 ± 0.08	3.9 ± 0.2	4.5 ± 0.2	3.29 ± 0.09	2.5 ± 0.1	3.6 ± 0.1	3.4 ± 0.1	3.8 ± 0.2	E Africa M	E Asia F
25	3.8 ± 0.2	2.12 ± 0.05	2.58 ± 0.08	2.76 ± 0.06	2.41 ± 0.08	4.2 ± 0.2	4.4 ± 0.2	3.15 ± 0.09	2.5 ± 0.1	3.38 ± 0.09	3.3 ± 0.1	3.7 ± 0.2	E Africa M	E Asia F
26	3.8 ± 0.2	2.09 ± 0.05	2.54 ± 0.08	2.95 ± 0.06	2.44 ± 0.07	4.0 ± 0.2	4.1 ± 0.2	2.87 ± 0.08	2.2 ± 0.1	3.11 ± 0.08	3.1 ± 0.1	3.5 ± 0.2	E Africa M	E Asia F
27	4.0 ± 0.2	2.12 ± 0.05	2.49 ± 0.09	3.14 ± 0.06	2.32 ± 0.08	4.1 ± 0.2	4.0 ± 0.2	2.63 ± 0.08	2.0 ± 0.1	2.76 ± 0.08	3.0 ± 0.1	3.3 ± 0.2	W Africa F	E Europe M
28	4.0 ± 0.2	2.23 ± 0.05	2.58 ± 0.10	3.42 ± 0.07	2.43 ± 0.08	4.0 ± 0.2	3.7 ± 0.2	2.48 ± 0.08	2.1 ± 0.1	2.57 ± 0.07	2.7 ± 0.1	3.2 ± 0.2	W Africa F	E Europe M
29	4.2 ± 0.2	2.53 ± 0.05	2.66 ± 0.09	3.60 ± 0.07	2.66 ± 0.08	4.1 ± 0.2	3.7 ± 0.2	2.42 ± 0.07	2.19 ± 0.10	2.61 ± 0.07	2.7 ± 0.1	3.3 ± 0.1	E Africa F	E Europe M
30	4.1 ± 0.2	2.85 ± 0.05	2.97 ± 0.09	3.98 ± 0.07	3.04 ± 0.09	4.3 ± 0.2	3.9 ± 0.2	2.39 ± 0.06	2.4 ± 0.1	2.78 ± 0.06	2.7 ± 0.1	3.2 ± 0.1	W Africa F	E Asia M
31	4.3 ± 0.2	3.11 ± 0.05	3.34 ± 0.10	4.27 ± 0.07	3.22 ± 0.09	4.3 ± 0.2	4.0 ± 0.2	2.36 ± 0.07	2.7 ± 0.1	2.96 ± 0.06	2.8 ± 0.1	3.4 ± 0.1	W Africa F	E Asia M
32	4.5 ± 0.2	3.33 ± 0.06	3.6 ± 0.1	4.53 ± 0.08	3.5 ± 0.1	4.5 ± 0.2	3.9 ± 0.2	2.21 ± 0.07	2.9 ± 0.1	3.02 ± 0.06	2.7 ± 0.1	3.4 ± 0.1	E Africa F	E Asia M
33	4.8 ± 0.2	3.57 ± 0.07	3.9 ± 0.1	4.76 ± 0.08	3.6 ± 0.1	4.5 ± 0.2	4.1 ± 0.2	2.30 ± 0.08	2.9 ± 0.1	3.12 ± 0.06	2.7 ± 0.1	3.3 ± 0.1	E Africa F	E Asia M
34	4.7 ± 0.2	3.87 ± 0.07	4.2 ± 0.1	4.94 ± 0.09	3.8 ± 0.1	4.5 ± 0.2	3.9 ± 0.2	2.52 ± 0.07	3.1 ± 0.1	3.25 ± 0.06	2.8 ± 0.1	3.4 ± 0.1	S Asia F	E Asia M
35	5.1 ± 0.2	4.28 ± 0.07	4.5 ± 0.1	5.10 ± 0.10	4.1 ± 0.1	4.7 ± 0.2	3.6 ± 0.2	2.71 ± 0.07	3.1 ± 0.1	3.32 ± 0.07	3.1 ± 0.2	3.6 ± 0.2	S Asia F	E Asia M
36	5.5 ± 0.3	4.54 ± 0.08	4.4 ± 0.1	5.4 ± 0.1	4.4 ± 0.1	4.9 ± 0.2	3.8 ± 0.2	2.91 ± 0.08	2.9 ± 0.1	3.40 ± 0.07	3.1 ± 0.2	3.7 ± 0.2	E Africa F	E Asia M
37	5.5 ± 0.3	4.80 ± 0.07	4.8 ± 0.2	5.6 ± 0.1	4.7 ± 0.1	5.3 ± 0.2	3.9 ± 0.2	3.20 ± 0.08	3.1 ± 0.1	3.61 ± 0.08	3.3 ± 0.1	3.7 ± 0.1	S Asia F	E Europe M
38	5.7 ± 0.3	5.15 ± 0.08	4.8 ± 0.2	5.8 ± 0.1	4.9 ± 0.1	5.8 ± 0.2	4.1 ± 0.2	3.49 ± 0.08	3.1 ± 0.1	3.70 ± 0.08	3.6 ± 0.2	4.0 ± 0.2	S Asia F	E Europe M
39	5.8 ± 0.3	5.32 ± 0.08	4.9 ± 0.2	5.9 ± 0.1	5.1 ± 0.1	5.7 ± 0.3	4.3 ± 0.2	3.69 ± 0.08	3.1 ± 0.1	3.85 ± 0.08	3.8 ± 0.2	4.3 ± 0.2	S Asia F	E Europe M
40	6.1 ± 0.3	5.45 ± 0.08	4.9 ± 0.2	6.0 ± 0.1	5.2 ± 0.2	6.1 ± 0.2	4.5 ± 0.2	3.72 ± 0.08	3.2 ± 0.2	4.07 ± 0.09	3.5 ± 0.1	4.5 ± 0.2	W Africa F	E Europe M
41	6.5 ± 0.3	5.50 ± 0.09	5.0 ± 0.2	6.2 ± 0.1	5.1 ± 0.2	6.4 ± 0.3	4.6 ± 0.2	3.80 ± 0.08	3.4 ± 0.2	4.19 ± 0.09	3.8 ± 0.2	4.7 ± 0.2	E Africa F	E Europe M
42	6.2 ± 0.3	5.42 ± 0.09	4.9 ± 0.2	5.9 ± 0.2	5.0 ± 0.2	6.0 ± 0.3	4.6 ± 0.2	3.78 ± 0.09	3.3 ± 0.2	4.25 ± 0.10	3.8 ± 0.2	4.6 ± 0.2	E Africa F	E Europe M
43	6.2 ± 0.3	5.3 ± 0.1	4.8 ± 0.2	5.9 ± 0.2	5.1 ± 0.2	6.1 ± 0.3	4.4 ± 0.3	3.72 ± 0.10	3.4 ± 0.2	4.2 ± 0.1	3.7 ± 0.2	4.7 ± 0.2	E Africa F	E Europe M
44	6.7 ± 0.4	5.2 ± 0.1	4.7 ± 0.2	5.7 ± 0.2	4.9 ± 0.2	6.2 ± 0.3	4.0 ± 0.3	3.5 ± 0.1	3.4 ± 0.2	4.3 ± 0.1	3.8 ± 0.2	4.3 ± 0.2	E Africa F	E Europe M
45	6.3 ± 0.4	5.0 ± 0.1	4.4 ± 0.2	5.7 ± 0.2	4.5 ± 0.2	6.3 ± 0.3	4.2 ± 0.3	3.5 ± 0.1	3.4 ± 0.2	4.2 ± 0.1	3.8 ± 0.2	4.7 ± 0.3	E Africa F	E Europe M
46	6.5 ± 0.4	5.0 ± 0.1	4.4 ± 0.2	5.3 ± 0.2	4.5 ± 0.2	6.1 ± 0.3	4.2 ± 0.3	3.6 ± 0.1	3.7 ± 0.2	4.3 ± 0.1	3.9 ± 0.2	4.8 ± 0.2	E Africa F	E Asia M
47	6.2 ± 0.4	4.9 ± 0.1	4.4 ± 0.2	5.3 ± 0.2	4.5 ± 0.2	6.2 ± 0.3	4.6 ± 0.3	3.7 ± 0.1	3.8 ± 0.2	4.4 ± 0.1	3.9 ± 0.2	4.9 ± 0.3	W Africa F	E Asia M
48	6.1 ± 0.4	4.9 ± 0.1	4.2 ± 0.2	5.4 ± 0.2	4.4 ± 0.2	6.0 ± 0.3	4.7 ± 0.3	3.84 ± 0.09	4.0 ± 0.2	4.5 ± 0.1	4.0 ± 0.2	5.3 ± 0.3	E Africa F	E Asia M
49	6.0 ± 0.4	4.9 ± 0.1	4.1 ± 0.2	5.3 ± 0.2	4.4 ± 0.2	5.9 ± 0.4	4.6 ± 0.3	4.02 ± 0.10	4.1 ± 0.2	4.5 ± 0.1	3.8 ± 0.2	5.0 ± 0.2	E Africa F	S E Asia M
50	6.0 ± 0.5	4.8 ± 0.1	4.1 ± 0.2	5.0 ± 0.2	4.3 ± 0.2	5.7 ± 0.4	4.6 ± 0.3	3.93 ± 0.09	3.9 ± 0.2	4.6 ± 0.2	3.7 ± 0.2	5.4 ± 0.3	E Africa F	S E Asia M
51	5.5 ± 0.5	4.6 ± 0.1	4.0 ± 0.2	4.9 ± 0.2	4.1 ± 0.2	5.5 ± 0.4	4.7 ± 0.4	3.8 ± 0.1	3.6 ± 0.2	4.5 ± 0.2	3.5 ± 0.2	5.5 ± 0.3	E Africa F	S E Asia M
52	5.8 ± 0.6	4.2 ± 0.1	4.1 ± 0.3	4.8 ± 0.2	3.5 ± 0.2	5.6 ± 0.4	4.2 ± 0.4	3.6 ± 0.1	3.6 ± 0.2	4.3 ± 0.2	3.1 ± 0.2	5.6 ± 0.3	E Africa F	S E Asia M

Table 77. *Mean absolute error for Application-type images for algorithm cyberlink-001. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	4.7 ± 0.2	4.04 ± 0.10	3.2 ± 0.2	3.6 ± 0.1	4.0 ± 0.2	5.0 ± 0.3	3.8 ± 0.2	3.48 ± 0.09	2.3 ± 0.1	3.01 ± 0.09	3.2 ± 0.2	3.9 ± 0.2	W Africa F	E Europe M
15	4.2 ± 0.2	4.0 ± 0.1	3.3 ± 0.2	3.5 ± 0.2	3.8 ± 0.3	4.5 ± 0.3	3.2 ± 0.2	3.35 ± 0.09	2.4 ± 0.2	2.9 ± 0.1	3.3 ± 0.2	3.6 ± 0.2	W Africa F	E Europe M
16	3.7 ± 0.2	3.7 ± 0.1	3.2 ± 0.2	3.1 ± 0.1	3.7 ± 0.2	4.3 ± 0.4	3.4 ± 0.2	3.04 ± 0.08	2.6 ± 0.2	2.8 ± 0.1	3.0 ± 0.2	3.4 ± 0.2	W Africa F	E Europe M
17	3.9 ± 0.3	3.3 ± 0.1	3.0 ± 0.2	2.9 ± 0.1	3.4 ± 0.2	4.0 ± 0.3	3.0 ± 0.2	2.92 ± 0.10	2.4 ± 0.2	2.8 ± 0.1	2.9 ± 0.2	3.2 ± 0.3	W Africa F	E Europe M
18	3.2 ± 0.2	2.96 ± 0.08	2.7 ± 0.2	2.6 ± 0.1	3.0 ± 0.1	3.5 ± 0.3	2.8 ± 0.2	2.64 ± 0.08	2.4 ± 0.1	2.79 ± 0.10	2.7 ± 0.2	2.9 ± 0.2	W Africa F	E Europe M
19	3.1 ± 0.2	2.67 ± 0.08	2.4 ± 0.2	2.4 ± 0.1	2.7 ± 0.1	3.6 ± 0.3	2.9 ± 0.2	2.49 ± 0.08	2.3 ± 0.1	2.8 ± 0.1	2.6 ± 0.1	3.1 ± 0.3	W Africa F	E Europe M
20	3.1 ± 0.2	2.37 ± 0.09	2.2 ± 0.1	2.5 ± 0.1	2.5 ± 0.1	3.5 ± 0.3	2.9 ± 0.2	2.39 ± 0.08	2.1 ± 0.2	2.9 ± 0.1	2.6 ± 0.1	2.9 ± 0.2	W Africa F	E Europe M
21	2.9 ± 0.2	2.12 ± 0.08	2.1 ± 0.1	2.36 ± 0.08	2.20 ± 0.10	3.5 ± 0.3	3.0 ± 0.2	2.30 ± 0.08	2.1 ± 0.1	2.9 ± 0.1	2.6 ± 0.1	2.8 ± 0.2	W Africa F	E Europe F
22	3.0 ± 0.2	1.99 ± 0.06	2.10 ± 0.09	2.42 ± 0.08	2.16 ± 0.09	3.5 ± 0.3	3.4 ± 0.2	2.37 ± 0.09	2.2 ± 0.1	2.9 ± 0.1	2.5 ± 0.1	2.8 ± 0.2	W Africa F	E Asia F
23	3.1 ± 0.2	2.04 ± 0.06	2.13 ± 0.09	2.60 ± 0.07	2.20 ± 0.08	3.6 ± 0.2	3.4 ± 0.2	2.35 ± 0.08	2.1 ± 0.1	3.0 ± 0.1	2.6 ± 0.1	3.0 ± 0.2	W Africa F	E Asia F
24	3.3 ± 0.2	2.07 ± 0.06	2.06 ± 0.07	2.83 ± 0.07	2.19 ± 0.07	3.6 ± 0.2	3.4 ± 0.2	2.46 ± 0.08	2.2 ± 0.1	3.04 ± 0.09	2.6 ± 0.1	3.0 ± 0.2	W Africa F	E Europe F
25	3.5 ± 0.2	2.13 ± 0.06	2.28 ± 0.07	3.03 ± 0.07	2.39 ± 0.08	4.0 ± 0.2	3.4 ± 0.2	2.61 ± 0.08	2.2 ± 0.1	2.98 ± 0.09	2.9 ± 0.1	3.1 ± 0.1	W Africa F	E Asia F
26	3.6 ± 0.1	2.38 ± 0.06	2.34 ± 0.07	3.33 ± 0.06	2.58 ± 0.08	3.9 ± 0.2	3.2 ± 0.2	2.52 ± 0.08	2.3 ± 0.1	2.92 ± 0.08	2.9 ± 0.1	3.0 ± 0.1	W Africa F	E Europe M
27	3.9 ± 0.2	2.66 ± 0.05	2.45 ± 0.07	3.59 ± 0.07	2.82 ± 0.08	4.2 ± 0.2	3.3 ± 0.2	2.58 ± 0.08	2.33 ± 0.10	2.84 ± 0.07	3.0 ± 0.1	3.0 ± 0.1	W Africa F	E Europe M
28	4.0 ± 0.2	3.01 ± 0.05	2.65 ± 0.07	3.93 ± 0.07	3.08 ± 0.08	4.3 ± 0.2	3.2 ± 0.1	2.73 ± 0.08	2.42 ± 0.10	2.81 ± 0.07	2.9 ± 0.1	2.9 ± 0.1	W Africa F	E Europe M
29	4.1 ± 0.2	3.30 ± 0.05	2.81 ± 0.08	4.12 ± 0.07	3.34 ± 0.08	4.4 ± 0.2	3.1 ± 0.1	2.70 ± 0.07	2.45 ± 0.10	2.77 ± 0.06	2.9 ± 0.1	3.0 ± 0.1	W Africa F	E Europe M
30	4.2 ± 0.2	3.56 ± 0.06	3.06 ± 0.08	4.38 ± 0.08	3.56 ± 0.09	4.5 ± 0.2	3.2 ± 0.1	2.68 ± 0.07	2.39 ± 0.10	2.82 ± 0.06	2.8 ± 0.1	3.0 ± 0.1	W Africa F	E Europe M
31	4.6 ± 0.2	3.78 ± 0.06	3.24 ± 0.09	4.77 ± 0.08	3.77 ± 0.09	4.5 ± 0.2	3.3 ± 0.1	2.73 ± 0.08	2.5 ± 0.1	2.87 ± 0.06	3.0 ± 0.1	3.1 ± 0.1	S Asia F	E Europe M
32	4.7 ± 0.2	4.00 ± 0.07	3.40 ± 0.09	5.01 ± 0.08	3.9 ± 0.1	4.8 ± 0.2	3.2 ± 0.1	2.71 ± 0.07	2.59 ± 0.10	2.94 ± 0.06	3.0 ± 0.1	3.2 ± 0.1	S Asia F	E Europe M
33	5.1 ± 0.2	4.12 ± 0.07	3.7 ± 0.1	5.28 ± 0.09	4.1 ± 0.1	4.8 ± 0.2	3.5 ± 0.2	2.76 ± 0.08	2.40 ± 0.10	2.97 ± 0.06	3.0 ± 0.1	3.2 ± 0.1	S Asia F	E Europe M
34	5.0 ± 0.2	4.28 ± 0.07	4.0 ± 0.1	5.46 ± 0.10	4.1 ± 0.1	4.9 ± 0.2	3.6 ± 0.2	2.85 ± 0.08	2.7 ± 0.1	3.12 ± 0.06	2.9 ± 0.1	3.4 ± 0.1	S Asia F	E Europe M
35	5.4 ± 0.2	4.49 ± 0.08	4.2 ± 0.1	5.7 ± 0.1	4.3 ± 0.1	4.9 ± 0.2	3.6 ± 0.2	2.90 ± 0.08	2.7 ± 0.1	3.20 ± 0.06	3.1 ± 0.1	3.8 ± 0.1	S Asia F	E Europe M
36	5.7 ± 0.2	4.53 ± 0.08	4.2 ± 0.1	6.0 ± 0.1	4.4 ± 0.1	5.1 ± 0.2	4.1 ± 0.2	2.91 ± 0.08	2.7 ± 0.1	3.24 ± 0.07	3.1 ± 0.1	3.9 ± 0.1	S Asia F	E Europe M
37	6.0 ± 0.3	4.58 ± 0.08	4.5 ± 0.1	6.0 ± 0.1	4.6 ± 0.1	5.6 ± 0.2	4.0 ± 0.2	2.99 ± 0.08	2.9 ± 0.1	3.36 ± 0.07	3.1 ± 0.2	4.1 ± 0.1	S Asia F	E Europe M
38	5.7 ± 0.3	4.81 ± 0.09	4.6 ± 0.1	6.2 ± 0.1	4.6 ± 0.1	5.8 ± 0.3	4.2 ± 0.2	3.05 ± 0.08	3.1 ± 0.1	3.33 ± 0.07	3.1 ± 0.2	4.4 ± 0.2	S Asia F	E Asia M
39	6.0 ± 0.3	4.92 ± 0.09	4.6 ± 0.1	6.3 ± 0.1	4.8 ± 0.1	5.8 ± 0.3	4.1 ± 0.2	3.09 ± 0.08	3.2 ± 0.1	3.40 ± 0.07	3.3 ± 0.1	4.6 ± 0.2	S Asia F	E Asia M
40	6.2 ± 0.3	5.03 ± 0.09	4.5 ± 0.2	6.4 ± 0.1	5.0 ± 0.2	6.0 ± 0.3	4.3 ± 0.2	3.14 ± 0.08	3.3 ± 0.1	3.52 ± 0.08	3.1 ± 0.1	5.0 ± 0.2	S Asia F	S E Asia M
41	6.4 ± 0.3	5.06 ± 0.09	4.6 ± 0.2	6.6 ± 0.2	5.0 ± 0.2	6.2 ± 0.3	4.5 ± 0.2	3.25 ± 0.08	3.3 ± 0.1	3.59 ± 0.08	3.4 ± 0.1	5.2 ± 0.2	S Asia F	E Asia M
42	6.3 ± 0.3	5.01 ± 0.09	4.8 ± 0.2	6.3 ± 0.2	4.9 ± 0.2	6.1 ± 0.3	4.5 ± 0.2	3.36 ± 0.08	3.3 ± 0.2	3.66 ± 0.09	3.3 ± 0.2	5.1 ± 0.2	S Asia F	E Europe M
43	6.4 ± 0.4	5.21 ± 0.10	4.6 ± 0.2	6.5 ± 0.2	5.1 ± 0.2	6.3 ± 0.3	4.4 ± 0.2	3.37 ± 0.08	3.3 ± 0.2	3.67 ± 0.10	3.4 ± 0.2	5.5 ± 0.2	S Asia F	E Europe M
44	6.6 ± 0.4	5.30 ± 0.10	4.8 ± 0.2	6.4 ± 0.2	4.9 ± 0.2	6.5 ± 0.3	4.4 ± 0.2	3.32 ± 0.09	3.1 ± 0.2	3.7 ± 0.1	3.5 ± 0.2	5.3 ± 0.2	E Africa F	E Europe M
45	6.4 ± 0.4	5.2 ± 0.1	4.5 ± 0.2	6.4 ± 0.2	5.0 ± 0.2	6.4 ± 0.3	4.4 ± 0.2	3.32 ± 0.09	3.2 ± 0.2	3.7 ± 0.1	3.4 ± 0.2	5.7 ± 0.3	S Asia F	E Europe M
46	6.7 ± 0.4	5.3 ± 0.1	4.4 ± 0.2	6.0 ± 0.2	5.1 ± 0.2	6.2 ± 0.3	4.6 ± 0.3	3.24 ± 0.10	3.2 ± 0.2	3.6 ± 0.1	3.5 ± 0.2	5.6 ± 0.3	E Africa F	E Europe M
47	5.9 ± 0.4	5.1 ± 0.1	4.5 ± 0.2	6.1 ± 0.2	4.8 ± 0.2	6.2 ± 0.3	4.3 ± 0.2	3.2 ± 0.1	3.1 ± 0.2	3.7 ± 0.1	3.1 ± 0.2	5.4 ± 0.3	W Africa F	E Europe M
48	5.9 ± 0.5	5.0 ± 0.1	4.2 ± 0.2	5.9 ± 0.2	4.7 ± 0.2	6.0 ± 0.4	4.5 ± 0.3	3.29 ± 0.10	3.1 ± 0.2	3.7 ± 0.1	3.4 ± 0.2	5.8 ± 0.3	W Africa F	E Europe M
49	5.7 ± 0.5	5.1 ± 0.1	4.3 ± 0.2	5.6 ± 0.2	4.6 ± 0.2	6.2 ± 0.4	4.3 ± 0.3	3.5 ± 0.1	3.1 ± 0.2	3.6 ± 0.1	3.2 ± 0.2	5.5 ± 0.3	W Africa F	E Europe M
50	6.0 ± 0.5	5.0 ± 0.1	4.1 ± 0.2	5.4 ± 0.2	4.5 ± 0.2	6.0 ± 0.4	4.1 ± 0.3	3.49 ± 0.10	3.1 ± 0.2	3.6 ± 0.1	3.1 ± 0.2	5.6 ± 0.3	W Africa F	E Europe M
51	5.5 ± 0.5	4.8 ± 0.1	4.1 ± 0.2	5.4 ± 0.2	4.3 ± 0.2	6.1 ± 0.4	4.2 ± 0.4	3.56 ± 0.10	2.7 ± 0.1	3.7 ± 0.2	3.1 ± 0.2	5.6 ± 0.3	W Africa F	E Europe M
52	5.8 ± 0.6	4.7 ± 0.1	3.9 ± 0.2	5.3 ± 0.2	4.0 ± 0.2	6.2 ± 0.5	3.9 ± 0.4	3.6 ± 0.1	2.9 ± 0.2	3.7 ± 0.1	3.1 ± 0.2	5.8 ± 0.4	W Africa F	E Europe M

Table 78. *Mean absolute error for Application-type images for algorithm daon-000. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	3.3 ± 0.3	2.9 ± 0.1	1.9 ± 0.2	3.0 ± 0.1	3.1 ± 0.2	3.3 ± 0.4	3.7 ± 0.3	4.3 ± 0.2	2.2 ± 0.2	4.2 ± 0.2	3.9 ± 0.3	2.6 ± 0.4	E Asia M	E Europe F
15	3.7 ± 0.3	3.4 ± 0.2	2.0 ± 0.2	3.6 ± 0.2	3.6 ± 0.3	3.6 ± 0.4	4.0 ± 0.3	4.7 ± 0.2	2.3 ± 0.2	4.6 ± 0.2	4.7 ± 0.3	3.4 ± 0.4	S E Asia M	E Europe F
16	4.4 ± 0.4	3.7 ± 0.2	2.4 ± 0.2	3.4 ± 0.2	4.0 ± 0.3	5.0 ± 0.5	4.8 ± 0.3	4.6 ± 0.2	2.6 ± 0.2	5.0 ± 0.2	4.9 ± 0.3	3.4 ± 0.3	W Africa F	E Europe F
17	5.0 ± 0.4	4.0 ± 0.1	2.5 ± 0.2	3.6 ± 0.2	4.1 ± 0.3	5.5 ± 0.5	5.3 ± 0.4	4.5 ± 0.2	2.3 ± 0.2	5.0 ± 0.2	4.5 ± 0.3	4.3 ± 0.5	W Africa F	E Europe M
18	4.6 ± 0.3	4.2 ± 0.1	2.6 ± 0.2	3.6 ± 0.1	4.0 ± 0.2	5.8 ± 0.4	5.2 ± 0.3	4.1 ± 0.1	2.4 ± 0.2	4.9 ± 0.1	4.1 ± 0.3	4.5 ± 0.3	W Africa F	E Europe M
19	5.2 ± 0.3	4.2 ± 0.1	2.8 ± 0.2	3.5 ± 0.1	4.2 ± 0.2	6.1 ± 0.4	5.5 ± 0.3	3.9 ± 0.1	2.5 ± 0.2	4.9 ± 0.1	3.9 ± 0.2	4.4 ± 0.3	W Africa F	E Europe M
20	5.1 ± 0.3	4.4 ± 0.1	2.7 ± 0.2	3.7 ± 0.1	4.3 ± 0.2	6.3 ± 0.4	5.5 ± 0.3	3.6 ± 0.1	2.5 ± 0.2	4.9 ± 0.1	3.7 ± 0.2	4.6 ± 0.3	W Africa F	E Europe M
21	4.8 ± 0.3	4.4 ± 0.1	2.8 ± 0.1	3.5 ± 0.1	4.3 ± 0.2	6.7 ± 0.4	5.6 ± 0.3	3.4 ± 0.1	2.5 ± 0.2	4.4 ± 0.1	3.7 ± 0.2	4.5 ± 0.3	W Africa F	E Europe M
22	5.0 ± 0.2	4.3 ± 0.1	2.9 ± 0.1	3.6 ± 0.1	4.4 ± 0.1	6.4 ± 0.3	5.7 ± 0.3	3.4 ± 0.1	2.5 ± 0.2	4.3 ± 0.1	3.4 ± 0.2	4.4 ± 0.3	W Africa F	E Europe M
23	4.9 ± 0.2	4.5 ± 0.1	3.0 ± 0.1	3.62 ± 0.10	4.4 ± 0.1	6.6 ± 0.3	5.6 ± 0.3	3.4 ± 0.1	2.5 ± 0.1	4.2 ± 0.1	3.6 ± 0.2	4.3 ± 0.3	W Africa F	E Europe M
24	5.0 ± 0.2	4.5 ± 0.1	3.0 ± 0.1	3.62 ± 0.09	4.3 ± 0.1	6.5 ± 0.3	5.4 ± 0.3	3.4 ± 0.1	2.6 ± 0.1	4.0 ± 0.1	3.3 ± 0.1	4.3 ± 0.2	W Africa F	E Europe M
25	5.0 ± 0.2	4.5 ± 0.1	3.2 ± 0.1	3.74 ± 0.09	4.3 ± 0.1	6.5 ± 0.3	5.4 ± 0.3	3.5 ± 0.1	2.6 ± 0.1	3.9 ± 0.1	3.6 ± 0.2	4.4 ± 0.2	W Africa F	E Europe M
26	4.7 ± 0.2	4.6 ± 0.1	3.25 ± 0.09	3.96 ± 0.08	4.4 ± 0.1	6.1 ± 0.2	5.1 ± 0.2	3.4 ± 0.1	2.7 ± 0.1	3.78 ± 0.10	3.6 ± 0.2	4.4 ± 0.2	W Africa F	E Europe M
27	4.7 ± 0.2	4.6 ± 0.1	3.35 ± 0.10	4.10 ± 0.08	4.3 ± 0.1	6.1 ± 0.2	4.9 ± 0.2	3.5 ± 0.1	2.8 ± 0.1	3.60 ± 0.09	3.7 ± 0.2	4.3 ± 0.2	W Africa F	E Europe M
28	4.6 ± 0.2	4.61 ± 0.10	3.46 ± 0.10	4.46 ± 0.09	4.4 ± 0.1	6.0 ± 0.2	4.9 ± 0.2	3.6 ± 0.1	2.9 ± 0.1	3.49 ± 0.08	3.7 ± 0.2	4.3 ± 0.2	W Africa F	E Europe M
29	4.8 ± 0.2	4.54 ± 0.10	3.6 ± 0.1	4.64 ± 0.09	4.3 ± 0.1	6.0 ± 0.2	4.9 ± 0.2	3.7 ± 0.1	3.0 ± 0.1	3.37 ± 0.07	3.8 ± 0.2	4.6 ± 0.2	W Africa F	E Europe M
30	4.9 ± 0.2	4.69 ± 0.10	3.7 ± 0.1	4.83 ± 0.09	4.5 ± 0.1	6.0 ± 0.2	4.8 ± 0.2	3.69 ± 0.10	3.0 ± 0.1	3.39 ± 0.07	3.8 ± 0.2	4.4 ± 0.2	W Africa F	E Europe M
31	5.0 ± 0.2	4.7 ± 0.1	3.8 ± 0.1	5.26 ± 0.09	4.5 ± 0.1	5.7 ± 0.2	4.8 ± 0.2	3.7 ± 0.1	3.1 ± 0.1	3.37 ± 0.07	4.0 ± 0.2	4.6 ± 0.2	W Africa F	E Europe M
32	5.0 ± 0.2	4.7 ± 0.1	3.9 ± 0.1	5.45 ± 0.10	4.6 ± 0.2	5.9 ± 0.2	4.6 ± 0.2	3.71 ± 0.10	3.1 ± 0.1	3.41 ± 0.07	4.0 ± 0.2	4.5 ± 0.2	W Africa F	E Europe M
33	5.3 ± 0.2	4.6 ± 0.1	4.1 ± 0.1	5.7 ± 0.1	4.5 ± 0.2	5.6 ± 0.2	4.6 ± 0.2	3.69 ± 0.10	3.0 ± 0.1	3.38 ± 0.07	3.9 ± 0.2	4.4 ± 0.2	S Asia F	E Europe M
34	5.2 ± 0.2	4.7 ± 0.1	4.1 ± 0.1	5.8 ± 0.1	4.5 ± 0.2	6.0 ± 0.2	4.4 ± 0.2	3.74 ± 0.10	3.2 ± 0.1	3.47 ± 0.07	4.1 ± 0.2	4.5 ± 0.2	W Africa F	E Europe M
35	5.4 ± 0.2	4.7 ± 0.1	4.3 ± 0.1	6.1 ± 0.1	4.6 ± 0.2	5.5 ± 0.2	4.5 ± 0.2	3.78 ± 0.10	3.1 ± 0.1	3.53 ± 0.07	4.2 ± 0.2	4.7 ± 0.2	S Asia F	E Europe M
36	5.5 ± 0.3	4.7 ± 0.1	4.0 ± 0.1	6.3 ± 0.1	4.5 ± 0.2	5.7 ± 0.3	4.5 ± 0.2	3.7 ± 0.1	3.3 ± 0.1	3.58 ± 0.07	4.1 ± 0.2	4.7 ± 0.2	S Asia F	E Europe M
37	5.6 ± 0.3	4.6 ± 0.1	4.2 ± 0.1	6.4 ± 0.1	4.5 ± 0.2	5.5 ± 0.3	4.3 ± 0.2	3.74 ± 0.10	3.1 ± 0.1	3.71 ± 0.08	3.9 ± 0.2	4.4 ± 0.2	S Asia F	E Europe M
38	5.6 ± 0.3	4.6 ± 0.1	4.2 ± 0.2	6.5 ± 0.1	4.5 ± 0.2	6.2 ± 0.3	4.2 ± 0.2	3.8 ± 0.1	3.2 ± 0.1	3.71 ± 0.08	4.2 ± 0.2	4.4 ± 0.2	S Asia F	E Europe M
39	5.6 ± 0.3	4.5 ± 0.1	4.1 ± 0.2	6.8 ± 0.1	4.4 ± 0.2	5.7 ± 0.3	4.2 ± 0.2	3.68 ± 0.10	3.2 ± 0.1	3.76 ± 0.08	4.3 ± 0.2	4.6 ± 0.2	S Asia F	E Europe M
40	5.8 ± 0.3	4.5 ± 0.1	4.0 ± 0.2	6.8 ± 0.2	4.4 ± 0.2	5.7 ± 0.3	4.1 ± 0.2	3.70 ± 0.10	3.2 ± 0.1	3.87 ± 0.09	4.0 ± 0.2	4.8 ± 0.2	S Asia F	E Europe M
41	5.9 ± 0.3	4.5 ± 0.1	3.8 ± 0.2	6.8 ± 0.2	4.5 ± 0.2	5.8 ± 0.3	4.3 ± 0.2	3.68 ± 0.10	3.3 ± 0.2	3.97 ± 0.09	4.1 ± 0.2	4.8 ± 0.2	S Asia F	E Europe M
42	5.8 ± 0.3	4.3 ± 0.1	3.8 ± 0.2	6.5 ± 0.2	4.2 ± 0.2	5.9 ± 0.3	4.1 ± 0.2	3.64 ± 0.10	3.2 ± 0.2	3.91 ± 0.10	4.1 ± 0.2	4.5 ± 0.2	S Asia F	E Europe M
43	6.0 ± 0.4	4.3 ± 0.1	3.8 ± 0.2	6.8 ± 0.2	4.3 ± 0.2	6.0 ± 0.4	4.0 ± 0.2	3.53 ± 0.09	3.2 ± 0.2	4.0 ± 0.1	4.1 ± 0.2	4.7 ± 0.2	S Asia F	E Europe M
44	5.8 ± 0.4	4.4 ± 0.1	3.7 ± 0.2	6.7 ± 0.2	4.3 ± 0.2	6.2 ± 0.4	3.9 ± 0.2	3.56 ± 0.10	3.2 ± 0.2	3.9 ± 0.1	4.1 ± 0.2	4.5 ± 0.2	S Asia F	E Europe M
45	5.7 ± 0.4	4.4 ± 0.1	3.7 ± 0.2	6.7 ± 0.2	4.2 ± 0.2	5.9 ± 0.4	3.8 ± 0.2	3.51 ± 0.09	3.1 ± 0.2	3.9 ± 0.1	3.9 ± 0.2	4.9 ± 0.2	S Asia F	E Europe M
46	5.8 ± 0.4	4.6 ± 0.1	3.7 ± 0.2	6.2 ± 0.2	4.4 ± 0.2	5.9 ± 0.3	3.8 ± 0.3	3.39 ± 0.10	3.2 ± 0.2	3.9 ± 0.1	4.0 ± 0.2	4.6 ± 0.2	S Asia F	E Europe M
47	5.4 ± 0.4	4.4 ± 0.1	3.8 ± 0.2	6.2 ± 0.2	4.3 ± 0.2	5.9 ± 0.4	3.8 ± 0.3	3.24 ± 0.10	3.1 ± 0.2	4.0 ± 0.1	3.6 ± 0.2	4.5 ± 0.2	S Asia F	E Europe M
48	5.7 ± 0.5	4.4 ± 0.1	3.7 ± 0.2	6.2 ± 0.2	4.2 ± 0.2	5.7 ± 0.4	4.0 ± 0.3	3.20 ± 0.09	3.3 ± 0.2	3.8 ± 0.1	3.4 ± 0.2	4.8 ± 0.3	S Asia F	E Asia M
49	5.7 ± 0.5	4.5 ± 0.1	3.6 ± 0.2	5.9 ± 0.2	4.2 ± 0.2	5.8 ± 0.4	4.1 ± 0.3	3.23 ± 0.10	3.2 ± 0.2	3.8 ± 0.1	3.4 ± 0.2	4.6 ± 0.3	S Asia F	E Europe M
50	5.7 ± 0.6	4.5 ± 0.1	3.6 ± 0.2	5.5 ± 0.2	4.2 ± 0.2	5.4 ± 0.4	4.2 ± 0.3	3.15 ± 0.10	3.2 ± 0.2	3.9 ± 0.1	3.5 ± 0.2	4.7 ± 0.3	E Africa F	E Asia M
51	5.0 ± 0.4	4.5 ± 0.1	3.6 ± 0.2	5.7 ± 0.2	4.4 ± 0.2	5.7 ± 0.4	4.4 ± 0.4	3.24 ± 0.10	3.2 ± 0.2	3.8 ± 0.2	3.4 ± 0.2	4.9 ± 0.3	S Asia F	E Europe M
52	5.6 ± 0.5	4.5 ± 0.1	3.9 ± 0.2	5.5 ± 0.2	4.2 ± 0.2	5.9 ± 0.4	4.0 ± 0.4	3.18 ± 0.10	3.4 ± 0.2	3.8 ± 0.1	3.3 ± 0.2	5.0 ± 0.3	W Africa F	E Asia M

Table 79. *Mean absolute error for Application-type images for algorithm daon-001. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	2.7 ± 0.2	2.6 ± 0.1	1.8 ± 0.1	2.5 ± 0.1	2.7 ± 0.2	2.6 ± 0.3	3.1 ± 0.2	3.3 ± 0.1	1.9 ± 0.1	3.1 ± 0.1	2.9 ± 0.2	2.2 ± 0.2	E Asia M	E Europe F
15	3.0 ± 0.3	2.9 ± 0.1	1.9 ± 0.1	2.9 ± 0.2	3.1 ± 0.3	3.1 ± 0.4	3.1 ± 0.2	3.6 ± 0.1	1.9 ± 0.2	3.5 ± 0.2	3.4 ± 0.3	2.8 ± 0.3	E Asia M	E Europe M
16	3.7 ± 0.3	3.2 ± 0.1	2.2 ± 0.2	2.8 ± 0.2	3.4 ± 0.3	4.2 ± 0.5	3.7 ± 0.3	3.7 ± 0.1	2.2 ± 0.2	3.8 ± 0.2	3.6 ± 0.3	2.8 ± 0.3	W Africa F	E Europe F
17	4.0 ± 0.3	3.5 ± 0.1	2.4 ± 0.2	3.0 ± 0.1	3.6 ± 0.3	4.8 ± 0.4	4.1 ± 0.3	3.7 ± 0.1	2.0 ± 0.2	4.0 ± 0.2	3.7 ± 0.3	3.6 ± 0.4	W Africa F	E Europe M
18	4.0 ± 0.3	3.7 ± 0.1	2.6 ± 0.2	3.1 ± 0.1	3.5 ± 0.2	5.0 ± 0.4	4.2 ± 0.3	3.5 ± 0.1	2.3 ± 0.2	4.1 ± 0.1	3.3 ± 0.2	3.8 ± 0.3	W Africa F	E Europe M
19	4.4 ± 0.3	3.8 ± 0.1	2.7 ± 0.2	3.1 ± 0.1	3.7 ± 0.1	5.2 ± 0.4	4.7 ± 0.3	3.4 ± 0.1	2.3 ± 0.2	4.3 ± 0.1	3.2 ± 0.2	3.9 ± 0.3	W Africa F	E Europe M
20	4.5 ± 0.3	3.9 ± 0.1	2.7 ± 0.1	3.3 ± 0.1	3.8 ± 0.1	5.3 ± 0.3	5.1 ± 0.3	3.2 ± 0.1	2.3 ± 0.2	4.3 ± 0.1	3.2 ± 0.2	4.3 ± 0.3	W Africa F	E Europe M
21	4.3 ± 0.2	3.9 ± 0.1	2.8 ± 0.1	3.2 ± 0.1	3.8 ± 0.1	5.8 ± 0.3	5.2 ± 0.3	2.99 ± 0.10	2.2 ± 0.1	4.0 ± 0.1	3.1 ± 0.2	4.3 ± 0.3	W Africa F	E Europe M
22	4.5 ± 0.2	3.9 ± 0.1	2.9 ± 0.1	3.29 ± 0.09	3.9 ± 0.1	5.5 ± 0.3	5.5 ± 0.3	2.9 ± 0.1	2.3 ± 0.1	4.0 ± 0.1	2.8 ± 0.1	4.4 ± 0.3	E Africa M	E Europe M
23	4.5 ± 0.2	3.9 ± 0.1	2.9 ± 0.1	3.31 ± 0.09	3.8 ± 0.1	5.6 ± 0.3	5.5 ± 0.3	2.94 ± 0.10	2.3 ± 0.1	4.0 ± 0.1	3.1 ± 0.1	4.2 ± 0.2	W Africa F	E Europe M
24	4.6 ± 0.2	4.03 ± 0.10	2.86 ± 0.10	3.36 ± 0.08	3.7 ± 0.1	5.6 ± 0.2	5.4 ± 0.3	2.9 ± 0.1	2.3 ± 0.1	3.8 ± 0.1	2.8 ± 0.1	4.3 ± 0.2	W Africa F	E Europe M
25	4.7 ± 0.2	3.94 ± 0.09	3.02 ± 0.09	3.49 ± 0.08	3.7 ± 0.1	5.7 ± 0.2	5.4 ± 0.2	2.99 ± 0.10	2.3 ± 0.1	3.74 ± 0.10	3.0 ± 0.1	4.3 ± 0.2	W Africa F	E Europe M
26	4.4 ± 0.2	3.93 ± 0.09	3.00 ± 0.09	3.60 ± 0.08	3.8 ± 0.1	5.4 ± 0.2	5.2 ± 0.2	2.91 ± 0.09	2.4 ± 0.1	3.61 ± 0.09	3.1 ± 0.1	4.2 ± 0.2	W Africa F	E Europe M
27	4.6 ± 0.2	3.90 ± 0.09	3.05 ± 0.09	3.76 ± 0.08	3.7 ± 0.1	5.5 ± 0.2	4.9 ± 0.2	3.04 ± 0.09	2.5 ± 0.1	3.41 ± 0.08	3.3 ± 0.1	4.2 ± 0.2	W Africa F	E Europe M
28	4.4 ± 0.2	3.87 ± 0.09	3.10 ± 0.09	4.02 ± 0.08	3.7 ± 0.1	5.3 ± 0.2	4.9 ± 0.2	3.09 ± 0.09	2.7 ± 0.1	3.32 ± 0.08	3.2 ± 0.1	4.1 ± 0.2	W Africa F	E Europe M
29	4.5 ± 0.2	3.77 ± 0.08	3.14 ± 0.09	4.13 ± 0.08	3.6 ± 0.1	5.1 ± 0.2	4.8 ± 0.2	3.16 ± 0.09	2.7 ± 0.1	3.15 ± 0.07	3.2 ± 0.1	4.3 ± 0.2	W Africa F	E Europe M
30	4.4 ± 0.2	3.83 ± 0.08	3.25 ± 0.10	4.32 ± 0.08	3.7 ± 0.1	5.3 ± 0.2	4.7 ± 0.2	3.12 ± 0.08	2.6 ± 0.1	3.17 ± 0.06	3.3 ± 0.1	4.1 ± 0.1	W Africa F	E Europe M
31	4.5 ± 0.2	3.83 ± 0.08	3.29 ± 0.10	4.66 ± 0.08	3.7 ± 0.1	4.9 ± 0.2	4.7 ± 0.2	3.16 ± 0.09	2.8 ± 0.1	3.15 ± 0.06	3.4 ± 0.2	4.1 ± 0.1	W Africa F	E Europe M
32	4.5 ± 0.2	3.82 ± 0.08	3.3 ± 0.1	4.75 ± 0.09	3.9 ± 0.1	5.0 ± 0.2	4.4 ± 0.2	3.19 ± 0.08	2.8 ± 0.1	3.14 ± 0.06	3.5 ± 0.1	4.0 ± 0.1	W Africa F	E Europe M
33	4.7 ± 0.2	3.80 ± 0.09	3.5 ± 0.1	4.96 ± 0.09	3.8 ± 0.1	4.8 ± 0.2	4.5 ± 0.2	3.12 ± 0.08	2.8 ± 0.1	3.06 ± 0.06	3.4 ± 0.2	3.9 ± 0.1	S Asia F	E Europe M
34	4.5 ± 0.2	3.80 ± 0.08	3.5 ± 0.1	5.09 ± 0.10	3.7 ± 0.1	4.8 ± 0.2	4.2 ± 0.2	3.17 ± 0.08	2.8 ± 0.1	3.17 ± 0.06	3.4 ± 0.2	3.8 ± 0.1	S Asia F	E Europe M
35	4.7 ± 0.2	3.84 ± 0.08	3.7 ± 0.1	5.26 ± 0.10	3.8 ± 0.1	4.7 ± 0.2	4.2 ± 0.2	3.21 ± 0.08	2.8 ± 0.1	3.14 ± 0.06	3.5 ± 0.2	3.9 ± 0.2	S Asia F	E Europe M
36	4.7 ± 0.2	3.79 ± 0.08	3.4 ± 0.1	5.4 ± 0.1	3.8 ± 0.1	4.6 ± 0.2	4.1 ± 0.2	3.15 ± 0.08	2.9 ± 0.1	3.14 ± 0.07	3.5 ± 0.2	3.8 ± 0.1	S Asia F	E Europe M
37	4.7 ± 0.2	3.66 ± 0.08	3.6 ± 0.1	5.5 ± 0.1	3.7 ± 0.1	4.6 ± 0.2	4.0 ± 0.2	3.12 ± 0.08	2.8 ± 0.1	3.21 ± 0.07	3.2 ± 0.2	3.5 ± 0.1	S Asia F	E Europe M
38	4.6 ± 0.2	3.74 ± 0.08	3.6 ± 0.1	5.6 ± 0.1	3.8 ± 0.1	4.9 ± 0.2	3.8 ± 0.2	3.18 ± 0.08	2.8 ± 0.1	3.15 ± 0.07	3.5 ± 0.2	3.5 ± 0.1	S Asia F	E Europe M
39	4.6 ± 0.2	3.65 ± 0.08	3.3 ± 0.1	5.6 ± 0.1	3.6 ± 0.1	4.6 ± 0.2	3.7 ± 0.2	3.05 ± 0.08	2.9 ± 0.1	3.19 ± 0.07	3.5 ± 0.2	3.5 ± 0.1	S Asia F	E Europe M
40	4.6 ± 0.3	3.67 ± 0.08	3.4 ± 0.1	5.5 ± 0.1	3.6 ± 0.1	4.5 ± 0.2	3.7 ± 0.2	3.00 ± 0.08	3.0 ± 0.1	3.24 ± 0.07	3.3 ± 0.1	3.8 ± 0.2	S Asia F	E Europe M
41	4.8 ± 0.3	3.58 ± 0.08	3.2 ± 0.1	5.5 ± 0.1	3.6 ± 0.1	4.5 ± 0.2	3.9 ± 0.2	2.95 ± 0.08	2.9 ± 0.1	3.25 ± 0.08	3.3 ± 0.1	3.8 ± 0.2	S Asia F	E Europe M
42	4.5 ± 0.3	3.40 ± 0.08	3.2 ± 0.1	5.2 ± 0.2	3.4 ± 0.1	4.8 ± 0.3	3.6 ± 0.2	2.94 ± 0.08	2.9 ± 0.1	3.17 ± 0.08	3.3 ± 0.2	3.6 ± 0.2	S Asia F	E Europe M
43	4.6 ± 0.3	3.47 ± 0.08	3.1 ± 0.1	5.3 ± 0.2	3.6 ± 0.1	4.5 ± 0.3	3.5 ± 0.2	2.84 ± 0.08	2.8 ± 0.1	3.23 ± 0.09	3.3 ± 0.2	3.7 ± 0.2	S Asia F	E Europe M
44	4.9 ± 0.3	3.42 ± 0.08	3.1 ± 0.2	5.2 ± 0.2	3.5 ± 0.1	4.8 ± 0.3	3.4 ± 0.2	2.83 ± 0.08	2.9 ± 0.2	3.24 ± 0.09	3.3 ± 0.2	3.7 ± 0.2	S Asia F	E Asia M
45	4.6 ± 0.3	3.35 ± 0.08	3.0 ± 0.2	5.1 ± 0.2	3.4 ± 0.1	4.4 ± 0.3	3.5 ± 0.2	2.81 ± 0.08	2.8 ± 0.1	3.22 ± 0.10	3.1 ± 0.1	3.9 ± 0.2	S Asia F	E Europe M
46	4.8 ± 0.3	3.47 ± 0.08	3.1 ± 0.2	4.7 ± 0.2	3.5 ± 0.1	4.2 ± 0.3	3.4 ± 0.2	2.71 ± 0.08	3.0 ± 0.2	3.2 ± 0.1	3.2 ± 0.2	3.8 ± 0.2	E Africa F	E Asia M
47	4.4 ± 0.3	3.32 ± 0.08	3.2 ± 0.2	4.6 ± 0.2	3.4 ± 0.2	4.5 ± 0.3	3.6 ± 0.2	2.66 ± 0.08	2.9 ± 0.2	3.3 ± 0.1	3.1 ± 0.2	3.8 ± 0.2	S Asia F	E Asia M
48	4.4 ± 0.3	3.34 ± 0.09	3.1 ± 0.2	4.6 ± 0.2	3.3 ± 0.2	4.4 ± 0.3	3.7 ± 0.3	2.64 ± 0.07	3.1 ± 0.2	3.2 ± 0.1	3.0 ± 0.2	4.0 ± 0.2	S Asia F	E Asia M
49	4.5 ± 0.3	3.44 ± 0.09	3.1 ± 0.2	4.3 ± 0.2	3.4 ± 0.2	4.5 ± 0.3	3.6 ± 0.3	2.71 ± 0.08	3.0 ± 0.2	3.2 ± 0.1	2.9 ± 0.2	3.7 ± 0.2	E Africa F	E Asia M
50	4.6 ± 0.4	3.47 ± 0.09	3.1 ± 0.2	4.1 ± 0.2	3.3 ± 0.1	4.0 ± 0.3	3.3 ± 0.3	2.66 ± 0.08	2.9 ± 0.2	3.3 ± 0.1	2.9 ± 0.2	4.0 ± 0.2	E Africa F	E Asia M
51	4.1 ± 0.3	3.48 ± 0.09	3.1 ± 0.2	4.2 ± 0.2	3.4 ± 0.2	4.4 ± 0.3	3.8 ± 0.3	2.74 ± 0.08	3.0 ± 0.2	3.3 ± 0.1	2.9 ± 0.2	4.3 ± 0.2	W Africa F	E Asia M
52	4.6 ± 0.4	3.46 ± 0.10	3.3 ± 0.2	4.1 ± 0.2	3.3 ± 0.1	4.5 ± 0.3	3.6 ± 0.3	2.72 ± 0.08	3.2 ± 0.2	3.3 ± 0.1	2.9 ± 0.2	4.4 ± 0.3	E Africa F	E Asia M

Table 80. *Mean absolute error for Application-type images for algorithm dermalog-001. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	3.4 ± 0.3	4.7 ± 0.1	5.1 ± 0.3	4.8 ± 0.2	5.3 ± 0.3	3.4 ± 0.3	2.4 ± 0.2	3.7 ± 0.1	2.9 ± 0.3	3.6 ± 0.2	3.6 ± 0.2	2.7 ± 0.3	S E Asia F	E Africa M
15	4.0 ± 0.3	4.6 ± 0.2	5.4 ± 0.3	5.4 ± 0.2	5.2 ± 0.4	3.4 ± 0.3	2.4 ± 0.2	3.9 ± 0.1	3.0 ± 0.3	4.1 ± 0.2	4.0 ± 0.2	3.0 ± 0.3	S Asia F	E Africa M
16	4.0 ± 0.3	4.6 ± 0.1	5.3 ± 0.3	5.2 ± 0.2	5.3 ± 0.3	3.4 ± 0.4	3.0 ± 0.3	3.8 ± 0.1	3.3 ± 0.3	4.3 ± 0.2	4.2 ± 0.3	3.3 ± 0.3	E Europe F	E Africa M
17	4.2 ± 0.3	4.2 ± 0.1	5.6 ± 0.3	5.1 ± 0.2	4.9 ± 0.3	3.2 ± 0.2	3.1 ± 0.3	3.4 ± 0.1	2.8 ± 0.2	4.2 ± 0.2	3.8 ± 0.2	3.6 ± 0.4	E Europe F	E Europe M
18	3.8 ± 0.2	3.7 ± 0.1	4.8 ± 0.3	4.5 ± 0.1	4.1 ± 0.2	3.1 ± 0.2	3.4 ± 0.2	2.88 ± 0.09	2.7 ± 0.2	4.1 ± 0.1	3.3 ± 0.2	3.4 ± 0.3	E Europe F	E Europe M
19	4.2 ± 0.3	3.3 ± 0.1	4.6 ± 0.3	4.4 ± 0.1	3.7 ± 0.2	3.2 ± 0.2	3.8 ± 0.3	2.52 ± 0.09	2.6 ± 0.2	3.9 ± 0.1	3.0 ± 0.2	3.6 ± 0.3	E Europe F	E Asia M
20	4.4 ± 0.3	3.1 ± 0.1	4.3 ± 0.2	4.0 ± 0.2	3.5 ± 0.2	3.0 ± 0.2	3.8 ± 0.3	2.32 ± 0.09	2.5 ± 0.2	3.8 ± 0.1	2.8 ± 0.2	3.3 ± 0.3	E Africa F	E Asia M
21	4.3 ± 0.2	2.8 ± 0.1	4.1 ± 0.2	3.9 ± 0.1	3.3 ± 0.2	3.3 ± 0.2	3.8 ± 0.3	2.06 ± 0.08	2.3 ± 0.2	3.5 ± 0.1	2.6 ± 0.2	3.5 ± 0.3	E Africa F	E Asia M
22	4.3 ± 0.2	2.59 ± 0.09	3.8 ± 0.2	3.7 ± 0.1	2.9 ± 0.1	3.3 ± 0.2	4.5 ± 0.3	2.14 ± 0.08	2.5 ± 0.2	3.4 ± 0.1	2.3 ± 0.1	3.4 ± 0.2	E Africa M	E Asia M
23	4.2 ± 0.2	2.68 ± 0.08	3.7 ± 0.1	3.6 ± 0.1	2.9 ± 0.1	3.3 ± 0.2	4.4 ± 0.3	2.22 ± 0.08	2.4 ± 0.1	3.2 ± 0.1	2.3 ± 0.1	3.6 ± 0.2	E Africa M	E Asia M
24	4.5 ± 0.2	2.82 ± 0.07	3.5 ± 0.1	3.52 ± 0.09	2.89 ± 0.09	3.7 ± 0.2	4.3 ± 0.2	2.36 ± 0.07	2.6 ± 0.1	3.1 ± 0.1	2.4 ± 0.1	3.4 ± 0.2	E Africa F	S E Asia M
25	4.6 ± 0.2	3.02 ± 0.07	3.5 ± 0.1	3.48 ± 0.08	2.97 ± 0.09	4.1 ± 0.2	4.5 ± 0.2	2.66 ± 0.08	2.6 ± 0.1	2.96 ± 0.09	2.7 ± 0.1	3.5 ± 0.2	E Africa F	E Europe M
26	4.6 ± 0.2	3.15 ± 0.06	3.52 ± 0.10	3.42 ± 0.07	3.19 ± 0.08	4.3 ± 0.2	4.1 ± 0.2	2.73 ± 0.07	2.8 ± 0.1	2.95 ± 0.08	2.8 ± 0.1	3.4 ± 0.2	E Africa F	E Asia M
27	4.8 ± 0.2	3.29 ± 0.06	3.43 ± 0.09	3.36 ± 0.06	3.30 ± 0.08	4.8 ± 0.2	4.3 ± 0.2	2.97 ± 0.08	2.8 ± 0.1	2.94 ± 0.07	3.0 ± 0.1	3.6 ± 0.2	E Africa F	E Europe M
28	5.0 ± 0.2	3.51 ± 0.06	3.34 ± 0.09	3.37 ± 0.06	3.40 ± 0.09	4.9 ± 0.2	3.9 ± 0.2	3.16 ± 0.09	3.0 ± 0.1	2.91 ± 0.07	3.0 ± 0.1	3.5 ± 0.1	E Africa F	S Asia M
29	5.0 ± 0.2	3.57 ± 0.06	3.34 ± 0.09	3.36 ± 0.06	3.52 ± 0.09	5.2 ± 0.2	4.1 ± 0.2	3.28 ± 0.08	3.2 ± 0.1	2.88 ± 0.06	3.2 ± 0.1	3.7 ± 0.1	W Africa F	S Asia M
30	5.1 ± 0.2	3.71 ± 0.06	3.37 ± 0.10	3.37 ± 0.07	3.62 ± 0.10	5.4 ± 0.2	4.0 ± 0.2	3.41 ± 0.09	3.1 ± 0.1	2.93 ± 0.06	3.2 ± 0.1	3.7 ± 0.1	W Africa F	S Asia M
31	5.3 ± 0.2	3.77 ± 0.07	3.3 ± 0.1	3.38 ± 0.07	3.7 ± 0.1	5.7 ± 0.2	4.1 ± 0.2	3.57 ± 0.09	3.4 ± 0.1	2.98 ± 0.06	3.5 ± 0.2	3.8 ± 0.1	W Africa F	S Asia M
32	5.4 ± 0.2	3.87 ± 0.07	3.3 ± 0.1	3.44 ± 0.07	3.8 ± 0.1	5.7 ± 0.2	4.1 ± 0.2	3.70 ± 0.09	3.5 ± 0.1	3.11 ± 0.06	3.6 ± 0.2	3.9 ± 0.2	W Africa F	S Asia M
33	5.7 ± 0.2	3.89 ± 0.08	3.3 ± 0.1	3.51 ± 0.08	3.9 ± 0.1	5.9 ± 0.2	4.2 ± 0.2	3.9 ± 0.1	3.5 ± 0.1	3.24 ± 0.07	3.6 ± 0.2	4.1 ± 0.1	W Africa F	S Asia M
34	5.7 ± 0.3	3.94 ± 0.08	3.4 ± 0.1	3.63 ± 0.08	3.9 ± 0.1	6.0 ± 0.2	4.2 ± 0.2	4.0 ± 0.1	3.6 ± 0.2	3.39 ± 0.07	3.9 ± 0.2	4.1 ± 0.2	W Africa F	E Europe F
35	6.0 ± 0.3	4.07 ± 0.09	3.5 ± 0.1	3.77 ± 0.09	3.9 ± 0.1	6.1 ± 0.2	4.3 ± 0.2	4.2 ± 0.1	3.8 ± 0.2	3.64 ± 0.08	4.2 ± 0.2	4.5 ± 0.2	W Africa F	E Europe F
36	6.0 ± 0.3	4.14 ± 0.09	3.5 ± 0.1	3.98 ± 0.09	4.2 ± 0.1	6.3 ± 0.3	4.5 ± 0.2	4.3 ± 0.1	4.0 ± 0.2	3.85 ± 0.08	4.3 ± 0.2	4.4 ± 0.2	W Africa F	E Europe F
37	6.2 ± 0.3	4.26 ± 0.09	3.7 ± 0.1	4.28 ± 0.09	4.2 ± 0.1	6.6 ± 0.3	4.4 ± 0.2	4.5 ± 0.1	4.2 ± 0.2	4.14 ± 0.08	4.3 ± 0.2	4.7 ± 0.2	W Africa F	E Europe F
38	6.1 ± 0.3	4.48 ± 0.09	3.7 ± 0.1	4.41 ± 0.10	4.3 ± 0.1	6.8 ± 0.3	4.6 ± 0.2	4.7 ± 0.1	4.2 ± 0.2	4.40 ± 0.08	4.4 ± 0.2	4.8 ± 0.2	W Africa F	E Europe F
39	6.2 ± 0.3	4.53 ± 0.09	3.9 ± 0.1	4.6 ± 0.1	4.3 ± 0.1	6.5 ± 0.3	4.6 ± 0.2	4.8 ± 0.1	4.3 ± 0.2	4.46 ± 0.09	4.5 ± 0.2	5.1 ± 0.2	W Africa F	E Europe F
40	6.0 ± 0.3	4.70 ± 0.09	3.8 ± 0.1	4.7 ± 0.1	4.5 ± 0.2	6.8 ± 0.3	4.6 ± 0.2	4.9 ± 0.1	4.5 ± 0.2	4.72 ± 0.09	4.5 ± 0.2	5.2 ± 0.2	W Africa F	E Europe F
41	6.5 ± 0.4	4.69 ± 0.10	3.8 ± 0.1	5.0 ± 0.1	4.5 ± 0.2	6.9 ± 0.3	4.9 ± 0.2	4.9 ± 0.1	4.6 ± 0.2	4.75 ± 0.10	4.6 ± 0.2	5.4 ± 0.2	W Africa F	E Europe F
42	5.9 ± 0.4	4.73 ± 0.09	3.7 ± 0.2	4.8 ± 0.1	4.5 ± 0.2	6.8 ± 0.3	4.7 ± 0.3	5.0 ± 0.1	4.2 ± 0.2	4.8 ± 0.1	4.5 ± 0.2	5.2 ± 0.2	W Africa F	E Europe F
43	5.9 ± 0.4	4.86 ± 0.10	4.0 ± 0.2	5.1 ± 0.2	4.7 ± 0.2	6.8 ± 0.3	4.6 ± 0.3	4.8 ± 0.1	4.5 ± 0.2	4.9 ± 0.1	4.2 ± 0.2	5.5 ± 0.3	W Africa F	E Europe F
44	6.1 ± 0.4	5.0 ± 0.1	4.0 ± 0.2	5.0 ± 0.2	4.5 ± 0.2	6.9 ± 0.4	4.3 ± 0.3	4.7 ± 0.1	4.1 ± 0.2	4.8 ± 0.1	4.2 ± 0.2	5.2 ± 0.2	W Africa F	E Europe F
45	6.0 ± 0.4	4.9 ± 0.1	3.8 ± 0.2	5.1 ± 0.2	4.4 ± 0.2	7.0 ± 0.4	4.5 ± 0.3	4.7 ± 0.1	4.2 ± 0.2	4.8 ± 0.1	4.1 ± 0.2	5.3 ± 0.3	W Africa F	E Europe F
46	5.7 ± 0.4	5.1 ± 0.1	3.9 ± 0.2	4.9 ± 0.2	4.7 ± 0.2	6.5 ± 0.4	4.3 ± 0.3	4.5 ± 0.1	4.1 ± 0.2	4.5 ± 0.1	3.9 ± 0.2	5.6 ± 0.3	W Africa F	E Europe F
47	5.7 ± 0.5	5.0 ± 0.1	3.8 ± 0.2	4.8 ± 0.2	4.4 ± 0.2	6.5 ± 0.4	4.4 ± 0.3	4.4 ± 0.1	3.7 ± 0.2	4.7 ± 0.2	3.7 ± 0.2	5.3 ± 0.3	W Africa F	E Europe M
48	5.6 ± 0.5	5.0 ± 0.1	3.8 ± 0.2	5.0 ± 0.2	4.5 ± 0.2	6.6 ± 0.4	4.5 ± 0.3	4.3 ± 0.1	3.9 ± 0.3	4.6 ± 0.2	3.9 ± 0.2	5.5 ± 0.3	W Africa F	E Europe F
49	5.7 ± 0.5	5.1 ± 0.1	3.8 ± 0.2	4.9 ± 0.2	4.3 ± 0.2	6.9 ± 0.4	4.7 ± 0.4	4.3 ± 0.1	3.8 ± 0.2	4.5 ± 0.2	3.8 ± 0.2	5.4 ± 0.3	W Africa F	E Europe F
50	5.9 ± 0.6	5.1 ± 0.1	3.7 ± 0.2	4.8 ± 0.2	4.6 ± 0.2	6.7 ± 0.4	4.3 ± 0.3	4.2 ± 0.1	3.9 ± 0.2	4.6 ± 0.2	3.8 ± 0.2	5.3 ± 0.3	W Africa F	E Europe F
51	5.2 ± 0.4	5.3 ± 0.1	3.6 ± 0.2	4.9 ± 0.2	4.5 ± 0.2	6.7 ± 0.4	4.7 ± 0.4	4.2 ± 0.1	3.6 ± 0.2	4.6 ± 0.2	3.7 ± 0.2	5.7 ± 0.3	W Africa F	E Europe M
52	5.6 ± 0.5	5.2 ± 0.1	3.9 ± 0.2	5.1 ± 0.2	4.4 ± 0.2	7.0 ± 0.5	4.7 ± 0.4	4.1 ± 0.1	3.9 ± 0.2	4.6 ± 0.2	3.9 ± 0.2	5.8 ± 0.4	W Africa F	E Europe F

Table 81. *Mean absolute error for Application-type images for algorithm dermalog-002. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	3.8 ± 0.3	5.5 ± 0.2	5.2 ± 0.3	4.8 ± 0.2	5.4 ± 0.3	3.7 ± 0.3	3.1 ± 0.2	3.0 ± 0.1	2.6 ± 0.2	3.1 ± 0.1	3.1 ± 0.2	3.2 ± 0.3	E Asia F	E Europe M
15	3.6 ± 0.3	5.8 ± 0.2	5.9 ± 0.3	5.2 ± 0.2	6.0 ± 0.4	4.0 ± 0.4	3.0 ± 0.2	3.2 ± 0.1	2.7 ± 0.2	3.3 ± 0.1	3.3 ± 0.2	3.3 ± 0.3	S E Asia F	E Europe M
16	4.1 ± 0.3	5.9 ± 0.2	5.8 ± 0.3	5.3 ± 0.2	5.9 ± 0.3	4.0 ± 0.4	3.1 ± 0.2	3.3 ± 0.1	2.9 ± 0.3	3.3 ± 0.1	3.6 ± 0.2	3.3 ± 0.3	S E Asia F	E Europe M
17	4.3 ± 0.3	5.6 ± 0.1	5.7 ± 0.4	5.3 ± 0.2	5.8 ± 0.3	4.1 ± 0.3	2.9 ± 0.3	3.1 ± 0.1	3.0 ± 0.2	3.4 ± 0.2	3.4 ± 0.2	3.1 ± 0.3	S E Asia F	E Africa M
18	4.3 ± 0.2	5.3 ± 0.1	5.7 ± 0.3	4.9 ± 0.1	5.2 ± 0.2	3.9 ± 0.3	3.1 ± 0.2	2.95 ± 0.09	3.1 ± 0.2	3.5 ± 0.1	3.2 ± 0.2	3.1 ± 0.2	E Europe F	E Asia M
19	4.3 ± 0.2	4.8 ± 0.1	5.2 ± 0.3	4.7 ± 0.1	4.9 ± 0.2	3.8 ± 0.3	3.1 ± 0.2	2.9 ± 0.1	3.0 ± 0.2	3.5 ± 0.1	3.0 ± 0.2	3.1 ± 0.3	E Europe F	E Asia M
20	4.5 ± 0.2	4.6 ± 0.1	4.9 ± 0.2	4.3 ± 0.2	4.7 ± 0.2	3.8 ± 0.3	3.3 ± 0.3	2.7 ± 0.1	3.0 ± 0.2	3.4 ± 0.1	3.0 ± 0.2	2.9 ± 0.3	E Europe F	E Asia M
21	4.4 ± 0.2	4.1 ± 0.1	4.5 ± 0.2	4.1 ± 0.1	4.1 ± 0.1	3.8 ± 0.2	3.1 ± 0.2	2.51 ± 0.09	3.1 ± 0.2	3.3 ± 0.1	2.8 ± 0.2	3.1 ± 0.3	E Europe F	E Asia M
22	4.5 ± 0.2	3.57 ± 0.10	4.1 ± 0.2	3.7 ± 0.1	3.7 ± 0.1	3.7 ± 0.2	3.5 ± 0.2	2.50 ± 0.09	3.2 ± 0.2	3.0 ± 0.1	2.5 ± 0.1	3.0 ± 0.2	E Africa F	E Asia M
23	4.8 ± 0.2	3.22 ± 0.09	4.1 ± 0.2	3.6 ± 0.1	3.4 ± 0.1	3.7 ± 0.2	3.4 ± 0.2	2.64 ± 0.09	3.0 ± 0.2	3.2 ± 0.1	2.6 ± 0.1	3.2 ± 0.2	E Africa F	S E Asia M
24	4.6 ± 0.2	2.98 ± 0.08	3.8 ± 0.1	3.41 ± 0.09	3.05 ± 0.10	3.8 ± 0.2	3.5 ± 0.2	2.72 ± 0.09	3.0 ± 0.2	3.2 ± 0.1	2.7 ± 0.1	3.2 ± 0.2	E Africa F	S E Asia M
25	5.0 ± 0.2	2.72 ± 0.07	3.7 ± 0.1	3.34 ± 0.09	2.92 ± 0.10	4.2 ± 0.2	3.7 ± 0.2	2.82 ± 0.09	3.0 ± 0.1	3.15 ± 0.09	2.9 ± 0.1	3.4 ± 0.2	E Africa F	E Asia F
26	5.1 ± 0.2	2.67 ± 0.07	3.6 ± 0.1	3.38 ± 0.08	2.89 ± 0.09	4.2 ± 0.2	3.7 ± 0.2	2.89 ± 0.09	3.0 ± 0.1	3.24 ± 0.08	3.0 ± 0.1	3.4 ± 0.2	E Africa F	E Asia F
27	5.3 ± 0.2	2.58 ± 0.06	3.5 ± 0.1	3.46 ± 0.08	2.83 ± 0.09	4.5 ± 0.2	3.7 ± 0.2	3.09 ± 0.09	3.2 ± 0.1	3.29 ± 0.08	3.2 ± 0.1	3.6 ± 0.1	E Africa F	E Asia F
28	5.5 ± 0.2	2.72 ± 0.06	3.5 ± 0.1	3.68 ± 0.08	2.95 ± 0.09	4.8 ± 0.2	3.8 ± 0.1	3.38 ± 0.10	3.2 ± 0.1	3.39 ± 0.08	3.3 ± 0.1	3.9 ± 0.1	E Africa F	E Asia F
29	5.7 ± 0.2	2.84 ± 0.06	3.5 ± 0.1	3.91 ± 0.08	3.16 ± 0.09	4.9 ± 0.2	4.0 ± 0.2	3.39 ± 0.09	3.3 ± 0.1	3.51 ± 0.07	3.5 ± 0.1	4.2 ± 0.1	E Africa F	E Asia F
30	5.9 ± 0.2	3.04 ± 0.06	3.7 ± 0.1	4.13 ± 0.08	3.24 ± 0.09	5.8 ± 0.2	4.3 ± 0.2	3.60 ± 0.09	3.2 ± 0.1	3.75 ± 0.07	3.6 ± 0.2	4.3 ± 0.1	E Africa F	E Asia F
31	6.2 ± 0.2	3.29 ± 0.06	3.8 ± 0.1	4.40 ± 0.08	3.52 ± 0.10	6.0 ± 0.2	4.2 ± 0.2	3.74 ± 0.09	3.4 ± 0.1	3.95 ± 0.07	3.9 ± 0.2	4.6 ± 0.1	E Africa F	E Asia F
32	6.5 ± 0.3	3.46 ± 0.06	3.8 ± 0.1	4.67 ± 0.09	3.7 ± 0.1	6.2 ± 0.2	4.6 ± 0.2	4.0 ± 0.1	3.4 ± 0.1	4.17 ± 0.08	3.9 ± 0.2	4.8 ± 0.2	E Africa F	E Europe M
33	6.8 ± 0.3	3.67 ± 0.07	3.8 ± 0.1	4.96 ± 0.10	3.9 ± 0.1	6.5 ± 0.2	4.8 ± 0.2	4.1 ± 0.1	3.5 ± 0.1	4.47 ± 0.08	4.0 ± 0.2	4.9 ± 0.2	E Africa F	E Europe M
34	7.0 ± 0.3	3.82 ± 0.07	3.8 ± 0.1	5.2 ± 0.1	4.0 ± 0.1	6.7 ± 0.2	5.0 ± 0.2	4.3 ± 0.1	3.4 ± 0.1	4.67 ± 0.09	4.1 ± 0.2	5.1 ± 0.2	E Africa F	E Europe M
35	7.1 ± 0.3	4.12 ± 0.08	3.9 ± 0.1	5.5 ± 0.1	4.2 ± 0.1	7.1 ± 0.3	5.1 ± 0.2	4.4 ± 0.1	3.6 ± 0.2	4.96 ± 0.10	4.5 ± 0.2	5.5 ± 0.2	E Africa F	E Europe M
36	7.6 ± 0.3	4.25 ± 0.08	3.9 ± 0.1	5.8 ± 0.1	4.4 ± 0.1	7.4 ± 0.3	5.4 ± 0.2	4.6 ± 0.1	3.5 ± 0.2	5.2 ± 0.1	4.6 ± 0.2	5.7 ± 0.2	E Africa F	E Europe M
37	7.8 ± 0.3	4.46 ± 0.08	4.1 ± 0.1	6.0 ± 0.1	4.5 ± 0.1	7.7 ± 0.3	5.4 ± 0.2	4.7 ± 0.1	3.7 ± 0.2	5.6 ± 0.1	4.6 ± 0.2	5.7 ± 0.2	E Africa F	E Europe M
38	7.4 ± 0.4	4.68 ± 0.09	4.0 ± 0.2	6.3 ± 0.1	4.6 ± 0.2	7.9 ± 0.3	5.5 ± 0.3	4.9 ± 0.1	3.5 ± 0.2	5.7 ± 0.1	4.6 ± 0.2	6.0 ± 0.2	W Africa F	E Europe M
39	7.8 ± 0.4	4.77 ± 0.09	4.1 ± 0.2	6.5 ± 0.1	4.8 ± 0.2	8.1 ± 0.3	5.5 ± 0.3	5.0 ± 0.1	3.7 ± 0.2	5.8 ± 0.1	4.8 ± 0.2	6.4 ± 0.2	W Africa F	E Europe M
40	8.1 ± 0.4	4.89 ± 0.09	4.1 ± 0.2	6.6 ± 0.2	5.0 ± 0.2	8.5 ± 0.3	5.7 ± 0.3	5.1 ± 0.1	3.9 ± 0.2	6.1 ± 0.1	4.9 ± 0.2	6.6 ± 0.3	W Africa F	E Europe M
41	8.4 ± 0.4	5.00 ± 0.10	4.2 ± 0.2	6.8 ± 0.2	5.1 ± 0.2	8.8 ± 0.4	6.1 ± 0.3	5.1 ± 0.1	4.1 ± 0.2	6.3 ± 0.1	5.2 ± 0.2	6.9 ± 0.3	W Africa F	E Europe M
42	7.8 ± 0.4	5.08 ± 0.10	4.3 ± 0.2	6.8 ± 0.2	5.0 ± 0.2	8.5 ± 0.4	6.0 ± 0.3	5.3 ± 0.1	3.9 ± 0.2	6.4 ± 0.1	5.0 ± 0.2	7.0 ± 0.3	W Africa F	E Europe M
43	8.2 ± 0.5	5.2 ± 0.1	4.4 ± 0.2	6.9 ± 0.2	5.2 ± 0.2	8.8 ± 0.4	6.0 ± 0.3	5.2 ± 0.1	4.1 ± 0.2	6.4 ± 0.2	5.1 ± 0.2	7.4 ± 0.3	W Africa F	E Europe M
44	8.4 ± 0.5	5.3 ± 0.1	4.3 ± 0.2	6.8 ± 0.2	5.1 ± 0.2	9.1 ± 0.4	6.4 ± 0.4	5.3 ± 0.1	4.0 ± 0.2	6.6 ± 0.2	5.1 ± 0.2	7.3 ± 0.3	W Africa F	E Europe M
45	8.4 ± 0.5	5.2 ± 0.1	4.2 ± 0.2	6.9 ± 0.2	5.1 ± 0.2	9.0 ± 0.4	6.2 ± 0.4	5.5 ± 0.1	4.1 ± 0.2	6.5 ± 0.2	5.2 ± 0.3	7.6 ± 0.3	W Africa F	E Europe M
46	7.8 ± 0.5	5.3 ± 0.1	4.3 ± 0.2	6.7 ± 0.2	5.3 ± 0.2	9.2 ± 0.5	6.1 ± 0.4	5.4 ± 0.1	4.3 ± 0.2	6.3 ± 0.2	5.0 ± 0.2	7.9 ± 0.3	W Africa F	E Europe M
47	8.0 ± 0.6	5.2 ± 0.1	4.4 ± 0.2	6.6 ± 0.2	5.0 ± 0.2	8.9 ± 0.5	6.2 ± 0.4	5.2 ± 0.1	4.3 ± 0.2	6.4 ± 0.2	5.0 ± 0.2	7.8 ± 0.4	W Africa F	E Europe M
48	8.1 ± 0.6	5.1 ± 0.1	4.2 ± 0.2	6.7 ± 0.3	5.2 ± 0.2	8.8 ± 0.5	6.8 ± 0.5	5.4 ± 0.1	4.2 ± 0.2	6.5 ± 0.2	5.0 ± 0.2	8.0 ± 0.4	W Africa F	E Europe F
49	8.1 ± 0.7	5.3 ± 0.1	4.3 ± 0.2	6.4 ± 0.2	5.0 ± 0.2	9.2 ± 0.5	6.6 ± 0.5	5.3 ± 0.1	4.6 ± 0.3	6.5 ± 0.2	4.9 ± 0.3	8.1 ± 0.4	W Africa F	E Europe F
50	7.6 ± 0.7	5.1 ± 0.1	4.3 ± 0.2	6.3 ± 0.2	4.9 ± 0.2	8.5 ± 0.5	7.2 ± 0.5	5.3 ± 0.1	4.6 ± 0.2	6.8 ± 0.2	4.8 ± 0.3	8.1 ± 0.4	W Africa F	E Europe F
51	7.6 ± 0.6	5.2 ± 0.1	4.2 ± 0.2	6.4 ± 0.2	5.0 ± 0.2	9.2 ± 0.6	7.2 ± 0.5	5.2 ± 0.2	4.3 ± 0.2	6.9 ± 0.2	4.8 ± 0.3	7.9 ± 0.4	W Africa F	E Europe F
52	7.8 ± 0.7	5.1 ± 0.1	4.2 ± 0.2	6.5 ± 0.2	4.6 ± 0.2	9.4 ± 0.6	6.9 ± 0.5	5.2 ± 0.2	4.5 ± 0.3	6.8 ± 0.3	5.0 ± 0.3	8.6 ± 0.5	W Africa F	E Europe F

Table 82. *Mean absolute error for Application-type images for algorithm hzailu-001. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	6.1 ± 0.5	6.1 ± 0.2	8.4 ± 0.4	6.7 ± 0.2	6.4 ± 0.4	8.4 ± 0.6	6.1 ± 0.4	5.9 ± 0.2	5.5 ± 0.4	7.5 ± 0.2	6.2 ± 0.4	7.6 ± 0.8	E Europe F	E Europe M
15	6.3 ± 0.5	6.4 ± 0.2	8.6 ± 0.4	7.3 ± 0.3	6.7 ± 0.4	8.2 ± 0.8	6.4 ± 0.5	6.1 ± 0.2	6.3 ± 0.4	8.2 ± 0.2	6.9 ± 0.3	8.1 ± 0.8	E Europe F	E Asia M
16	6.2 ± 0.5	6.4 ± 0.2	8.5 ± 0.4	7.1 ± 0.3	7.2 ± 0.4	8.4 ± 0.7	8.3 ± 0.5	6.0 ± 0.2	6.8 ± 0.4	8.4 ± 0.2	7.3 ± 0.4	9.4 ± 0.8	W Africa M	E Asia M
17	6.4 ± 0.5	6.3 ± 0.2	8.5 ± 0.4	7.1 ± 0.3	6.8 ± 0.4	8.7 ± 0.6	8.3 ± 0.5	5.8 ± 0.2	6.6 ± 0.3	8.5 ± 0.2	7.4 ± 0.3	9.5 ± 0.7	W Africa M	E Asia M
18	6.6 ± 0.4	6.1 ± 0.1	8.2 ± 0.3	6.6 ± 0.2	6.5 ± 0.2	8.3 ± 0.5	9.0 ± 0.4	5.4 ± 0.1	6.6 ± 0.3	8.4 ± 0.2	6.6 ± 0.2	10.2 ± 0.5	W Africa M	E Asia M
19	6.4 ± 0.3	5.6 ± 0.1	7.8 ± 0.3	6.6 ± 0.2	6.3 ± 0.2	8.1 ± 0.4	8.9 ± 0.4	5.1 ± 0.1	6.3 ± 0.3	8.2 ± 0.2	6.2 ± 0.2	10.2 ± 0.5	W Africa M	E Asia M
20	6.4 ± 0.3	5.5 ± 0.1	7.5 ± 0.2	6.1 ± 0.2	5.9 ± 0.2	8.0 ± 0.4	9.1 ± 0.4	4.6 ± 0.1	6.3 ± 0.3	7.9 ± 0.2	6.0 ± 0.2	9.9 ± 0.5	W Africa M	E Asia M
21	6.2 ± 0.3	5.1 ± 0.1	7.0 ± 0.2	5.8 ± 0.1	5.6 ± 0.2	8.0 ± 0.4	8.7 ± 0.3	4.1 ± 0.1	6.5 ± 0.3	7.7 ± 0.1	5.6 ± 0.2	10.0 ± 0.4	W Africa M	E Asia M
22	6.0 ± 0.3	4.6 ± 0.1	6.5 ± 0.2	5.3 ± 0.1	5.1 ± 0.2	7.4 ± 0.3	8.9 ± 0.3	3.7 ± 0.1	6.3 ± 0.3	7.1 ± 0.1	4.9 ± 0.2	9.4 ± 0.4	W Africa M	E Asia M
23	5.5 ± 0.2	4.4 ± 0.1	6.1 ± 0.2	5.0 ± 0.1	4.7 ± 0.1	7.2 ± 0.3	8.1 ± 0.3	3.4 ± 0.1	6.0 ± 0.2	6.6 ± 0.1	4.5 ± 0.2	9.2 ± 0.3	W Africa M	E Asia M
24	5.3 ± 0.2	3.97 ± 0.09	5.7 ± 0.1	4.56 ± 0.10	4.4 ± 0.1	6.7 ± 0.3	7.8 ± 0.3	3.2 ± 0.1	5.5 ± 0.2	6.4 ± 0.1	4.0 ± 0.2	8.9 ± 0.3	W Africa M	E Asia M
25	5.1 ± 0.2	3.68 ± 0.08	5.3 ± 0.1	4.21 ± 0.09	4.0 ± 0.1	6.7 ± 0.3	7.6 ± 0.3	2.87 ± 0.09	5.3 ± 0.2	5.8 ± 0.1	3.7 ± 0.2	8.4 ± 0.3	W Africa M	E Asia M
26	5.1 ± 0.2	3.45 ± 0.08	4.8 ± 0.1	3.88 ± 0.08	3.7 ± 0.1	6.0 ± 0.2	7.2 ± 0.2	2.63 ± 0.08	5.0 ± 0.2	5.3 ± 0.1	3.3 ± 0.2	7.9 ± 0.2	W Africa M	E Asia M
27	5.1 ± 0.2	3.10 ± 0.07	4.4 ± 0.1	3.60 ± 0.08	3.5 ± 0.1	5.9 ± 0.2	6.8 ± 0.2	2.61 ± 0.09	4.9 ± 0.2	4.73 ± 0.10	3.3 ± 0.2	7.4 ± 0.2	W Africa M	E Asia M
28	4.9 ± 0.2	3.06 ± 0.07	3.9 ± 0.1	3.52 ± 0.08	3.22 ± 0.10	5.8 ± 0.2	6.3 ± 0.2	2.66 ± 0.09	4.5 ± 0.2	4.24 ± 0.09	3.1 ± 0.2	6.9 ± 0.2	W Africa M	E Asia M
29	4.7 ± 0.2	2.93 ± 0.07	3.6 ± 0.1	3.41 ± 0.08	3.2 ± 0.1	5.4 ± 0.2	6.1 ± 0.2	2.74 ± 0.09	4.2 ± 0.2	3.81 ± 0.08	3.0 ± 0.1	6.5 ± 0.2	W Africa M	E Asia M
30	5.0 ± 0.2	2.92 ± 0.06	3.5 ± 0.1	3.55 ± 0.08	3.2 ± 0.1	5.3 ± 0.2	5.5 ± 0.2	2.81 ± 0.08	3.9 ± 0.2	3.43 ± 0.08	3.1 ± 0.2	6.0 ± 0.2	W Africa M	E Asia M
31	4.9 ± 0.2	3.04 ± 0.07	3.5 ± 0.1	3.80 ± 0.08	3.3 ± 0.1	5.3 ± 0.2	5.2 ± 0.2	3.18 ± 0.09	3.8 ± 0.2	3.20 ± 0.07	3.3 ± 0.2	5.7 ± 0.2	W Africa M	E Asia F
32	5.1 ± 0.3	3.18 ± 0.07	3.4 ± 0.1	4.01 ± 0.09	3.2 ± 0.1	5.2 ± 0.2	4.8 ± 0.2	3.41 ± 0.09	3.9 ± 0.2	3.18 ± 0.07	3.7 ± 0.2	5.2 ± 0.2	W Africa M	E Asia F
33	5.4 ± 0.2	3.41 ± 0.07	3.5 ± 0.1	4.34 ± 0.10	3.4 ± 0.1	5.4 ± 0.2	4.7 ± 0.2	3.71 ± 0.10	3.7 ± 0.2	3.24 ± 0.07	3.6 ± 0.2	4.8 ± 0.2	W Africa F	S Asia M
34	5.4 ± 0.3	3.68 ± 0.07	3.6 ± 0.1	4.7 ± 0.1	3.6 ± 0.1	5.3 ± 0.2	4.2 ± 0.2	4.08 ± 0.10	3.8 ± 0.2	3.46 ± 0.08	4.1 ± 0.2	4.6 ± 0.2	E Africa F	S Asia M
35	5.9 ± 0.3	4.05 ± 0.08	3.9 ± 0.1	5.1 ± 0.1	3.9 ± 0.1	5.4 ± 0.2	4.2 ± 0.2	4.40 ± 0.10	4.0 ± 0.2	3.69 ± 0.08	4.4 ± 0.2	4.5 ± 0.2	E Africa F	S Asia M
36	6.2 ± 0.3	4.29 ± 0.08	4.4 ± 0.2	5.5 ± 0.1	4.2 ± 0.1	5.3 ± 0.2	4.4 ± 0.2	4.6 ± 0.1	4.3 ± 0.2	3.87 ± 0.08	4.7 ± 0.2	4.3 ± 0.2	E Africa F	S Asia M
37	6.5 ± 0.3	4.60 ± 0.08	4.6 ± 0.2	5.9 ± 0.1	4.7 ± 0.1	5.5 ± 0.3	4.3 ± 0.2	4.8 ± 0.1	4.6 ± 0.2	4.12 ± 0.08	4.7 ± 0.2	4.2 ± 0.2	E Africa F	S Asia M
38	6.4 ± 0.3	4.87 ± 0.09	4.8 ± 0.2	6.3 ± 0.1	4.6 ± 0.1	6.0 ± 0.3	4.3 ± 0.2	4.9 ± 0.1	4.6 ± 0.2	4.26 ± 0.08	4.7 ± 0.2	4.2 ± 0.2	E Africa F	W Africa M
39	6.5 ± 0.3	5.15 ± 0.09	5.1 ± 0.2	6.7 ± 0.1	4.8 ± 0.2	5.7 ± 0.3	4.4 ± 0.2	5.1 ± 0.1	4.8 ± 0.2	4.48 ± 0.09	5.0 ± 0.2	4.0 ± 0.2	S Asia F	W Africa M
40	6.9 ± 0.4	5.36 ± 0.10	5.3 ± 0.2	6.8 ± 0.1	5.3 ± 0.2	6.0 ± 0.3	4.4 ± 0.2	5.1 ± 0.1	5.1 ± 0.2	4.65 ± 0.10	4.7 ± 0.2	4.2 ± 0.2	E Africa F	W Africa M
41	7.3 ± 0.4	5.50 ± 0.10	5.5 ± 0.2	7.2 ± 0.2	5.3 ± 0.2	6.2 ± 0.3	4.5 ± 0.2	5.0 ± 0.1	5.1 ± 0.2	4.8 ± 0.1	4.9 ± 0.2	4.4 ± 0.2	E Africa F	W Africa M
42	7.0 ± 0.4	5.6 ± 0.1	5.6 ± 0.2	7.3 ± 0.2	5.4 ± 0.2	6.2 ± 0.3	4.5 ± 0.2	5.1 ± 0.1	5.1 ± 0.2	5.0 ± 0.1	5.0 ± 0.2	4.5 ± 0.2	S Asia F	E Africa M
43	7.6 ± 0.5	5.8 ± 0.1	5.9 ± 0.2	7.6 ± 0.2	5.7 ± 0.2	6.5 ± 0.4	4.7 ± 0.3	4.9 ± 0.1	5.2 ± 0.3	5.0 ± 0.1	5.0 ± 0.2	4.7 ± 0.2	E Africa F	E Africa M
44	7.6 ± 0.5	6.0 ± 0.1	6.0 ± 0.2	7.6 ± 0.2	5.7 ± 0.2	6.5 ± 0.4	4.8 ± 0.3	4.9 ± 0.1	5.2 ± 0.2	5.1 ± 0.1	5.0 ± 0.2	4.8 ± 0.2	S Asia F	W Africa M
45	7.9 ± 0.5	6.0 ± 0.1	5.7 ± 0.3	7.8 ± 0.2	5.8 ± 0.2	6.6 ± 0.4	4.9 ± 0.3	4.9 ± 0.1	4.8 ± 0.2	5.1 ± 0.2	5.0 ± 0.2	5.1 ± 0.2	E Africa F	E Europe M
46	7.6 ± 0.5	6.1 ± 0.1	5.9 ± 0.3	7.7 ± 0.3	6.2 ± 0.2	6.9 ± 0.4	4.9 ± 0.3	4.7 ± 0.1	5.1 ± 0.3	5.2 ± 0.2	5.1 ± 0.3	5.3 ± 0.2	S Asia F	E Asia M
47	7.5 ± 0.5	6.1 ± 0.1	5.8 ± 0.3	7.7 ± 0.3	5.8 ± 0.2	6.8 ± 0.4	5.3 ± 0.3	4.8 ± 0.1	5.1 ± 0.3	5.3 ± 0.2	4.9 ± 0.2	5.8 ± 0.3	S Asia F	E Asia M
48	7.8 ± 0.6	6.2 ± 0.1	5.8 ± 0.3	7.7 ± 0.3	6.0 ± 0.2	7.3 ± 0.5	5.4 ± 0.4	4.7 ± 0.1	5.3 ± 0.3	5.4 ± 0.2	5.1 ± 0.3	5.8 ± 0.3	E Africa F	E Asia M
49	7.9 ± 0.6	6.2 ± 0.1	5.7 ± 0.3	7.7 ± 0.3	5.9 ± 0.3	7.6 ± 0.5	5.9 ± 0.4	4.7 ± 0.1	5.3 ± 0.3	5.5 ± 0.2	4.9 ± 0.3	6.0 ± 0.3	E Africa F	E Asia M
50	8.0 ± 0.6	6.3 ± 0.1	5.5 ± 0.3	7.7 ± 0.3	6.1 ± 0.3	7.1 ± 0.5	5.9 ± 0.4	4.7 ± 0.1	5.1 ± 0.3	5.7 ± 0.2	4.8 ± 0.3	6.2 ± 0.3	E Africa F	E Asia M
51	7.4 ± 0.6	6.4 ± 0.2	5.7 ± 0.3	7.6 ± 0.3	6.0 ± 0.3	8.0 ± 0.5	6.4 ± 0.4	4.6 ± 0.1	5.1 ± 0.3	5.6 ± 0.2	4.7 ± 0.3	6.5 ± 0.3	W Africa F	E Asia M
52	8.2 ± 0.6	6.4 ± 0.2	5.4 ± 0.3	7.5 ± 0.3	5.9 ± 0.3	8.2 ± 0.5	6.1 ± 0.5	4.6 ± 0.1	4.9 ± 0.3	5.6 ± 0.2	4.7 ± 0.3	7.0 ± 0.4	W Africa F	E Asia M

Table 83. *Mean absolute error for Application-type images for algorithm idemia-001. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	2.7 ± 0.2	2.34 ± 0.09	1.6 ± 0.1	2.2 ± 0.1	2.5 ± 0.2	2.9 ± 0.3	2.5 ± 0.2	1.89 ± 0.08	1.6 ± 0.1	1.89 ± 0.08	2.0 ± 0.1	2.0 ± 0.2	W Africa F	E Europe M
15	2.7 ± 0.2	2.44 ± 0.10	1.7 ± 0.1	2.4 ± 0.1	2.6 ± 0.2	3.2 ± 0.3	2.3 ± 0.2	1.92 ± 0.08	1.5 ± 0.1	1.81 ± 0.09	1.9 ± 0.1	2.2 ± 0.2	W Africa F	E Europe M
16	2.9 ± 0.2	2.52 ± 0.10	1.8 ± 0.1	2.4 ± 0.1	2.8 ± 0.3	3.5 ± 0.4	2.4 ± 0.2	1.94 ± 0.08	1.6 ± 0.2	1.85 ± 0.09	2.0 ± 0.2	2.3 ± 0.2	W Africa F	E Europe M
17	2.9 ± 0.2	2.5 ± 0.1	2.1 ± 0.2	2.5 ± 0.1	2.8 ± 0.2	3.5 ± 0.3	2.4 ± 0.2	2.03 ± 0.09	1.7 ± 0.1	2.1 ± 0.1	2.0 ± 0.2	2.6 ± 0.3	W Africa F	E Europe M
18	3.0 ± 0.2	2.43 ± 0.08	2.4 ± 0.2	2.46 ± 0.09	2.8 ± 0.1	3.6 ± 0.3	2.7 ± 0.2	2.13 ± 0.08	2.1 ± 0.1	2.41 ± 0.10	2.3 ± 0.2	2.6 ± 0.2	W Africa F	E Europe M
19	3.2 ± 0.2	2.35 ± 0.08	2.4 ± 0.2	2.4 ± 0.1	2.7 ± 0.1	3.2 ± 0.2	2.9 ± 0.2	2.23 ± 0.08	2.1 ± 0.1	2.41 ± 0.10	2.4 ± 0.1	3.0 ± 0.3	E Africa F	E Europe M
20	3.3 ± 0.2	2.39 ± 0.09	2.4 ± 0.1	2.6 ± 0.1	2.6 ± 0.1	3.3 ± 0.2	3.1 ± 0.2	2.15 ± 0.08	2.0 ± 0.1	2.54 ± 0.10	2.4 ± 0.1	3.1 ± 0.3	W Africa F	E Europe M
21	3.2 ± 0.2	2.30 ± 0.08	2.6 ± 0.1	2.53 ± 0.09	2.7 ± 0.1	3.2 ± 0.2	3.2 ± 0.2	2.17 ± 0.07	2.0 ± 0.1	2.7 ± 0.1	2.5 ± 0.1	3.2 ± 0.2	W Africa F	E Europe M
22	3.3 ± 0.2	2.27 ± 0.07	2.9 ± 0.1	2.62 ± 0.08	2.7 ± 0.1	3.1 ± 0.2	3.7 ± 0.2	2.18 ± 0.08	2.1 ± 0.1	2.7 ± 0.1	2.3 ± 0.1	3.0 ± 0.2	E Africa M	E Europe M
23	3.3 ± 0.2	2.32 ± 0.06	3.1 ± 0.1	2.69 ± 0.07	2.53 ± 0.09	3.2 ± 0.2	3.7 ± 0.2	2.17 ± 0.08	2.1 ± 0.1	2.9 ± 0.1	2.5 ± 0.1	3.3 ± 0.2	E Africa M	E Europe M
24	3.4 ± 0.2	2.34 ± 0.06	3.24 ± 0.09	2.78 ± 0.07	2.58 ± 0.08	3.3 ± 0.2	3.7 ± 0.2	2.26 ± 0.08	2.2 ± 0.1	2.99 ± 0.09	2.3 ± 0.1	3.3 ± 0.2	E Africa M	E Europe M
25	3.5 ± 0.2	2.43 ± 0.06	3.43 ± 0.09	2.80 ± 0.06	2.61 ± 0.08	3.4 ± 0.2	3.9 ± 0.2	2.35 ± 0.07	2.2 ± 0.1	2.95 ± 0.08	2.5 ± 0.1	3.4 ± 0.2	E Africa M	E Europe M
26	3.5 ± 0.1	2.49 ± 0.06	3.69 ± 0.09	2.94 ± 0.06	2.64 ± 0.08	3.2 ± 0.1	3.8 ± 0.2	2.31 ± 0.07	2.3 ± 0.1	3.06 ± 0.08	2.5 ± 0.1	3.2 ± 0.2	E Africa M	E Asia M
27	3.7 ± 0.2	2.53 ± 0.05	3.87 ± 0.09	3.08 ± 0.06	2.58 ± 0.07	3.4 ± 0.1	3.7 ± 0.2	2.35 ± 0.07	2.31 ± 0.09	3.00 ± 0.07	2.6 ± 0.1	3.3 ± 0.1	E Europe F	E Europe M
28	3.7 ± 0.2	2.66 ± 0.05	3.99 ± 0.09	3.23 ± 0.06	2.69 ± 0.07	3.3 ± 0.1	3.6 ± 0.2	2.46 ± 0.08	2.38 ± 0.09	3.00 ± 0.07	2.6 ± 0.1	3.3 ± 0.1	E Europe F	E Europe M
29	3.6 ± 0.1	2.62 ± 0.05	4.08 ± 0.10	3.31 ± 0.06	2.67 ± 0.08	3.5 ± 0.1	3.6 ± 0.2	2.34 ± 0.07	2.45 ± 0.10	2.99 ± 0.06	2.6 ± 0.1	3.4 ± 0.1	E Europe F	E Asia M
30	3.8 ± 0.1	2.68 ± 0.05	4.2 ± 0.1	3.44 ± 0.06	2.78 ± 0.08	3.7 ± 0.1	3.6 ± 0.2	2.36 ± 0.06	2.38 ± 0.09	2.96 ± 0.06	2.6 ± 0.1	3.4 ± 0.1	E Europe F	E Asia M
31	3.8 ± 0.2	2.76 ± 0.05	4.2 ± 0.1	3.57 ± 0.07	2.81 ± 0.08	3.6 ± 0.1	3.6 ± 0.1	2.39 ± 0.07	2.44 ± 0.10	2.94 ± 0.06	2.7 ± 0.1	3.4 ± 0.1	E Europe F	E Asia M
32	3.9 ± 0.2	2.83 ± 0.05	4.2 ± 0.1	3.72 ± 0.07	2.90 ± 0.09	3.8 ± 0.1	3.5 ± 0.2	2.37 ± 0.06	2.5 ± 0.1	2.92 ± 0.06	2.6 ± 0.1	3.5 ± 0.1	E Europe F	E Asia M
33	4.0 ± 0.2	2.86 ± 0.06	4.2 ± 0.1	3.76 ± 0.07	2.85 ± 0.09	3.7 ± 0.1	3.6 ± 0.2	2.40 ± 0.07	2.5 ± 0.1	2.89 ± 0.06	2.6 ± 0.1	3.3 ± 0.1	E Europe F	E Asia M
34	4.0 ± 0.2	2.87 ± 0.06	4.3 ± 0.1	3.78 ± 0.07	2.88 ± 0.09	3.7 ± 0.1	3.5 ± 0.2	2.39 ± 0.06	2.5 ± 0.1	2.93 ± 0.06	2.6 ± 0.1	3.3 ± 0.1	E Europe F	E Asia M
35	4.2 ± 0.2	2.94 ± 0.06	4.2 ± 0.1	3.90 ± 0.08	2.93 ± 0.09	3.8 ± 0.2	3.5 ± 0.2	2.38 ± 0.07	2.5 ± 0.1	2.90 ± 0.06	2.8 ± 0.1	3.4 ± 0.1	E Europe F	E Asia M
36	4.3 ± 0.2	2.96 ± 0.06	4.1 ± 0.1	3.98 ± 0.08	3.0 ± 0.1	3.8 ± 0.2	3.5 ± 0.2	2.36 ± 0.07	2.5 ± 0.1	2.83 ± 0.06	2.7 ± 0.1	3.5 ± 0.1	E Africa F	E Asia M
37	4.3 ± 0.2	2.92 ± 0.06	4.1 ± 0.1	4.01 ± 0.09	3.02 ± 0.10	4.2 ± 0.2	3.5 ± 0.2	2.39 ± 0.07	2.5 ± 0.1	2.87 ± 0.06	2.7 ± 0.1	3.3 ± 0.1	E Africa F	E Asia M
38	4.0 ± 0.2	2.99 ± 0.06	4.0 ± 0.1	4.04 ± 0.09	3.0 ± 0.1	4.2 ± 0.2	3.5 ± 0.2	2.41 ± 0.07	2.5 ± 0.1	2.75 ± 0.06	2.9 ± 0.1	3.2 ± 0.1	W Africa F	E Asia M
39	4.3 ± 0.2	3.05 ± 0.06	4.0 ± 0.1	4.09 ± 0.10	3.0 ± 0.1	3.8 ± 0.2	3.4 ± 0.2	2.39 ± 0.07	2.5 ± 0.1	2.77 ± 0.06	3.0 ± 0.1	3.1 ± 0.1	E Africa F	E Asia M
40	4.2 ± 0.2	3.03 ± 0.06	3.6 ± 0.1	4.0 ± 0.1	3.2 ± 0.1	4.0 ± 0.2	3.4 ± 0.2	2.41 ± 0.07	2.6 ± 0.1	2.82 ± 0.07	2.7 ± 0.1	3.2 ± 0.1	E Africa F	E Asia M
41	4.4 ± 0.2	3.06 ± 0.06	3.7 ± 0.1	4.0 ± 0.1	3.0 ± 0.1	4.1 ± 0.2	3.5 ± 0.2	2.45 ± 0.07	2.5 ± 0.1	2.79 ± 0.07	2.8 ± 0.1	3.4 ± 0.2	E Africa F	E Asia M
42	4.1 ± 0.3	3.07 ± 0.06	3.6 ± 0.2	3.9 ± 0.1	2.9 ± 0.1	3.9 ± 0.2	3.3 ± 0.2	2.47 ± 0.07	2.6 ± 0.1	2.76 ± 0.07	2.9 ± 0.1	3.2 ± 0.2	E Africa F	E Asia M
43	4.1 ± 0.2	3.17 ± 0.07	3.6 ± 0.2	3.9 ± 0.1	3.1 ± 0.1	4.0 ± 0.2	3.5 ± 0.2	2.52 ± 0.07	2.5 ± 0.1	2.73 ± 0.08	2.9 ± 0.1	3.4 ± 0.2	E Africa F	E Asia M
44	4.4 ± 0.3	3.27 ± 0.07	3.7 ± 0.2	4.0 ± 0.1	3.1 ± 0.1	4.1 ± 0.2	3.3 ± 0.2	2.59 ± 0.07	2.6 ± 0.1	2.80 ± 0.08	3.0 ± 0.1	3.2 ± 0.2	E Africa F	E Europe M
45	4.2 ± 0.3	3.27 ± 0.07	3.4 ± 0.2	3.9 ± 0.1	3.0 ± 0.1	4.0 ± 0.2	3.4 ± 0.2	2.64 ± 0.07	2.5 ± 0.1	2.81 ± 0.09	2.9 ± 0.1	3.3 ± 0.2	E Africa F	E Europe M
46	4.4 ± 0.3	3.41 ± 0.07	3.4 ± 0.2	3.7 ± 0.1	3.2 ± 0.1	4.0 ± 0.2	3.3 ± 0.2	2.66 ± 0.07	2.8 ± 0.1	2.85 ± 0.10	3.0 ± 0.2	3.3 ± 0.2	E Africa F	E Asia M
47	4.3 ± 0.3	3.38 ± 0.07	3.6 ± 0.2	3.8 ± 0.1	3.0 ± 0.1	4.0 ± 0.2	3.5 ± 0.2	2.66 ± 0.08	2.6 ± 0.1	3.1 ± 0.1	3.1 ± 0.2	3.4 ± 0.2	E Africa F	E Europe M
48	4.3 ± 0.3	3.44 ± 0.08	3.3 ± 0.2	3.9 ± 0.1	3.2 ± 0.1	4.2 ± 0.3	3.6 ± 0.3	2.73 ± 0.07	2.7 ± 0.2	2.9 ± 0.1	3.0 ± 0.2	3.5 ± 0.2	E Africa F	E Asia M
49	4.3 ± 0.3	3.59 ± 0.08	3.4 ± 0.2	3.7 ± 0.1	3.1 ± 0.1	4.6 ± 0.3	3.5 ± 0.3	2.82 ± 0.08	2.7 ± 0.1	3.0 ± 0.1	3.1 ± 0.2	3.4 ± 0.2	W Africa F	E Europe M
50	4.4 ± 0.4	3.65 ± 0.08	3.2 ± 0.2	3.6 ± 0.1	3.1 ± 0.1	4.2 ± 0.3	3.2 ± 0.3	2.72 ± 0.08	2.8 ± 0.2	3.0 ± 0.1	3.2 ± 0.2	3.5 ± 0.2	E Africa F	E Asia M
51	4.1 ± 0.3	3.66 ± 0.09	3.3 ± 0.2	3.6 ± 0.1	3.2 ± 0.1	4.4 ± 0.3	3.7 ± 0.3	2.84 ± 0.08	2.7 ± 0.1	3.2 ± 0.1	3.1 ± 0.2	3.7 ± 0.2	W Africa F	E Europe M
52	4.3 ± 0.4	3.76 ± 0.09	3.2 ± 0.2	3.7 ± 0.1	3.1 ± 0.1	4.5 ± 0.3	3.5 ± 0.3	2.82 ± 0.08	2.8 ± 0.2	3.0 ± 0.1	3.0 ± 0.2	3.8 ± 0.2	W Africa F	E Europe M

Table 84. *Mean absolute error for Application-type images for algorithm idemia-002. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	2.0 ± 0.2	1.40 ± 0.06	1.6 ± 0.1	1.57 ± 0.09	1.6 ± 0.1	1.8 ± 0.2	2.1 ± 0.1	1.64 ± 0.07	1.5 ± 0.1	1.48 ± 0.07	1.7 ± 0.1	1.8 ± 0.2	E Africa M	E Asia F
15	2.2 ± 0.2	1.55 ± 0.08	1.9 ± 0.1	1.8 ± 0.1	1.8 ± 0.2	2.4 ± 0.3	2.0 ± 0.2	1.63 ± 0.07	1.4 ± 0.1	1.47 ± 0.08	1.7 ± 0.1	1.8 ± 0.2	W Africa F	E Europe M
16	2.6 ± 0.2	1.83 ± 0.08	2.3 ± 0.2	2.1 ± 0.1	2.1 ± 0.2	2.8 ± 0.4	2.0 ± 0.2	1.61 ± 0.06	1.6 ± 0.2	1.53 ± 0.08	1.7 ± 0.1	1.8 ± 0.2	W Africa F	S Asia M
17	2.7 ± 0.2	2.10 ± 0.09	2.6 ± 0.2	2.3 ± 0.1	2.4 ± 0.2	3.1 ± 0.3	2.0 ± 0.2	1.69 ± 0.08	1.5 ± 0.1	1.71 ± 0.10	1.7 ± 0.1	2.1 ± 0.3	W Africa F	E Europe M
18	3.2 ± 0.2	2.26 ± 0.07	2.9 ± 0.2	2.57 ± 0.09	2.5 ± 0.1	3.3 ± 0.3	2.2 ± 0.2	1.81 ± 0.07	1.9 ± 0.1	1.99 ± 0.08	1.9 ± 0.2	2.0 ± 0.2	W Africa F	E Asia M
19	3.4 ± 0.2	2.38 ± 0.08	2.7 ± 0.2	2.7 ± 0.1	2.6 ± 0.1	3.1 ± 0.2	2.3 ± 0.2	1.91 ± 0.08	1.9 ± 0.1	1.97 ± 0.08	2.1 ± 0.1	2.3 ± 0.2	E Africa F	E Asia M
20	3.7 ± 0.2	2.53 ± 0.09	2.8 ± 0.2	3.0 ± 0.1	2.6 ± 0.1	3.4 ± 0.2	2.5 ± 0.2	1.89 ± 0.07	1.9 ± 0.1	2.05 ± 0.09	2.1 ± 0.1	2.4 ± 0.2	E Africa F	E Europe M
21	3.6 ± 0.2	2.55 ± 0.08	2.9 ± 0.1	3.01 ± 0.09	2.7 ± 0.1	3.5 ± 0.2	2.7 ± 0.2	2.02 ± 0.06	1.8 ± 0.1	2.27 ± 0.09	2.2 ± 0.1	2.7 ± 0.2	E Africa F	E Europe M
22	3.8 ± 0.2	2.61 ± 0.08	3.1 ± 0.1	3.16 ± 0.09	2.8 ± 0.1	3.4 ± 0.2	3.2 ± 0.2	2.10 ± 0.07	1.9 ± 0.1	2.32 ± 0.10	2.2 ± 0.1	2.6 ± 0.2	E Africa F	E Europe M
23	3.9 ± 0.2	2.70 ± 0.07	3.1 ± 0.1	3.25 ± 0.09	2.69 ± 0.09	3.6 ± 0.2	3.4 ± 0.2	2.19 ± 0.07	1.9 ± 0.1	2.53 ± 0.09	2.4 ± 0.1	3.0 ± 0.2	E Africa F	E Europe M
24	4.0 ± 0.2	2.81 ± 0.07	3.10 ± 0.09	3.35 ± 0.08	2.82 ± 0.08	3.8 ± 0.2	3.5 ± 0.2	2.33 ± 0.08	2.03 ± 0.10	2.64 ± 0.08	2.3 ± 0.1	3.2 ± 0.2	E Africa F	E Europe M
25	4.2 ± 0.2	2.92 ± 0.06	3.08 ± 0.09	3.37 ± 0.07	2.93 ± 0.08	4.0 ± 0.2	3.6 ± 0.2	2.43 ± 0.07	2.1 ± 0.1	2.65 ± 0.07	2.5 ± 0.1	3.4 ± 0.2	E Africa F	E Europe M
26	4.2 ± 0.2	3.02 ± 0.06	3.14 ± 0.09	3.48 ± 0.07	2.96 ± 0.08	3.8 ± 0.2	3.6 ± 0.2	2.40 ± 0.07	2.2 ± 0.1	2.80 ± 0.07	2.5 ± 0.1	3.3 ± 0.1	E Africa F	E Europe M
27	4.3 ± 0.2	3.05 ± 0.06	3.19 ± 0.09	3.59 ± 0.07	2.94 ± 0.08	3.9 ± 0.2	3.7 ± 0.2	2.46 ± 0.07	2.17 ± 0.09	2.80 ± 0.07	2.6 ± 0.1	3.5 ± 0.1	E Africa F	E Europe M
28	4.3 ± 0.2	3.16 ± 0.06	3.10 ± 0.09	3.69 ± 0.07	3.06 ± 0.08	3.9 ± 0.2	3.5 ± 0.1	2.58 ± 0.08	2.25 ± 0.09	2.82 ± 0.07	2.6 ± 0.1	3.6 ± 0.1	E Africa F	E Europe M
29	4.2 ± 0.2	3.10 ± 0.06	3.08 ± 0.09	3.70 ± 0.07	3.06 ± 0.08	4.1 ± 0.2	3.6 ± 0.2	2.46 ± 0.07	2.31 ± 0.09	2.86 ± 0.06	2.7 ± 0.1	3.6 ± 0.1	E Africa F	E Europe M
30	4.4 ± 0.2	3.14 ± 0.06	3.07 ± 0.09	3.77 ± 0.07	3.16 ± 0.09	4.2 ± 0.2	3.5 ± 0.2	2.50 ± 0.07	2.27 ± 0.09	2.85 ± 0.06	2.7 ± 0.1	3.7 ± 0.1	E Africa F	E Europe M
31	4.3 ± 0.2	3.19 ± 0.06	3.09 ± 0.10	3.86 ± 0.07	3.20 ± 0.09	4.2 ± 0.2	3.6 ± 0.2	2.53 ± 0.07	2.30 ± 0.09	2.90 ± 0.06	2.8 ± 0.1	3.7 ± 0.1	E Africa F	E Europe M
32	4.4 ± 0.2	3.22 ± 0.06	3.02 ± 0.10	3.89 ± 0.07	3.3 ± 0.1	4.3 ± 0.2	3.6 ± 0.2	2.53 ± 0.07	2.37 ± 0.10	2.89 ± 0.06	2.7 ± 0.1	3.7 ± 0.1	E Africa F	E Europe M
33	4.5 ± 0.2	3.22 ± 0.06	3.08 ± 0.10	3.88 ± 0.07	3.2 ± 0.1	4.3 ± 0.2	3.8 ± 0.2	2.56 ± 0.07	2.36 ± 0.10	2.87 ± 0.06	2.7 ± 0.1	3.6 ± 0.1	E Africa F	E Europe M
34	4.5 ± 0.2	3.20 ± 0.06	3.1 ± 0.1	3.82 ± 0.08	3.2 ± 0.1	4.2 ± 0.2	3.7 ± 0.2	2.54 ± 0.07	2.4 ± 0.1	2.93 ± 0.06	2.7 ± 0.1	3.6 ± 0.1	E Africa F	E Europe M
35	4.6 ± 0.2	3.24 ± 0.07	3.2 ± 0.1	3.77 ± 0.08	3.3 ± 0.1	4.3 ± 0.2	3.7 ± 0.2	2.51 ± 0.07	2.3 ± 0.1	2.92 ± 0.06	2.9 ± 0.1	3.7 ± 0.1	E Africa F	E Europe M
36	4.7 ± 0.2	3.22 ± 0.07	3.2 ± 0.1	3.69 ± 0.08	3.3 ± 0.1	4.3 ± 0.2	3.7 ± 0.2	2.49 ± 0.07	2.4 ± 0.1	2.89 ± 0.06	2.9 ± 0.1	3.8 ± 0.2	E Africa F	E Europe M
37	4.6 ± 0.2	3.13 ± 0.06	3.1 ± 0.1	3.68 ± 0.09	3.3 ± 0.1	4.6 ± 0.2	3.7 ± 0.2	2.49 ± 0.07	2.35 ± 0.10	2.96 ± 0.06	2.8 ± 0.1	3.6 ± 0.1	W Africa F	E Europe M
38	4.5 ± 0.2	3.16 ± 0.07	3.1 ± 0.1	3.55 ± 0.09	3.3 ± 0.1	4.6 ± 0.2	3.7 ± 0.2	2.48 ± 0.07	2.31 ± 0.10	2.85 ± 0.06	2.9 ± 0.1	3.6 ± 0.1	W Africa F	E Europe M
39	4.5 ± 0.2	3.17 ± 0.07	3.1 ± 0.1	3.44 ± 0.09	3.3 ± 0.1	4.2 ± 0.2	3.7 ± 0.2	2.44 ± 0.07	2.34 ± 0.10	2.88 ± 0.06	3.0 ± 0.1	3.5 ± 0.1	E Africa F	E Europe M
40	4.5 ± 0.2	3.10 ± 0.07	3.0 ± 0.1	3.33 ± 0.10	3.4 ± 0.1	4.2 ± 0.2	3.7 ± 0.2	2.44 ± 0.07	2.4 ± 0.1	2.94 ± 0.07	2.8 ± 0.1	3.6 ± 0.2	E Africa F	E Europe M
41	4.6 ± 0.3	3.10 ± 0.07	3.1 ± 0.1	3.3 ± 0.1	3.2 ± 0.1	4.2 ± 0.2	3.8 ± 0.2	2.47 ± 0.07	2.4 ± 0.1	2.92 ± 0.07	2.8 ± 0.1	3.8 ± 0.2	E Africa F	E Europe M
42	4.4 ± 0.3	3.05 ± 0.06	3.1 ± 0.1	3.3 ± 0.1	3.1 ± 0.1	4.0 ± 0.2	3.6 ± 0.2	2.47 ± 0.07	2.4 ± 0.1	2.89 ± 0.07	2.9 ± 0.1	3.5 ± 0.2	E Africa F	E Europe M
43	4.3 ± 0.3	3.07 ± 0.07	3.0 ± 0.1	3.3 ± 0.1	3.3 ± 0.1	3.9 ± 0.2	3.8 ± 0.2	2.53 ± 0.07	2.4 ± 0.1	2.83 ± 0.08	2.9 ± 0.1	3.8 ± 0.2	E Africa F	E Europe M
44	4.6 ± 0.3	3.12 ± 0.07	3.0 ± 0.1	3.4 ± 0.1	3.3 ± 0.1	3.9 ± 0.2	3.7 ± 0.2	2.59 ± 0.07	2.5 ± 0.1	2.88 ± 0.08	3.0 ± 0.1	3.5 ± 0.2	E Africa F	E Europe M
45	4.3 ± 0.3	3.01 ± 0.07	2.8 ± 0.1	3.3 ± 0.1	3.1 ± 0.1	3.8 ± 0.2	3.7 ± 0.2	2.64 ± 0.07	2.4 ± 0.1	2.85 ± 0.09	2.9 ± 0.1	3.7 ± 0.2	E Africa F	E Europe M
46	4.5 ± 0.3	3.10 ± 0.07	2.9 ± 0.1	3.2 ± 0.1	3.2 ± 0.1	3.7 ± 0.2	3.7 ± 0.3	2.66 ± 0.07	2.8 ± 0.1	2.87 ± 0.10	3.0 ± 0.2	3.5 ± 0.2	E Africa F	E Asia M
47	4.5 ± 0.3	2.99 ± 0.07	3.1 ± 0.2	3.2 ± 0.1	3.1 ± 0.1	3.7 ± 0.2	3.8 ± 0.2	2.66 ± 0.08	2.6 ± 0.1	3.1 ± 0.1	3.2 ± 0.2	3.6 ± 0.2	E Africa F	E Europe M
48	4.4 ± 0.3	2.93 ± 0.07	2.9 ± 0.1	3.4 ± 0.1	3.1 ± 0.1	3.8 ± 0.2	4.0 ± 0.3	2.72 ± 0.07	2.7 ± 0.2	2.9 ± 0.1	3.0 ± 0.2	3.8 ± 0.2	E Africa F	E Asia M
49	4.4 ± 0.3	2.97 ± 0.08	2.9 ± 0.1	3.3 ± 0.1	3.0 ± 0.1	4.1 ± 0.3	3.8 ± 0.3	2.82 ± 0.08	2.7 ± 0.1	3.0 ± 0.1	3.1 ± 0.2	3.5 ± 0.2	E Africa F	E Europe M
50	4.3 ± 0.4	2.97 ± 0.08	2.9 ± 0.1	3.2 ± 0.1	3.0 ± 0.1	3.7 ± 0.2	3.5 ± 0.3	2.72 ± 0.08	2.8 ± 0.2	3.0 ± 0.1	3.2 ± 0.2	3.6 ± 0.2	E Africa F	E Asia M
51	4.3 ± 0.3	2.96 ± 0.08	2.9 ± 0.2	3.2 ± 0.1	2.9 ± 0.1	3.9 ± 0.3	3.9 ± 0.4	2.84 ± 0.08	2.6 ± 0.1	3.1 ± 0.1	3.1 ± 0.2	3.7 ± 0.2	E Africa F	E Europe M
52	4.4 ± 0.4	2.99 ± 0.08	2.9 ± 0.1	3.2 ± 0.1	2.9 ± 0.1	3.8 ± 0.3	3.8 ± 0.3	2.82 ± 0.08	2.8 ± 0.2	3.0 ± 0.1	3.0 ± 0.2	3.9 ± 0.3	E Africa F	E Europe M

Table 85. *Mean absolute error for Application-type images for algorithm inbut-000. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	6.9 ± 0.4	4.0 ± 0.1	5.2 ± 0.4	4.6 ± 0.2	4.1 ± 0.2	7.7 ± 0.5	6.8 ± 0.5	3.5 ± 0.1	3.5 ± 0.3	4.1 ± 0.2	3.7 ± 0.3	6.0 ± 0.5	W Africa F	E Europe M
15	7.2 ± 0.4	3.7 ± 0.1	5.5 ± 0.4	4.6 ± 0.2	4.0 ± 0.3	7.3 ± 0.5	6.4 ± 0.5	3.5 ± 0.2	3.9 ± 0.3	4.0 ± 0.2	3.7 ± 0.3	6.3 ± 0.5	W Africa F	E Asia M
16	6.8 ± 0.4	3.4 ± 0.1	5.7 ± 0.4	4.2 ± 0.2	3.7 ± 0.3	7.8 ± 0.6	6.4 ± 0.4	3.3 ± 0.2	4.3 ± 0.3	4.0 ± 0.2	3.8 ± 0.4	6.1 ± 0.5	W Africa F	E Asia M
17	7.1 ± 0.4	3.1 ± 0.1	5.3 ± 0.4	4.2 ± 0.2	3.5 ± 0.3	7.1 ± 0.4	6.1 ± 0.4	3.2 ± 0.2	3.9 ± 0.3	3.8 ± 0.2	3.5 ± 0.4	6.0 ± 0.5	W Africa F	E Asia F
18	6.3 ± 0.3	2.8 ± 0.1	4.8 ± 0.3	3.7 ± 0.2	2.7 ± 0.2	6.8 ± 0.4	5.4 ± 0.3	3.0 ± 0.1	4.0 ± 0.3	3.5 ± 0.2	2.6 ± 0.2	4.9 ± 0.3	W Africa F	S E Asia M
19	6.4 ± 0.3	2.7 ± 0.1	4.5 ± 0.3	3.8 ± 0.2	3.0 ± 0.2	6.6 ± 0.4	5.7 ± 0.4	3.1 ± 0.1	4.1 ± 0.3	3.8 ± 0.2	2.8 ± 0.2	5.5 ± 0.4	W Africa F	E Asia F
20	6.1 ± 0.3	2.9 ± 0.1	4.2 ± 0.2	3.8 ± 0.2	2.9 ± 0.1	6.7 ± 0.4	5.5 ± 0.4	3.0 ± 0.1	3.9 ± 0.3	3.7 ± 0.2	2.8 ± 0.2	5.2 ± 0.4	W Africa F	S E Asia M
21	5.9 ± 0.3	2.88 ± 0.09	4.0 ± 0.2	3.8 ± 0.1	3.0 ± 0.1	6.2 ± 0.3	5.8 ± 0.3	2.96 ± 0.10	3.7 ± 0.2	3.8 ± 0.2	3.1 ± 0.2	5.1 ± 0.3	W Africa F	E Asia F
22	6.0 ± 0.3	2.70 ± 0.08	3.8 ± 0.2	3.7 ± 0.1	2.9 ± 0.1	5.9 ± 0.3	6.5 ± 0.3	2.79 ± 0.09	3.8 ± 0.2	4.0 ± 0.2	2.9 ± 0.2	4.8 ± 0.3	E Africa M	E Asia F
23	5.6 ± 0.2	2.67 ± 0.07	3.6 ± 0.1	3.66 ± 0.10	2.72 ± 0.10	5.9 ± 0.3	6.1 ± 0.3	2.59 ± 0.09	3.6 ± 0.2	4.0 ± 0.1	2.8 ± 0.2	5.2 ± 0.3	E Africa M	E Asia M
24	5.4 ± 0.2	2.50 ± 0.06	3.3 ± 0.1	3.69 ± 0.09	2.51 ± 0.08	5.6 ± 0.3	6.0 ± 0.3	2.44 ± 0.08	3.5 ± 0.2	4.0 ± 0.1	2.7 ± 0.1	4.9 ± 0.3	E Africa M	E Asia M
25	4.8 ± 0.2	2.29 ± 0.06	3.00 ± 0.10	3.48 ± 0.08	2.41 ± 0.08	5.2 ± 0.2	5.8 ± 0.3	2.36 ± 0.08	3.6 ± 0.2	3.8 ± 0.1	2.7 ± 0.1	4.8 ± 0.2	E Africa M	E Asia F
26	4.5 ± 0.2	2.17 ± 0.05	2.86 ± 0.09	3.30 ± 0.07	2.40 ± 0.08	5.1 ± 0.2	5.6 ± 0.2	2.20 ± 0.08	3.2 ± 0.1	3.8 ± 0.1	2.7 ± 0.1	4.4 ± 0.2	E Africa M	E Asia F
27	4.5 ± 0.2	2.08 ± 0.05	2.74 ± 0.09	3.19 ± 0.07	2.31 ± 0.07	4.9 ± 0.2	5.5 ± 0.2	2.18 ± 0.08	3.3 ± 0.1	3.69 ± 0.10	2.8 ± 0.1	4.6 ± 0.2	E Africa M	E Asia F
28	4.5 ± 0.2	2.17 ± 0.05	2.52 ± 0.08	3.08 ± 0.07	2.32 ± 0.07	4.7 ± 0.2	5.2 ± 0.2	2.24 ± 0.08	3.2 ± 0.1	3.67 ± 0.09	2.8 ± 0.1	4.4 ± 0.2	E Africa M	E Asia F
29	4.2 ± 0.2	2.22 ± 0.05	2.47 ± 0.08	2.93 ± 0.06	2.42 ± 0.07	4.5 ± 0.2	5.1 ± 0.2	2.37 ± 0.07	3.3 ± 0.1	3.59 ± 0.09	2.8 ± 0.1	4.5 ± 0.2	E Africa M	E Asia F
30	4.1 ± 0.2	2.44 ± 0.05	2.52 ± 0.08	2.78 ± 0.06	2.49 ± 0.08	4.3 ± 0.2	5.4 ± 0.2	2.43 ± 0.07	3.1 ± 0.1	3.59 ± 0.08	2.8 ± 0.1	4.5 ± 0.2	E Africa M	E Asia M
31	4.0 ± 0.2	2.61 ± 0.05	2.56 ± 0.09	2.85 ± 0.06	2.64 ± 0.08	4.3 ± 0.2	5.2 ± 0.2	2.63 ± 0.08	3.1 ± 0.1	3.61 ± 0.08	3.0 ± 0.1	4.3 ± 0.2	E Africa M	E Europe F
32	4.0 ± 0.2	2.83 ± 0.05	2.51 ± 0.08	2.81 ± 0.06	2.80 ± 0.08	4.3 ± 0.2	5.0 ± 0.2	2.73 ± 0.07	3.2 ± 0.1	3.57 ± 0.08	2.8 ± 0.1	4.4 ± 0.2	E Africa M	E Europe F
33	3.9 ± 0.2	2.98 ± 0.05	2.58 ± 0.09	2.92 ± 0.06	2.90 ± 0.09	4.1 ± 0.2	5.3 ± 0.2	2.81 ± 0.07	3.2 ± 0.1	3.52 ± 0.08	2.8 ± 0.1	4.4 ± 0.2	E Africa M	E Europe F
34	3.9 ± 0.2	3.08 ± 0.06	2.68 ± 0.10	2.95 ± 0.06	2.91 ± 0.09	3.8 ± 0.2	5.0 ± 0.2	2.92 ± 0.07	3.0 ± 0.1	3.55 ± 0.08	3.0 ± 0.2	4.5 ± 0.2	E Africa M	E Europe F
35	4.0 ± 0.2	3.28 ± 0.06	2.72 ± 0.09	3.13 ± 0.06	3.14 ± 0.10	3.7 ± 0.2	5.1 ± 0.2	2.88 ± 0.08	2.9 ± 0.1	3.47 ± 0.08	2.9 ± 0.1	4.5 ± 0.2	E Africa M	E Europe F
36	4.0 ± 0.2	3.30 ± 0.06	2.7 ± 0.1	3.25 ± 0.07	3.2 ± 0.1	3.8 ± 0.2	5.1 ± 0.2	2.78 ± 0.07	3.0 ± 0.1	3.39 ± 0.08	2.8 ± 0.1	4.5 ± 0.2	E Africa M	E Europe F
37	3.9 ± 0.2	3.29 ± 0.06	2.8 ± 0.1	3.47 ± 0.07	3.3 ± 0.1	3.8 ± 0.2	5.1 ± 0.2	2.72 ± 0.07	2.8 ± 0.1	3.26 ± 0.07	2.7 ± 0.1	4.3 ± 0.2	E Africa M	E Asia M
38	4.1 ± 0.2	3.41 ± 0.07	2.9 ± 0.1	3.61 ± 0.08	3.4 ± 0.1	3.8 ± 0.2	4.8 ± 0.2	2.57 ± 0.07	2.8 ± 0.1	3.27 ± 0.08	2.7 ± 0.1	4.2 ± 0.2	E Africa M	E Asia M
39	4.0 ± 0.2	3.38 ± 0.07	2.9 ± 0.1	3.73 ± 0.09	3.2 ± 0.1	3.7 ± 0.2	4.8 ± 0.2	2.53 ± 0.08	3.1 ± 0.2	3.21 ± 0.07	2.6 ± 0.1	4.3 ± 0.2	E Africa M	E Asia M
40	4.2 ± 0.2	3.43 ± 0.07	3.0 ± 0.1	3.79 ± 0.09	3.3 ± 0.1	3.5 ± 0.2	5.0 ± 0.3	2.44 ± 0.07	3.1 ± 0.2	3.30 ± 0.08	2.5 ± 0.1	4.2 ± 0.2	E Africa M	E Asia M
41	4.3 ± 0.2	3.45 ± 0.07	3.1 ± 0.1	3.88 ± 0.10	3.3 ± 0.1	3.6 ± 0.2	4.9 ± 0.3	2.47 ± 0.07	3.2 ± 0.2	3.26 ± 0.08	2.6 ± 0.1	4.5 ± 0.2	E Africa M	E Asia M
42	4.2 ± 0.2	3.44 ± 0.07	3.2 ± 0.1	3.8 ± 0.1	3.3 ± 0.1	3.6 ± 0.2	5.0 ± 0.3	2.44 ± 0.07	3.3 ± 0.2	3.32 ± 0.09	2.6 ± 0.1	4.2 ± 0.2	E Africa M	E Asia M
43	4.2 ± 0.3	3.57 ± 0.07	3.2 ± 0.1	3.9 ± 0.1	3.4 ± 0.1	3.7 ± 0.2	5.2 ± 0.3	2.55 ± 0.07	3.2 ± 0.2	3.32 ± 0.09	2.7 ± 0.1	4.2 ± 0.2	E Africa M	E Asia M
44	4.6 ± 0.3	3.70 ± 0.07	3.3 ± 0.1	3.9 ± 0.1	3.4 ± 0.1	3.8 ± 0.2	4.8 ± 0.3	2.66 ± 0.07	3.2 ± 0.2	3.35 ± 0.10	2.8 ± 0.1	4.1 ± 0.2	E Africa M	E Asia M
45	4.3 ± 0.3	3.76 ± 0.08	3.1 ± 0.1	3.8 ± 0.1	3.4 ± 0.1	3.9 ± 0.2	4.9 ± 0.3	2.84 ± 0.07	3.3 ± 0.2	3.26 ± 0.10	2.8 ± 0.1	4.3 ± 0.2	E Africa M	E Asia M
46	4.7 ± 0.3	3.95 ± 0.08	3.2 ± 0.2	3.6 ± 0.1	3.4 ± 0.1	3.7 ± 0.2	5.0 ± 0.3	2.85 ± 0.07	3.4 ± 0.2	3.2 ± 0.1	3.0 ± 0.2	4.0 ± 0.2	E Africa M	E Asia M
47	4.4 ± 0.3	3.88 ± 0.08	3.3 ± 0.2	3.6 ± 0.1	3.3 ± 0.1	4.0 ± 0.2	5.1 ± 0.3	2.98 ± 0.08	3.1 ± 0.2	3.4 ± 0.1	3.0 ± 0.2	4.2 ± 0.2	E Africa M	E Asia M
48	4.7 ± 0.3	4.04 ± 0.08	3.2 ± 0.2	3.6 ± 0.1	3.5 ± 0.1	3.9 ± 0.2	5.1 ± 0.3	2.99 ± 0.08	3.2 ± 0.2	3.2 ± 0.1	3.0 ± 0.2	4.2 ± 0.2	E Africa M	E Asia M
49	4.8 ± 0.3	4.15 ± 0.09	3.4 ± 0.2	3.4 ± 0.1	3.4 ± 0.1	4.2 ± 0.2	4.9 ± 0.3	3.08 ± 0.08	3.2 ± 0.2	3.2 ± 0.1	2.9 ± 0.2	3.8 ± 0.2	E Africa M	S E Asia M
50	4.5 ± 0.4	4.18 ± 0.09	3.1 ± 0.2	3.4 ± 0.1	3.6 ± 0.1	4.0 ± 0.3	4.4 ± 0.3	3.04 ± 0.09	3.0 ± 0.2	3.1 ± 0.1	3.0 ± 0.2	3.8 ± 0.2	E Africa F	S E Asia M
51	4.2 ± 0.3	4.20 ± 0.09	3.2 ± 0.2	3.4 ± 0.1	3.6 ± 0.2	4.2 ± 0.3	4.6 ± 0.4	3.12 ± 0.09	2.8 ± 0.2	3.2 ± 0.1	2.9 ± 0.1	4.1 ± 0.2	E Africa M	E Europe M
52	4.4 ± 0.3	4.2 ± 0.1	3.4 ± 0.2	3.4 ± 0.1	3.4 ± 0.1	4.1 ± 0.3	4.4 ± 0.3	3.09 ± 0.09	3.1 ± 0.2	3.1 ± 0.1	2.9 ± 0.2	4.1 ± 0.2	E Africa M	S E Asia M

Table 86. *Mean absolute error for Application-type images for algorithm incode-000. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	2.7 ± 0.2	2.39 ± 0.09	2.4 ± 0.2	2.3 ± 0.1	2.6 ± 0.2	2.9 ± 0.3	2.6 ± 0.2	1.67 ± 0.07	1.6 ± 0.1	1.81 ± 0.08	1.8 ± 0.1	2.2 ± 0.2	W Africa F	E Europe M
15	2.8 ± 0.3	2.5 ± 0.1	2.2 ± 0.2	2.6 ± 0.1	2.9 ± 0.3	2.7 ± 0.3	2.5 ± 0.2	1.74 ± 0.06	1.4 ± 0.1	1.81 ± 0.08	2.0 ± 0.1	2.2 ± 0.2	S E Asia F	E Europe M
16	2.9 ± 0.3	2.5 ± 0.1	2.6 ± 0.3	2.5 ± 0.2	2.8 ± 0.3	3.0 ± 0.5	2.5 ± 0.2	1.60 ± 0.06	1.5 ± 0.2	1.71 ± 0.08	1.8 ± 0.1	2.0 ± 0.2	W Africa F	E Europe M
17	3.4 ± 0.4	2.6 ± 0.1	2.5 ± 0.3	2.6 ± 0.2	2.8 ± 0.2	2.9 ± 0.3	2.1 ± 0.2	1.50 ± 0.08	1.3 ± 0.1	1.7 ± 0.1	1.6 ± 0.2	2.0 ± 0.3	E Africa F	E Europe M
18	3.4 ± 0.3	2.7 ± 0.1	2.7 ± 0.3	2.5 ± 0.1	2.9 ± 0.2	3.0 ± 0.3	2.1 ± 0.2	1.67 ± 0.08	1.6 ± 0.2	1.80 ± 0.10	1.7 ± 0.2	2.0 ± 0.2	E Africa F	E Europe M
19	4.1 ± 0.3	2.9 ± 0.1	3.1 ± 0.2	2.9 ± 0.1	3.0 ± 0.2	3.3 ± 0.3	2.8 ± 0.2	2.01 ± 0.08	1.9 ± 0.2	2.07 ± 0.10	2.0 ± 0.1	2.6 ± 0.3	E Africa F	E Europe M
20	4.6 ± 0.3	3.1 ± 0.1	3.4 ± 0.2	3.2 ± 0.1	3.1 ± 0.1	3.7 ± 0.2	3.2 ± 0.2	2.28 ± 0.08	2.2 ± 0.1	2.54 ± 0.09	2.2 ± 0.1	3.1 ± 0.2	E Africa F	E Europe M
21	4.6 ± 0.2	3.18 ± 0.09	3.6 ± 0.1	3.32 ± 0.09	3.3 ± 0.1	4.3 ± 0.3	3.5 ± 0.2	2.47 ± 0.07	2.4 ± 0.1	2.64 ± 0.09	2.5 ± 0.1	3.4 ± 0.2	E Africa F	E Europe M
22	5.0 ± 0.2	3.10 ± 0.08	3.5 ± 0.1	3.36 ± 0.09	3.2 ± 0.1	4.3 ± 0.2	4.0 ± 0.2	2.58 ± 0.08	2.5 ± 0.1	2.75 ± 0.10	2.5 ± 0.1	3.4 ± 0.2	E Africa F	S E Asia M
23	4.9 ± 0.2	2.94 ± 0.08	3.5 ± 0.1	3.36 ± 0.08	3.0 ± 0.1	4.3 ± 0.2	4.0 ± 0.2	2.58 ± 0.08	2.3 ± 0.1	2.80 ± 0.10	2.4 ± 0.1	3.7 ± 0.2	E Africa F	E Europe M
24	5.0 ± 0.2	2.87 ± 0.08	3.3 ± 0.1	3.32 ± 0.08	2.84 ± 0.09	4.3 ± 0.2	3.8 ± 0.2	2.48 ± 0.08	2.3 ± 0.1	2.79 ± 0.09	2.3 ± 0.1	3.4 ± 0.2	E Africa F	S E Asia M
25	4.9 ± 0.2	2.74 ± 0.07	3.1 ± 0.1	3.31 ± 0.07	2.80 ± 0.09	4.3 ± 0.2	3.9 ± 0.2	2.52 ± 0.08	2.3 ± 0.1	2.74 ± 0.08	2.3 ± 0.1	3.6 ± 0.2	E Africa F	S E Asia M
26	4.8 ± 0.2	2.75 ± 0.07	3.06 ± 0.10	3.17 ± 0.07	2.80 ± 0.09	4.2 ± 0.2	3.7 ± 0.2	2.43 ± 0.08	2.3 ± 0.1	2.75 ± 0.08	2.3 ± 0.1	3.4 ± 0.2	E Africa F	S E Asia M
27	4.7 ± 0.2	2.74 ± 0.07	3.1 ± 0.1	3.19 ± 0.07	2.77 ± 0.09	4.3 ± 0.2	3.8 ± 0.2	2.52 ± 0.08	2.3 ± 0.1	2.77 ± 0.07	2.4 ± 0.1	3.5 ± 0.2	E Africa F	E Europe M
28	4.6 ± 0.2	2.81 ± 0.06	2.97 ± 0.09	3.25 ± 0.07	2.77 ± 0.09	4.2 ± 0.2	3.6 ± 0.2	2.57 ± 0.08	2.4 ± 0.1	2.83 ± 0.07	2.5 ± 0.1	3.6 ± 0.2	E Africa F	E Europe M
29	4.6 ± 0.2	2.83 ± 0.06	3.01 ± 0.10	3.32 ± 0.07	2.85 ± 0.09	4.3 ± 0.2	3.6 ± 0.2	2.67 ± 0.08	2.5 ± 0.1	2.89 ± 0.07	2.6 ± 0.1	3.7 ± 0.2	E Africa F	E Europe M
30	4.6 ± 0.2	3.02 ± 0.06	3.11 ± 0.10	3.38 ± 0.07	2.92 ± 0.09	4.3 ± 0.2	3.8 ± 0.2	2.80 ± 0.08	2.4 ± 0.1	2.96 ± 0.06	2.8 ± 0.1	3.7 ± 0.1	E Africa F	E Europe M
31	4.7 ± 0.2	3.15 ± 0.06	3.2 ± 0.1	3.46 ± 0.07	3.02 ± 0.09	4.3 ± 0.2	3.8 ± 0.2	2.89 ± 0.08	2.5 ± 0.1	3.11 ± 0.06	2.9 ± 0.1	3.8 ± 0.1	E Africa F	E Europe M
32	4.8 ± 0.2	3.29 ± 0.06	3.2 ± 0.1	3.69 ± 0.07	3.19 ± 0.10	4.4 ± 0.2	3.8 ± 0.2	3.05 ± 0.08	2.6 ± 0.1	3.24 ± 0.06	2.9 ± 0.1	3.9 ± 0.2	E Africa F	E Europe M
33	4.7 ± 0.2	3.44 ± 0.07	3.4 ± 0.1	3.70 ± 0.07	3.29 ± 0.10	4.5 ± 0.2	4.1 ± 0.2	3.24 ± 0.08	2.7 ± 0.1	3.26 ± 0.06	3.0 ± 0.1	3.9 ± 0.1	E Africa F	E Europe M
34	4.6 ± 0.2	3.52 ± 0.06	3.4 ± 0.1	3.70 ± 0.07	3.2 ± 0.1	4.4 ± 0.2	3.8 ± 0.2	3.33 ± 0.08	2.8 ± 0.1	3.40 ± 0.06	3.0 ± 0.1	3.9 ± 0.1	E Africa F	E Europe M
35	4.9 ± 0.2	3.65 ± 0.07	3.6 ± 0.1	3.79 ± 0.08	3.4 ± 0.1	4.4 ± 0.2	4.0 ± 0.2	3.40 ± 0.09	2.8 ± 0.1	3.46 ± 0.07	3.2 ± 0.1	4.1 ± 0.2	E Africa F	E Europe M
36	4.7 ± 0.2	3.66 ± 0.07	3.4 ± 0.1	3.78 ± 0.08	3.4 ± 0.1	4.4 ± 0.2	4.1 ± 0.2	3.32 ± 0.08	2.9 ± 0.1	3.39 ± 0.07	3.2 ± 0.2	4.1 ± 0.2	E Africa F	E Europe M
37	4.7 ± 0.2	3.56 ± 0.07	3.6 ± 0.1	3.74 ± 0.08	3.3 ± 0.1	4.7 ± 0.2	4.0 ± 0.2	3.27 ± 0.09	2.9 ± 0.1	3.44 ± 0.07	3.1 ± 0.1	3.9 ± 0.1	W Africa F	E Europe M
38	4.5 ± 0.2	3.55 ± 0.07	3.4 ± 0.1	3.63 ± 0.09	3.3 ± 0.1	4.5 ± 0.2	3.7 ± 0.2	3.32 ± 0.09	2.7 ± 0.1	3.28 ± 0.07	3.0 ± 0.1	4.0 ± 0.2	E Africa F	E Europe M
39	4.4 ± 0.2	3.48 ± 0.07	3.2 ± 0.1	3.56 ± 0.09	3.1 ± 0.1	4.3 ± 0.2	3.6 ± 0.2	3.14 ± 0.09	2.7 ± 0.1	3.15 ± 0.07	2.9 ± 0.1	3.7 ± 0.2	E Africa F	E Europe M
40	4.2 ± 0.2	3.33 ± 0.08	3.2 ± 0.1	3.36 ± 0.09	3.0 ± 0.1	4.4 ± 0.2	3.5 ± 0.2	2.96 ± 0.09	2.7 ± 0.1	3.12 ± 0.07	2.7 ± 0.1	3.7 ± 0.2	W Africa F	E Europe M
41	4.1 ± 0.3	3.17 ± 0.08	3.0 ± 0.1	3.3 ± 0.1	2.9 ± 0.1	4.2 ± 0.2	3.4 ± 0.2	2.88 ± 0.09	2.6 ± 0.1	2.92 ± 0.08	2.6 ± 0.1	3.8 ± 0.2	W Africa F	E Europe M
42	4.3 ± 0.3	3.00 ± 0.07	3.1 ± 0.1	3.1 ± 0.1	2.7 ± 0.1	4.2 ± 0.2	3.3 ± 0.2	2.76 ± 0.09	2.5 ± 0.1	2.79 ± 0.08	2.5 ± 0.1	3.6 ± 0.2	E Africa F	S E Asia M
43	4.2 ± 0.3	3.02 ± 0.07	3.0 ± 0.1	3.1 ± 0.1	2.8 ± 0.1	4.1 ± 0.2	3.3 ± 0.2	2.72 ± 0.08	2.4 ± 0.1	2.84 ± 0.09	2.7 ± 0.1	3.9 ± 0.2	E Africa F	E Europe M
44	4.5 ± 0.3	3.05 ± 0.07	2.8 ± 0.1	3.1 ± 0.1	2.9 ± 0.1	4.4 ± 0.3	3.4 ± 0.2	2.66 ± 0.08	2.6 ± 0.1	2.86 ± 0.09	2.7 ± 0.1	3.6 ± 0.2	E Africa F	E Europe M
45	4.3 ± 0.3	3.01 ± 0.07	2.7 ± 0.1	3.1 ± 0.1	2.8 ± 0.1	3.9 ± 0.2	3.5 ± 0.2	2.78 ± 0.08	2.7 ± 0.1	2.92 ± 0.09	2.7 ± 0.1	3.9 ± 0.2	E Africa F	S E Asia M
46	4.7 ± 0.4	3.12 ± 0.08	2.9 ± 0.1	3.1 ± 0.1	2.9 ± 0.1	4.0 ± 0.3	3.8 ± 0.3	2.83 ± 0.08	2.8 ± 0.1	2.90 ± 0.10	2.8 ± 0.2	4.1 ± 0.2	E Africa F	E Europe M
47	4.4 ± 0.4	3.04 ± 0.08	2.9 ± 0.1	3.1 ± 0.1	2.9 ± 0.1	4.2 ± 0.3	4.0 ± 0.3	2.82 ± 0.08	2.7 ± 0.2	3.2 ± 0.1	3.0 ± 0.2	4.1 ± 0.2	E Africa F	E Europe M
48	4.5 ± 0.4	3.04 ± 0.08	3.0 ± 0.1	3.2 ± 0.1	2.9 ± 0.1	4.3 ± 0.3	4.3 ± 0.3	2.85 ± 0.08	3.0 ± 0.2	3.1 ± 0.1	2.9 ± 0.2	4.3 ± 0.3	E Africa F	E Asia M
49	4.8 ± 0.4	3.14 ± 0.09	2.8 ± 0.2	3.2 ± 0.1	3.0 ± 0.1	4.3 ± 0.3	4.0 ± 0.3	2.93 ± 0.09	2.9 ± 0.2	3.2 ± 0.1	3.0 ± 0.2	4.1 ± 0.2	E Africa F	E Europe F
50	4.8 ± 0.4	3.15 ± 0.09	2.9 ± 0.2	3.2 ± 0.1	3.1 ± 0.1	4.5 ± 0.3	3.9 ± 0.3	3.02 ± 0.09	3.0 ± 0.2	3.3 ± 0.1	3.2 ± 0.2	4.3 ± 0.2	E Africa F	E Europe F
51	5.0 ± 0.4	3.17 ± 0.09	3.0 ± 0.2	3.3 ± 0.1	3.2 ± 0.2	4.6 ± 0.3	4.3 ± 0.4	3.14 ± 0.10	3.1 ± 0.2	3.6 ± 0.2	3.3 ± 0.2	4.4 ± 0.3	E Africa F	E Europe F
52	5.1 ± 0.4	3.24 ± 0.09	3.3 ± 0.2	3.5 ± 0.1	3.4 ± 0.2	4.6 ± 0.3	4.2 ± 0.3	3.14 ± 0.10	3.4 ± 0.2	3.7 ± 0.1	3.5 ± 0.2	4.7 ± 0.3	E Africa F	E Asia M

Table 87. *Mean absolute error for Application-type images for algorithm incode-001. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	3.5 ± 0.2	2.6 ± 0.1	2.6 ± 0.2	2.8 ± 0.1	2.9 ± 0.2	3.6 ± 0.3	2.5 ± 0.2	1.72 ± 0.08	1.5 ± 0.1	1.76 ± 0.08	1.7 ± 0.1	2.1 ± 0.2	W Africa F	E Europe M
15	3.5 ± 0.3	2.7 ± 0.1	2.6 ± 0.2	3.0 ± 0.2	3.3 ± 0.3	3.4 ± 0.3	2.4 ± 0.2	1.88 ± 0.07	1.50 ± 0.10	1.76 ± 0.08	1.9 ± 0.1	2.3 ± 0.2	E Africa F	E Europe M
16	3.5 ± 0.3	2.8 ± 0.1	2.7 ± 0.2	2.9 ± 0.1	3.4 ± 0.3	3.8 ± 0.5	2.4 ± 0.2	1.76 ± 0.07	1.5 ± 0.2	1.68 ± 0.08	1.7 ± 0.1	1.9 ± 0.2	W Africa F	E Europe M
17	3.6 ± 0.3	3.0 ± 0.1	2.7 ± 0.3	2.9 ± 0.2	3.2 ± 0.3	3.9 ± 0.4	2.1 ± 0.2	1.70 ± 0.09	1.2 ± 0.1	1.5 ± 0.1	1.6 ± 0.2	2.0 ± 0.3	W Africa F	E Europe M
18	3.4 ± 0.3	3.1 ± 0.1	2.6 ± 0.3	2.8 ± 0.1	3.4 ± 0.2	3.7 ± 0.3	1.9 ± 0.2	1.82 ± 0.08	1.3 ± 0.1	1.66 ± 0.09	1.7 ± 0.2	1.9 ± 0.2	W Africa F	E Europe M
19	4.0 ± 0.3	3.2 ± 0.1	2.9 ± 0.2	2.9 ± 0.1	3.4 ± 0.2	3.9 ± 0.3	2.5 ± 0.2	2.16 ± 0.09	1.6 ± 0.1	1.87 ± 0.10	2.0 ± 0.1	2.6 ± 0.3	E Africa F	E Europe M
20	4.5 ± 0.3	3.4 ± 0.1	2.9 ± 0.2	3.1 ± 0.1	3.4 ± 0.2	4.2 ± 0.3	3.1 ± 0.3	2.29 ± 0.09	1.9 ± 0.1	2.4 ± 0.1	2.3 ± 0.1	3.0 ± 0.3	E Africa F	E Europe M
21	4.5 ± 0.3	3.4 ± 0.1	3.1 ± 0.2	3.2 ± 0.1	3.6 ± 0.1	4.5 ± 0.3	3.6 ± 0.2	2.59 ± 0.08	2.1 ± 0.1	2.67 ± 0.10	2.7 ± 0.1	3.4 ± 0.3	W Africa F	E Europe M
22	4.9 ± 0.3	3.41 ± 0.09	3.1 ± 0.1	3.26 ± 0.09	3.5 ± 0.1	4.4 ± 0.3	4.4 ± 0.3	2.85 ± 0.09	2.2 ± 0.1	2.8 ± 0.1	2.7 ± 0.1	3.5 ± 0.3	E Africa F	E Europe M
23	5.0 ± 0.2	3.27 ± 0.08	3.1 ± 0.1	3.28 ± 0.08	3.5 ± 0.1	4.7 ± 0.2	4.5 ± 0.3	2.87 ± 0.09	2.2 ± 0.1	3.0 ± 0.1	2.9 ± 0.1	4.0 ± 0.2	E Africa F	E Europe M
24	5.2 ± 0.3	3.21 ± 0.08	2.98 ± 0.10	3.28 ± 0.08	3.49 ± 0.10	4.6 ± 0.2	4.4 ± 0.2	2.92 ± 0.09	2.2 ± 0.1	3.03 ± 0.09	2.8 ± 0.1	3.9 ± 0.2	E Africa F	E Europe M
25	5.1 ± 0.2	3.16 ± 0.07	2.88 ± 0.09	3.22 ± 0.07	3.43 ± 0.10	4.7 ± 0.2	4.6 ± 0.2	2.95 ± 0.08	2.2 ± 0.1	3.02 ± 0.09	3.0 ± 0.1	3.9 ± 0.2	E Africa F	E Europe M
26	5.1 ± 0.2	3.12 ± 0.07	2.81 ± 0.09	3.18 ± 0.07	3.41 ± 0.09	4.6 ± 0.2	4.5 ± 0.2	2.88 ± 0.08	2.2 ± 0.1	3.05 ± 0.08	2.9 ± 0.1	3.8 ± 0.2	E Africa F	E Europe M
27	5.1 ± 0.2	2.99 ± 0.06	2.90 ± 0.09	3.19 ± 0.06	3.26 ± 0.09	4.9 ± 0.2	4.4 ± 0.2	2.95 ± 0.08	2.3 ± 0.1	3.00 ± 0.07	3.0 ± 0.1	3.8 ± 0.2	E Africa F	E Europe M
28	5.1 ± 0.2	2.98 ± 0.06	2.68 ± 0.08	3.24 ± 0.06	3.27 ± 0.09	4.7 ± 0.2	4.3 ± 0.2	2.93 ± 0.09	2.34 ± 0.10	3.00 ± 0.07	2.9 ± 0.1	3.7 ± 0.2	E Africa F	E Europe M
29	5.3 ± 0.2	2.83 ± 0.06	2.80 ± 0.08	3.16 ± 0.06	3.32 ± 0.09	4.8 ± 0.2	4.3 ± 0.2	2.79 ± 0.08	2.30 ± 0.09	2.97 ± 0.07	2.8 ± 0.1	3.9 ± 0.2	E Africa F	E Europe M
30	5.3 ± 0.2	2.91 ± 0.06	2.74 ± 0.08	3.16 ± 0.06	3.19 ± 0.09	4.6 ± 0.2	4.2 ± 0.2	2.84 ± 0.08	2.29 ± 0.09	2.97 ± 0.06	2.9 ± 0.1	3.8 ± 0.1	E Africa F	E Europe M
31	5.2 ± 0.2	2.91 ± 0.06	2.78 ± 0.09	3.14 ± 0.07	3.24 ± 0.09	4.5 ± 0.2	4.3 ± 0.2	2.76 ± 0.08	2.33 ± 0.09	3.03 ± 0.06	2.9 ± 0.1	3.8 ± 0.2	E Africa F	E Europe M
32	5.3 ± 0.2	2.90 ± 0.06	2.75 ± 0.09	3.23 ± 0.07	3.22 ± 0.10	4.8 ± 0.2	4.1 ± 0.2	2.79 ± 0.07	2.4 ± 0.1	3.05 ± 0.06	2.9 ± 0.1	3.9 ± 0.1	E Africa F	E Europe M
33	5.3 ± 0.2	2.89 ± 0.06	2.82 ± 0.09	3.21 ± 0.07	3.3 ± 0.1	4.6 ± 0.2	4.3 ± 0.2	2.78 ± 0.08	2.5 ± 0.1	3.00 ± 0.06	2.7 ± 0.1	3.9 ± 0.1	E Africa F	E Europe M
34	5.1 ± 0.2	2.94 ± 0.06	2.85 ± 0.09	3.13 ± 0.07	3.2 ± 0.1	4.6 ± 0.2	4.0 ± 0.2	2.78 ± 0.08	2.5 ± 0.1	3.10 ± 0.06	2.9 ± 0.1	3.9 ± 0.1	E Africa F	E Europe M
35	5.4 ± 0.2	2.96 ± 0.06	2.95 ± 0.10	3.16 ± 0.07	3.3 ± 0.1	4.6 ± 0.2	4.2 ± 0.2	2.86 ± 0.08	2.5 ± 0.1	3.08 ± 0.06	2.9 ± 0.1	3.9 ± 0.2	E Africa F	E Europe M
36	5.3 ± 0.2	2.94 ± 0.06	2.86 ± 0.10	3.15 ± 0.07	3.2 ± 0.1	4.5 ± 0.2	4.1 ± 0.2	2.82 ± 0.08	2.5 ± 0.1	3.04 ± 0.06	3.0 ± 0.1	3.9 ± 0.2	E Africa F	E Europe M
37	5.2 ± 0.2	2.90 ± 0.06	3.0 ± 0.1	3.20 ± 0.07	3.1 ± 0.1	4.8 ± 0.2	4.1 ± 0.2	2.82 ± 0.08	2.5 ± 0.1	3.07 ± 0.06	2.8 ± 0.1	3.7 ± 0.1	E Africa F	E Europe M
38	5.4 ± 0.3	2.94 ± 0.06	2.9 ± 0.1	3.15 ± 0.08	3.2 ± 0.1	4.5 ± 0.2	4.0 ± 0.2	2.91 ± 0.08	2.5 ± 0.1	2.99 ± 0.06	2.8 ± 0.1	3.7 ± 0.2	E Africa F	E Europe M
39	5.1 ± 0.3	2.98 ± 0.06	2.9 ± 0.1	3.17 ± 0.09	3.1 ± 0.1	4.5 ± 0.2	4.1 ± 0.2	2.88 ± 0.08	2.6 ± 0.1	2.93 ± 0.06	2.9 ± 0.1	3.6 ± 0.2	E Africa F	E Europe M
40	5.1 ± 0.3	2.95 ± 0.06	3.0 ± 0.1	3.06 ± 0.09	3.1 ± 0.1	4.4 ± 0.2	4.0 ± 0.2	2.83 ± 0.08	2.5 ± 0.1	2.98 ± 0.07	2.8 ± 0.1	3.7 ± 0.2	E Africa F	E Europe M
41	4.9 ± 0.3	2.86 ± 0.06	3.0 ± 0.1	3.09 ± 0.09	3.0 ± 0.1	4.3 ± 0.2	4.1 ± 0.2	2.80 ± 0.08	2.5 ± 0.1	2.86 ± 0.07	2.7 ± 0.1	3.8 ± 0.2	E Africa F	E Europe M
42	5.2 ± 0.3	2.93 ± 0.06	3.1 ± 0.1	3.1 ± 0.1	2.9 ± 0.1	4.4 ± 0.2	4.0 ± 0.2	2.87 ± 0.08	2.6 ± 0.1	2.83 ± 0.08	2.8 ± 0.1	3.6 ± 0.2	E Africa F	E Europe M
43	5.4 ± 0.3	2.95 ± 0.06	3.1 ± 0.1	3.0 ± 0.1	3.0 ± 0.1	4.2 ± 0.2	4.2 ± 0.3	2.91 ± 0.08	2.5 ± 0.1	2.86 ± 0.08	3.0 ± 0.1	3.7 ± 0.2	E Africa F	E Europe M
44	5.4 ± 0.3	2.94 ± 0.06	2.8 ± 0.1	3.1 ± 0.1	3.1 ± 0.1	4.4 ± 0.2	4.1 ± 0.3	2.94 ± 0.08	2.7 ± 0.1	2.89 ± 0.09	3.1 ± 0.2	3.6 ± 0.2	E Africa F	E Europe M
45	5.3 ± 0.3	2.91 ± 0.07	2.9 ± 0.1	3.1 ± 0.1	3.0 ± 0.1	3.9 ± 0.2	4.2 ± 0.3	3.02 ± 0.08	2.8 ± 0.2	2.97 ± 0.09	3.1 ± 0.2	3.8 ± 0.2	E Africa F	E Europe M
46	5.7 ± 0.4	2.91 ± 0.07	3.0 ± 0.1	3.0 ± 0.1	2.9 ± 0.1	4.1 ± 0.2	4.4 ± 0.3	2.94 ± 0.08	2.9 ± 0.2	3.0 ± 0.1	3.1 ± 0.2	3.8 ± 0.2	E Africa F	E Europe M
47	5.5 ± 0.4	2.85 ± 0.07	3.0 ± 0.2	3.1 ± 0.1	2.9 ± 0.1	4.1 ± 0.2	4.7 ± 0.3	2.98 ± 0.09	2.8 ± 0.2	3.3 ± 0.1	3.3 ± 0.2	4.0 ± 0.2	E Africa F	E Europe M
48	5.4 ± 0.4	2.73 ± 0.07	3.0 ± 0.2	3.1 ± 0.1	2.9 ± 0.1	4.0 ± 0.3	4.6 ± 0.3	2.88 ± 0.08	3.0 ± 0.2	3.2 ± 0.1	3.2 ± 0.2	4.1 ± 0.2	E Africa F	E Asia F
49	5.8 ± 0.4	2.83 ± 0.08	2.9 ± 0.2	3.2 ± 0.1	3.0 ± 0.1	4.2 ± 0.3	4.5 ± 0.3	3.04 ± 0.09	3.0 ± 0.2	3.2 ± 0.1	3.3 ± 0.2	3.7 ± 0.2	E Africa F	E Asia F
50	5.2 ± 0.4	2.84 ± 0.07	3.0 ± 0.2	3.2 ± 0.1	3.1 ± 0.1	4.1 ± 0.3	4.4 ± 0.3	3.02 ± 0.09	3.0 ± 0.2	3.3 ± 0.1	3.6 ± 0.2	4.0 ± 0.2	E Africa F	E Asia F
51	5.5 ± 0.4	2.83 ± 0.08	3.1 ± 0.2	3.2 ± 0.1	3.1 ± 0.1	4.3 ± 0.3	4.4 ± 0.3	3.04 ± 0.09	3.2 ± 0.2	3.6 ± 0.1	3.5 ± 0.2	4.2 ± 0.2	E Africa F	E Asia F
52	5.4 ± 0.4	2.78 ± 0.07	3.2 ± 0.2	3.3 ± 0.1	3.3 ± 0.1	4.0 ± 0.3	4.6 ± 0.3	3.06 ± 0.09	3.4 ± 0.2	3.5 ± 0.1	3.5 ± 0.2	4.1 ± 0.2	E Africa F	E Asia F

Table 88. *Mean absolute error for Application-type images for algorithm innovatrics-000. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	5.3 ± 0.2	3.20 ± 0.08	3.0 ± 0.2	3.9 ± 0.1	3.0 ± 0.1	5.8 ± 0.3	3.7 ± 0.2	2.36 ± 0.07	2.1 ± 0.1	2.69 ± 0.08	2.2 ± 0.1	3.5 ± 0.2	W Africa F	E Europe M
15	5.3 ± 0.2	3.05 ± 0.09	3.0 ± 0.2	3.8 ± 0.2	2.8 ± 0.2	5.7 ± 0.3	3.5 ± 0.2	2.27 ± 0.07	1.8 ± 0.1	2.59 ± 0.09	2.1 ± 0.1	3.6 ± 0.3	W Africa F	E Europe M
16	5.0 ± 0.3	2.9 ± 0.1	2.9 ± 0.2	3.5 ± 0.1	2.7 ± 0.2	5.8 ± 0.4	3.8 ± 0.2	2.12 ± 0.07	2.2 ± 0.2	2.50 ± 0.10	1.8 ± 0.1	3.5 ± 0.2	W Africa F	S E Asia M
17	5.3 ± 0.3	2.6 ± 0.1	2.8 ± 0.2	3.4 ± 0.2	2.4 ± 0.2	5.3 ± 0.3	3.4 ± 0.2	2.00 ± 0.09	1.9 ± 0.1	2.5 ± 0.1	1.7 ± 0.1	3.9 ± 0.4	E Africa F	S E Asia M
18	4.7 ± 0.2	2.37 ± 0.08	2.6 ± 0.2	3.1 ± 0.1	2.1 ± 0.1	5.0 ± 0.3	3.5 ± 0.2	1.93 ± 0.07	2.1 ± 0.1	2.62 ± 0.09	1.6 ± 0.1	3.6 ± 0.2	W Africa F	S E Asia M
19	4.6 ± 0.2	2.28 ± 0.08	2.4 ± 0.2	3.1 ± 0.1	2.1 ± 0.1	4.9 ± 0.2	3.5 ± 0.2	1.95 ± 0.07	2.1 ± 0.1	2.68 ± 0.10	1.6 ± 0.1	3.6 ± 0.3	W Africa F	S E Asia M
20	4.4 ± 0.2	2.22 ± 0.09	2.1 ± 0.1	2.9 ± 0.1	2.02 ± 0.09	4.7 ± 0.2	3.4 ± 0.2	1.85 ± 0.07	2.0 ± 0.2	2.73 ± 0.10	1.6 ± 0.1	3.6 ± 0.3	W Africa F	S E Asia M
21	4.1 ± 0.2	2.22 ± 0.07	2.1 ± 0.1	2.83 ± 0.08	2.03 ± 0.09	4.2 ± 0.2	3.4 ± 0.2	1.81 ± 0.06	2.0 ± 0.1	2.69 ± 0.09	1.80 ± 0.10	3.6 ± 0.3	W Africa F	S E Asia M
22	4.0 ± 0.2	2.13 ± 0.06	2.07 ± 0.09	2.56 ± 0.07	2.05 ± 0.08	4.0 ± 0.2	3.8 ± 0.2	1.82 ± 0.06	2.1 ± 0.1	2.70 ± 0.09	1.79 ± 0.08	3.3 ± 0.2	E Africa F	S E Asia M
23	3.7 ± 0.2	2.04 ± 0.05	2.04 ± 0.08	2.48 ± 0.07	2.04 ± 0.07	3.8 ± 0.2	3.6 ± 0.2	1.86 ± 0.06	1.9 ± 0.1	2.76 ± 0.09	1.84 ± 0.09	3.5 ± 0.2	W Africa F	S E Asia M
24	3.6 ± 0.2	2.05 ± 0.05	2.05 ± 0.07	2.30 ± 0.06	2.08 ± 0.06	3.5 ± 0.2	3.6 ± 0.2	1.89 ± 0.06	1.88 ± 0.09	2.65 ± 0.07	1.84 ± 0.09	3.3 ± 0.2	E Africa F	S E Asia M
25	3.4 ± 0.2	2.07 ± 0.05	2.06 ± 0.06	2.18 ± 0.05	2.16 ± 0.06	3.5 ± 0.2	3.5 ± 0.2	1.96 ± 0.06	1.86 ± 0.09	2.53 ± 0.07	2.01 ± 0.09	3.3 ± 0.2	E Africa M	E Europe M
26	3.2 ± 0.1	2.16 ± 0.05	2.17 ± 0.06	2.18 ± 0.05	2.26 ± 0.06	3.3 ± 0.2	3.4 ± 0.2	1.93 ± 0.06	1.91 ± 0.09	2.42 ± 0.07	2.15 ± 0.09	3.1 ± 0.1	E Africa M	E Europe M
27	3.3 ± 0.2	2.21 ± 0.05	2.26 ± 0.07	2.28 ± 0.05	2.43 ± 0.06	3.3 ± 0.1	3.3 ± 0.2	2.08 ± 0.06	1.93 ± 0.08	2.34 ± 0.06	2.25 ± 0.09	3.1 ± 0.1	W Africa F	E Europe M
28	3.3 ± 0.2	2.40 ± 0.05	2.28 ± 0.06	2.44 ± 0.05	2.64 ± 0.07	3.2 ± 0.1	3.2 ± 0.1	2.19 ± 0.07	1.92 ± 0.08	2.25 ± 0.06	2.3 ± 0.1	3.0 ± 0.1	E Africa F	E Europe M
29	3.3 ± 0.1	2.63 ± 0.05	2.38 ± 0.07	2.59 ± 0.05	2.88 ± 0.08	3.2 ± 0.1	3.2 ± 0.1	2.30 ± 0.06	1.97 ± 0.08	2.23 ± 0.05	2.5 ± 0.1	3.2 ± 0.1	E Africa F	E Europe M
30	3.3 ± 0.1	2.86 ± 0.05	2.50 ± 0.07	2.80 ± 0.05	2.98 ± 0.08	3.2 ± 0.1	3.3 ± 0.2	2.54 ± 0.06	1.99 ± 0.08	2.31 ± 0.05	2.7 ± 0.1	3.1 ± 0.1	E Africa M	E Europe M
31	3.3 ± 0.1	3.11 ± 0.05	2.61 ± 0.08	3.10 ± 0.06	3.21 ± 0.08	3.2 ± 0.1	3.4 ± 0.1	2.81 ± 0.07	2.15 ± 0.08	2.40 ± 0.05	3.0 ± 0.1	3.1 ± 0.1	E Africa M	E Europe M
32	3.4 ± 0.1	3.27 ± 0.06	2.66 ± 0.08	3.30 ± 0.06	3.44 ± 0.09	3.3 ± 0.1	3.3 ± 0.1	2.90 ± 0.07	2.30 ± 0.09	2.54 ± 0.05	3.0 ± 0.1	3.0 ± 0.1	S E Asia F	E Europe M
33	3.5 ± 0.2	3.47 ± 0.06	2.84 ± 0.09	3.47 ± 0.06	3.52 ± 0.10	3.1 ± 0.1	3.5 ± 0.2	3.11 ± 0.07	2.28 ± 0.09	2.64 ± 0.05	3.1 ± 0.1	3.0 ± 0.1	S E Asia F	E Europe M
34	3.6 ± 0.2	3.57 ± 0.06	2.97 ± 0.09	3.63 ± 0.07	3.6 ± 0.1	3.2 ± 0.1	3.4 ± 0.2	3.18 ± 0.08	2.38 ± 0.09	2.80 ± 0.05	3.2 ± 0.1	3.0 ± 0.1	S E Asia F	E Europe M
35	3.7 ± 0.2	3.83 ± 0.07	3.09 ± 0.10	3.84 ± 0.07	3.8 ± 0.1	3.2 ± 0.1	3.5 ± 0.2	3.26 ± 0.08	2.37 ± 0.10	2.89 ± 0.06	3.4 ± 0.2	3.2 ± 0.1	S Asia F	E Europe M
36	3.8 ± 0.2	3.89 ± 0.07	3.0 ± 0.1	4.04 ± 0.08	3.8 ± 0.1	3.2 ± 0.1	3.6 ± 0.2	3.27 ± 0.08	2.4 ± 0.1	3.02 ± 0.06	3.2 ± 0.2	3.1 ± 0.1	S Asia F	E Europe M
37	3.8 ± 0.2	3.94 ± 0.07	3.2 ± 0.1	4.12 ± 0.08	3.9 ± 0.1	3.6 ± 0.2	3.6 ± 0.2	3.27 ± 0.08	2.5 ± 0.1	3.19 ± 0.06	3.3 ± 0.2	3.1 ± 0.1	S Asia F	E Europe M
38	3.8 ± 0.2	4.13 ± 0.07	3.1 ± 0.1	4.25 ± 0.09	3.9 ± 0.1	3.7 ± 0.2	3.6 ± 0.2	3.31 ± 0.09	2.4 ± 0.1	3.17 ± 0.07	3.3 ± 0.2	3.1 ± 0.1	S Asia F	E Europe M
39	3.8 ± 0.2	4.14 ± 0.08	3.1 ± 0.1	4.33 ± 0.10	3.9 ± 0.1	3.5 ± 0.2	3.6 ± 0.2	3.32 ± 0.09	2.6 ± 0.1	3.23 ± 0.07	3.2 ± 0.2	3.2 ± 0.1	S Asia F	E Europe M
40	3.9 ± 0.2	4.27 ± 0.08	3.1 ± 0.1	4.4 ± 0.1	4.1 ± 0.1	3.7 ± 0.2	3.7 ± 0.2	3.38 ± 0.09	2.7 ± 0.1	3.29 ± 0.07	3.2 ± 0.1	3.6 ± 0.2	S Asia F	E Europe M
41	4.2 ± 0.2	4.32 ± 0.08	3.2 ± 0.1	4.5 ± 0.1	4.1 ± 0.1	3.9 ± 0.2	3.8 ± 0.2	3.38 ± 0.09	2.7 ± 0.1	3.34 ± 0.08	3.4 ± 0.2	3.8 ± 0.2	S Asia F	E Europe M
42	4.0 ± 0.2	4.32 ± 0.08	3.3 ± 0.1	4.3 ± 0.1	4.1 ± 0.1	4.0 ± 0.2	3.8 ± 0.2	3.32 ± 0.09	2.6 ± 0.1	3.32 ± 0.09	3.2 ± 0.1	3.6 ± 0.2	E Asia F	E Europe M
43	4.0 ± 0.2	4.51 ± 0.08	3.3 ± 0.1	4.5 ± 0.1	4.2 ± 0.1	4.0 ± 0.2	3.9 ± 0.2	3.41 ± 0.09	2.6 ± 0.1	3.26 ± 0.09	3.3 ± 0.2	3.9 ± 0.2	E Asia F	E Europe M
44	4.2 ± 0.3	4.68 ± 0.08	3.4 ± 0.1	4.4 ± 0.1	4.2 ± 0.1	4.4 ± 0.2	3.7 ± 0.2	3.41 ± 0.09	2.6 ± 0.1	3.31 ± 0.10	3.3 ± 0.2	3.8 ± 0.2	E Asia F	E Europe M
45	4.1 ± 0.3	4.70 ± 0.08	3.4 ± 0.1	4.4 ± 0.1	4.2 ± 0.1	4.3 ± 0.2	3.8 ± 0.2	3.55 ± 0.09	2.6 ± 0.1	3.24 ± 0.10	3.3 ± 0.2	4.0 ± 0.2	E Asia F	E Europe M
46	4.2 ± 0.3	4.92 ± 0.09	3.4 ± 0.2	4.1 ± 0.1	4.4 ± 0.2	4.3 ± 0.2	3.8 ± 0.2	3.52 ± 0.09	2.9 ± 0.1	3.1 ± 0.1	3.4 ± 0.2	4.0 ± 0.2	E Asia F	E Europe M
47	4.1 ± 0.3	4.79 ± 0.09	3.5 ± 0.2	4.1 ± 0.1	4.2 ± 0.2	4.4 ± 0.2	3.7 ± 0.2	3.52 ± 0.10	2.8 ± 0.1	3.3 ± 0.1	3.2 ± 0.2	4.1 ± 0.2	E Asia F	E Europe M
48	4.1 ± 0.3	4.85 ± 0.09	3.4 ± 0.2	4.1 ± 0.2	4.3 ± 0.2	4.4 ± 0.3	3.7 ± 0.3	3.51 ± 0.09	2.9 ± 0.2	3.2 ± 0.1	3.2 ± 0.2	4.1 ± 0.2	E Asia F	E Europe M
49	3.9 ± 0.3	5.03 ± 0.10	3.7 ± 0.2	3.8 ± 0.1	4.1 ± 0.2	4.7 ± 0.3	3.6 ± 0.3	3.52 ± 0.10	2.9 ± 0.2	3.2 ± 0.1	3.0 ± 0.2	3.6 ± 0.2	E Asia F	E Europe M
50	3.9 ± 0.3	5.0 ± 0.1	3.5 ± 0.2	3.8 ± 0.1	4.2 ± 0.2	4.5 ± 0.3	3.4 ± 0.3	3.45 ± 0.10	2.8 ± 0.2	3.2 ± 0.1	3.0 ± 0.2	3.7 ± 0.2	E Asia F	E Europe M
51	3.7 ± 0.3	5.0 ± 0.1	3.7 ± 0.2	3.8 ± 0.1	4.1 ± 0.2	4.5 ± 0.3	3.5 ± 0.3	3.45 ± 0.10	2.8 ± 0.1	3.3 ± 0.1	3.0 ± 0.2	3.9 ± 0.2	E Asia F	E Europe M
52	3.9 ± 0.3	5.0 ± 0.1	3.6 ± 0.2	3.8 ± 0.1	3.8 ± 0.2	4.6 ± 0.3	3.2 ± 0.3	3.50 ± 0.10	2.9 ± 0.2	3.3 ± 0.1	3.2 ± 0.2	3.8 ± 0.3	E Asia F	E Europe M

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Table 89. *Mean absolute error for Application-type images for algorithm innovatrics-001. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	5.2 ± 0.2	3.05 ± 0.07	3.0 ± 0.2	3.7 ± 0.1	3.0 ± 0.1	5.9 ± 0.3	3.7 ± 0.2	2.34 ± 0.07	2.0 ± 0.1	2.62 ± 0.07	2.2 ± 0.1	3.5 ± 0.2	W Africa F	E Europe M
15	5.2 ± 0.2	2.83 ± 0.09	3.0 ± 0.2	3.6 ± 0.1	2.7 ± 0.2	5.8 ± 0.3	3.4 ± 0.2	2.20 ± 0.07	1.9 ± 0.1	2.51 ± 0.09	2.0 ± 0.1	3.7 ± 0.3	W Africa F	E Europe M
16	4.9 ± 0.3	2.59 ± 0.10	2.9 ± 0.2	3.2 ± 0.1	2.5 ± 0.2	5.8 ± 0.4	3.8 ± 0.2	2.00 ± 0.07	2.1 ± 0.2	2.42 ± 0.10	1.8 ± 0.1	3.5 ± 0.2	W Africa F	S E Asia M
17	5.1 ± 0.3	2.36 ± 0.10	2.8 ± 0.2	3.1 ± 0.1	2.2 ± 0.2	5.5 ± 0.3	3.5 ± 0.2	1.82 ± 0.08	1.7 ± 0.1	2.4 ± 0.1	1.6 ± 0.1	3.8 ± 0.4	W Africa F	S E Asia M
18	4.5 ± 0.2	2.19 ± 0.08	2.5 ± 0.2	2.84 ± 0.10	2.0 ± 0.1	5.0 ± 0.3	3.4 ± 0.2	1.71 ± 0.07	1.9 ± 0.1	2.41 ± 0.09	1.5 ± 0.1	3.6 ± 0.2	W Africa F	S E Asia M
19	4.4 ± 0.2	2.13 ± 0.08	2.2 ± 0.2	2.7 ± 0.1	2.0 ± 0.1	4.9 ± 0.2	3.5 ± 0.2	1.69 ± 0.07	1.8 ± 0.1	2.39 ± 0.09	1.4 ± 0.1	3.7 ± 0.3	W Africa F	S E Asia M
20	4.2 ± 0.2	2.05 ± 0.08	2.0 ± 0.1	2.6 ± 0.1	1.91 ± 0.09	4.7 ± 0.2	3.3 ± 0.2	1.61 ± 0.07	1.8 ± 0.1	2.45 ± 0.09	1.50 ± 0.09	3.5 ± 0.3	W Africa F	S E Asia M
21	3.8 ± 0.2	2.04 ± 0.07	1.87 ± 0.10	2.51 ± 0.08	1.88 ± 0.08	4.2 ± 0.2	3.3 ± 0.2	1.62 ± 0.05	1.8 ± 0.1	2.42 ± 0.09	1.69 ± 0.09	3.5 ± 0.3	W Africa F	E Asia M
22	3.8 ± 0.2	1.94 ± 0.06	1.93 ± 0.08	2.30 ± 0.07	1.93 ± 0.08	4.0 ± 0.2	3.6 ± 0.2	1.67 ± 0.06	1.8 ± 0.1	2.43 ± 0.09	1.69 ± 0.08	3.2 ± 0.2	W Africa F	E Asia M
23	3.4 ± 0.2	1.91 ± 0.05	1.84 ± 0.08	2.27 ± 0.06	1.93 ± 0.07	3.7 ± 0.2	3.4 ± 0.2	1.80 ± 0.06	1.71 ± 0.10	2.54 ± 0.08	1.82 ± 0.08	3.3 ± 0.2	W Africa F	E Europe M
24	3.4 ± 0.2	1.97 ± 0.05	1.81 ± 0.06	2.17 ± 0.06	2.04 ± 0.06	3.4 ± 0.2	3.4 ± 0.2	1.84 ± 0.06	1.72 ± 0.08	2.46 ± 0.07	1.81 ± 0.08	3.2 ± 0.2	W Africa F	E Europe M
25	3.2 ± 0.2	2.06 ± 0.05	1.94 ± 0.06	2.12 ± 0.05	2.16 ± 0.06	3.3 ± 0.2	3.3 ± 0.2	1.99 ± 0.06	1.74 ± 0.08	2.39 ± 0.07	2.01 ± 0.08	3.2 ± 0.2	E Africa M	E Europe M
26	3.1 ± 0.1	2.25 ± 0.05	2.06 ± 0.06	2.19 ± 0.05	2.32 ± 0.06	3.1 ± 0.1	3.2 ± 0.2	1.97 ± 0.06	1.78 ± 0.08	2.31 ± 0.06	2.15 ± 0.09	2.9 ± 0.1	E Africa M	E Europe M
27	3.1 ± 0.1	2.34 ± 0.05	2.23 ± 0.07	2.37 ± 0.05	2.55 ± 0.07	3.2 ± 0.1	3.1 ± 0.2	2.13 ± 0.06	1.80 ± 0.08	2.25 ± 0.06	2.25 ± 0.09	3.0 ± 0.1	W Africa F	E Europe M
28	3.1 ± 0.1	2.55 ± 0.05	2.32 ± 0.06	2.55 ± 0.05	2.73 ± 0.07	3.0 ± 0.1	3.0 ± 0.1	2.22 ± 0.07	1.79 ± 0.08	2.18 ± 0.05	2.3 ± 0.1	2.9 ± 0.1	E Africa F	E Europe M
29	3.2 ± 0.1	2.79 ± 0.05	2.40 ± 0.07	2.71 ± 0.05	2.96 ± 0.08	3.0 ± 0.1	3.1 ± 0.1	2.35 ± 0.06	1.92 ± 0.08	2.15 ± 0.05	2.6 ± 0.1	3.0 ± 0.1	E Africa F	E Europe M
30	3.1 ± 0.1	3.06 ± 0.05	2.62 ± 0.07	2.98 ± 0.05	3.15 ± 0.08	3.1 ± 0.1	3.2 ± 0.1	2.67 ± 0.06	2.02 ± 0.08	2.23 ± 0.05	2.8 ± 0.1	3.0 ± 0.1	E Africa M	E Europe M
31	3.2 ± 0.1	3.38 ± 0.05	2.73 ± 0.08	3.30 ± 0.06	3.44 ± 0.09	3.0 ± 0.1	3.2 ± 0.1	2.96 ± 0.07	2.17 ± 0.08	2.32 ± 0.05	3.1 ± 0.1	3.0 ± 0.1	S E Asia F	E Europe M
32	3.3 ± 0.1	3.63 ± 0.06	2.85 ± 0.08	3.51 ± 0.06	3.68 ± 0.10	3.1 ± 0.1	3.2 ± 0.1	3.18 ± 0.07	2.29 ± 0.09	2.47 ± 0.05	3.2 ± 0.1	3.0 ± 0.1	S E Asia F	E Europe M
33	3.4 ± 0.1	3.92 ± 0.06	3.06 ± 0.09	3.72 ± 0.06	3.8 ± 0.1	3.0 ± 0.1	3.4 ± 0.2	3.45 ± 0.07	2.34 ± 0.09	2.60 ± 0.05	3.4 ± 0.1	3.0 ± 0.1	E Asia F	E Europe M
34	3.5 ± 0.1	4.09 ± 0.06	3.18 ± 0.09	3.87 ± 0.07	3.9 ± 0.1	3.0 ± 0.1	3.4 ± 0.2	3.65 ± 0.08	2.52 ± 0.10	2.81 ± 0.05	3.5 ± 0.2	3.0 ± 0.1	E Asia F	E Europe M
35	3.7 ± 0.2	4.38 ± 0.07	3.3 ± 0.1	4.09 ± 0.07	4.1 ± 0.1	3.1 ± 0.1	3.4 ± 0.2	3.73 ± 0.08	2.5 ± 0.1	2.96 ± 0.06	3.7 ± 0.2	3.2 ± 0.1	E Asia F	E Europe M
36	3.8 ± 0.2	4.45 ± 0.07	3.3 ± 0.1	4.31 ± 0.08	4.1 ± 0.1	3.0 ± 0.1	3.6 ± 0.2	3.78 ± 0.09	2.6 ± 0.1	3.12 ± 0.06	3.6 ± 0.2	3.1 ± 0.1	E Asia F	E Europe M
37	3.8 ± 0.2	4.54 ± 0.08	3.4 ± 0.1	4.46 ± 0.09	4.2 ± 0.1	3.4 ± 0.2	3.6 ± 0.2	3.86 ± 0.09	2.6 ± 0.1	3.30 ± 0.06	3.6 ± 0.2	3.1 ± 0.1	E Asia F	E Europe M
38	3.7 ± 0.2	4.71 ± 0.08	3.3 ± 0.1	4.59 ± 0.09	4.1 ± 0.1	3.6 ± 0.2	3.6 ± 0.2	3.88 ± 0.09	2.6 ± 0.1	3.32 ± 0.07	3.6 ± 0.2	3.1 ± 0.1	E Asia F	E Europe M
39	3.8 ± 0.2	4.76 ± 0.08	3.4 ± 0.1	4.82 ± 0.10	4.2 ± 0.1	3.4 ± 0.2	3.7 ± 0.2	3.96 ± 0.10	2.7 ± 0.1	3.41 ± 0.07	3.6 ± 0.2	3.2 ± 0.1	S Asia F	E Europe M
40	4.0 ± 0.2	4.90 ± 0.08	3.3 ± 0.1	4.8 ± 0.1	4.5 ± 0.1	3.8 ± 0.2	3.7 ± 0.2	4.00 ± 0.09	2.9 ± 0.1	3.49 ± 0.07	3.5 ± 0.2	3.4 ± 0.2	E Asia F	E Europe M
41	4.4 ± 0.2	5.02 ± 0.08	3.5 ± 0.1	5.0 ± 0.1	4.5 ± 0.1	4.1 ± 0.2	3.9 ± 0.2	4.02 ± 0.09	2.8 ± 0.1	3.55 ± 0.08	3.8 ± 0.2	3.7 ± 0.2	S Asia F	E Europe M
42	4.3 ± 0.3	5.06 ± 0.08	3.5 ± 0.2	4.9 ± 0.1	4.6 ± 0.1	4.2 ± 0.2	4.0 ± 0.2	4.01 ± 0.09	2.7 ± 0.1	3.61 ± 0.09	3.6 ± 0.1	3.6 ± 0.2	E Asia F	E Europe M
43	4.3 ± 0.3	5.34 ± 0.08	3.6 ± 0.2	5.1 ± 0.1	4.8 ± 0.1	4.2 ± 0.2	4.0 ± 0.2	4.09 ± 0.09	2.8 ± 0.1	3.56 ± 0.09	3.7 ± 0.2	3.8 ± 0.2	E Asia F	E Europe M
44	4.8 ± 0.3	5.58 ± 0.08	3.8 ± 0.2	5.1 ± 0.1	4.7 ± 0.2	4.6 ± 0.2	3.9 ± 0.2	4.16 ± 0.10	2.7 ± 0.1	3.6 ± 0.1	3.7 ± 0.2	3.8 ± 0.2	E Asia F	E Europe M
45	4.7 ± 0.3	5.70 ± 0.08	3.8 ± 0.2	5.1 ± 0.2	4.9 ± 0.1	4.6 ± 0.2	4.2 ± 0.2	4.27 ± 0.09	2.7 ± 0.1	3.6 ± 0.1	3.7 ± 0.2	4.1 ± 0.2	E Asia F	E Europe M
46	5.1 ± 0.4	5.96 ± 0.09	3.7 ± 0.2	4.9 ± 0.2	5.1 ± 0.2	4.7 ± 0.2	4.3 ± 0.3	4.32 ± 0.10	3.0 ± 0.1	3.5 ± 0.1	3.9 ± 0.2	4.2 ± 0.2	E Asia F	E Europe M
47	5.0 ± 0.4	5.88 ± 0.09	3.9 ± 0.2	4.9 ± 0.2	5.0 ± 0.2	4.7 ± 0.2	4.5 ± 0.3	4.3 ± 0.1	2.9 ± 0.2	3.8 ± 0.1	3.8 ± 0.2	4.3 ± 0.2	E Asia F	E Europe M
48	4.9 ± 0.4	6.04 ± 0.10	3.9 ± 0.2	4.9 ± 0.2	5.2 ± 0.2	5.0 ± 0.3	4.4 ± 0.3	4.4 ± 0.1	3.0 ± 0.2	3.6 ± 0.1	3.8 ± 0.2	4.4 ± 0.2	E Asia F	E Europe M
49	4.9 ± 0.4	6.2 ± 0.1	4.1 ± 0.2	4.7 ± 0.2	5.1 ± 0.2	5.2 ± 0.3	4.5 ± 0.3	4.4 ± 0.1	3.2 ± 0.2	3.7 ± 0.1	3.7 ± 0.2	4.0 ± 0.2	E Asia F	E Europe M
50	5.1 ± 0.4	6.2 ± 0.1	3.9 ± 0.2	4.7 ± 0.2	5.2 ± 0.2	5.2 ± 0.3	4.2 ± 0.3	4.3 ± 0.1	3.1 ± 0.2	3.8 ± 0.1	3.8 ± 0.2	4.3 ± 0.2	E Asia F	E Europe M
51	5.2 ± 0.4	6.1 ± 0.1	4.2 ± 0.2	4.7 ± 0.2	5.2 ± 0.2	5.3 ± 0.3	4.4 ± 0.4	4.3 ± 0.1	3.1 ± 0.2	3.8 ± 0.1	3.8 ± 0.2	4.4 ± 0.3	E Asia F	E Europe M
52	5.4 ± 0.5	6.1 ± 0.1	4.1 ± 0.2	4.7 ± 0.2	4.9 ± 0.2	5.2 ± 0.3	4.3 ± 0.3	4.3 ± 0.1	3.4 ± 0.2	3.7 ± 0.1	3.9 ± 0.2	4.5 ± 0.3	E Asia F	E Europe M

Table 90. *Mean absolute error for Application-type images for algorithm innovatrics-002. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	4.2 ± 0.3	2.11 ± 0.07	2.0 ± 0.1	2.5 ± 0.1	1.9 ± 0.1	5.4 ± 0.4	2.4 ± 0.2	1.48 ± 0.07	1.06 ± 0.07	1.56 ± 0.07	1.29 ± 0.10	2.5 ± 0.2	W Africa F	E Europe M
15	4.4 ± 0.3	2.0 ± 0.1	2.0 ± 0.2	2.5 ± 0.2	1.7 ± 0.2	5.5 ± 0.4	2.3 ± 0.2	1.34 ± 0.07	0.87 ± 0.08	1.39 ± 0.09	1.07 ± 0.09	2.8 ± 0.3	W Africa F	E Europe M
16	4.4 ± 0.3	2.0 ± 0.1	2.2 ± 0.2	2.4 ± 0.2	1.8 ± 0.2	5.8 ± 0.4	3.0 ± 0.3	1.31 ± 0.07	1.2 ± 0.1	1.5 ± 0.1	1.0 ± 0.1	2.9 ± 0.3	W Africa F	S E Asia M
17	5.0 ± 0.3	2.2 ± 0.1	2.3 ± 0.2	2.6 ± 0.2	1.9 ± 0.2	5.8 ± 0.3	3.1 ± 0.2	1.55 ± 0.09	1.3 ± 0.1	1.9 ± 0.1	1.4 ± 0.1	3.6 ± 0.4	W Africa F	E Europe M
18	4.6 ± 0.2	2.27 ± 0.08	2.4 ± 0.2	2.7 ± 0.1	2.1 ± 0.1	5.3 ± 0.3	3.4 ± 0.2	1.87 ± 0.07	1.8 ± 0.1	2.46 ± 0.09	1.8 ± 0.1	3.6 ± 0.3	W Africa F	S E Asia M
19	4.7 ± 0.3	2.44 ± 0.08	2.5 ± 0.2	2.8 ± 0.1	2.4 ± 0.1	5.6 ± 0.3	3.7 ± 0.2	2.16 ± 0.07	2.0 ± 0.1	2.72 ± 0.10	2.0 ± 0.1	4.0 ± 0.3	W Africa F	S E Asia M
20	4.6 ± 0.2	2.56 ± 0.09	2.5 ± 0.1	2.9 ± 0.1	2.40 ± 0.10	5.4 ± 0.3	3.8 ± 0.2	2.18 ± 0.07	2.1 ± 0.1	2.88 ± 0.10	2.2 ± 0.1	3.9 ± 0.3	W Africa F	E Europe M
21	4.3 ± 0.2	2.62 ± 0.08	2.5 ± 0.1	2.88 ± 0.08	2.49 ± 0.09	5.0 ± 0.3	3.8 ± 0.2	2.25 ± 0.07	2.2 ± 0.1	2.91 ± 0.10	2.4 ± 0.1	4.0 ± 0.3	W Africa F	E Europe M
22	4.3 ± 0.2	2.52 ± 0.07	2.6 ± 0.1	2.68 ± 0.07	2.52 ± 0.09	4.8 ± 0.2	4.3 ± 0.2	2.25 ± 0.07	2.3 ± 0.1	2.91 ± 0.10	2.2 ± 0.1	4.0 ± 0.2	W Africa F	S E Asia M
23	3.9 ± 0.2	2.39 ± 0.06	2.44 ± 0.10	2.60 ± 0.07	2.46 ± 0.08	4.6 ± 0.2	4.1 ± 0.2	2.24 ± 0.07	2.1 ± 0.1	2.97 ± 0.09	2.3 ± 0.1	4.2 ± 0.2	W Africa F	E Europe M
24	3.9 ± 0.2	2.35 ± 0.06	2.31 ± 0.09	2.44 ± 0.06	2.45 ± 0.07	4.2 ± 0.2	4.1 ± 0.2	2.19 ± 0.07	2.07 ± 0.10	2.83 ± 0.08	2.2 ± 0.1	3.9 ± 0.2	W Africa F	E Europe M
25	3.7 ± 0.2	2.32 ± 0.06	2.41 ± 0.08	2.38 ± 0.06	2.52 ± 0.08	4.1 ± 0.2	4.0 ± 0.2	2.24 ± 0.07	2.0 ± 0.1	2.62 ± 0.08	2.3 ± 0.1	3.9 ± 0.2	W Africa F	E Europe M
26	3.5 ± 0.2	2.40 ± 0.06	2.42 ± 0.08	2.36 ± 0.05	2.59 ± 0.08	3.9 ± 0.2	4.0 ± 0.2	2.14 ± 0.07	2.12 ± 0.10	2.53 ± 0.07	2.4 ± 0.1	3.6 ± 0.2	E Africa M	E Europe M
27	3.5 ± 0.2	2.43 ± 0.05	2.47 ± 0.08	2.60 ± 0.05	2.74 ± 0.08	3.8 ± 0.2	3.9 ± 0.2	2.28 ± 0.07	2.14 ± 0.09	2.52 ± 0.07	2.5 ± 0.1	3.6 ± 0.2	E Africa M	E Europe M
28	3.5 ± 0.2	2.64 ± 0.05	2.58 ± 0.07	2.83 ± 0.05	2.90 ± 0.08	3.6 ± 0.2	3.7 ± 0.2	2.37 ± 0.07	2.17 ± 0.09	2.43 ± 0.06	2.5 ± 0.1	3.5 ± 0.1	E Africa M	E Europe M
29	3.4 ± 0.2	2.78 ± 0.05	2.60 ± 0.07	3.03 ± 0.06	3.07 ± 0.08	3.4 ± 0.1	3.7 ± 0.2	2.43 ± 0.07	2.16 ± 0.09	2.41 ± 0.05	2.6 ± 0.1	3.5 ± 0.1	E Africa M	E Europe M
30	3.3 ± 0.1	2.99 ± 0.06	2.76 ± 0.08	3.27 ± 0.06	3.14 ± 0.09	3.3 ± 0.1	3.7 ± 0.2	2.53 ± 0.07	2.17 ± 0.09	2.44 ± 0.05	2.7 ± 0.1	3.3 ± 0.1	E Africa M	E Europe M
31	3.4 ± 0.1	3.19 ± 0.06	2.87 ± 0.09	3.55 ± 0.06	3.35 ± 0.09	3.2 ± 0.1	3.7 ± 0.2	2.64 ± 0.07	2.24 ± 0.09	2.52 ± 0.05	2.9 ± 0.1	3.3 ± 0.1	E Africa M	E Europe M
32	3.4 ± 0.2	3.35 ± 0.06	2.91 ± 0.09	3.76 ± 0.07	3.5 ± 0.1	3.2 ± 0.1	3.5 ± 0.2	2.74 ± 0.07	2.37 ± 0.10	2.65 ± 0.05	2.9 ± 0.1	3.2 ± 0.1	S Asia F	E Europe M
33	3.5 ± 0.1	3.54 ± 0.07	3.02 ± 0.10	4.03 ± 0.07	3.6 ± 0.1	3.1 ± 0.1	3.7 ± 0.2	2.89 ± 0.08	2.40 ± 0.10	2.74 ± 0.05	3.0 ± 0.1	3.1 ± 0.1	S Asia F	E Europe M
34	3.6 ± 0.2	3.68 ± 0.07	3.2 ± 0.1	4.20 ± 0.08	3.7 ± 0.1	3.1 ± 0.1	3.6 ± 0.2	3.00 ± 0.08	2.47 ± 0.10	2.94 ± 0.06	3.1 ± 0.1	3.1 ± 0.1	S Asia F	E Europe M
35	3.8 ± 0.2	4.01 ± 0.07	3.3 ± 0.1	4.45 ± 0.08	3.9 ± 0.1	3.2 ± 0.1	3.8 ± 0.2	3.08 ± 0.08	2.6 ± 0.1	3.06 ± 0.06	3.3 ± 0.1	3.5 ± 0.1	S Asia F	E Europe M
36	4.0 ± 0.2	4.09 ± 0.07	3.4 ± 0.1	4.62 ± 0.08	4.0 ± 0.1	3.1 ± 0.1	3.9 ± 0.2	3.18 ± 0.08	2.7 ± 0.1	3.24 ± 0.06	3.3 ± 0.1	3.4 ± 0.1	S Asia F	E Europe M
37	3.9 ± 0.2	4.26 ± 0.07	3.4 ± 0.1	4.80 ± 0.09	4.2 ± 0.1	3.6 ± 0.2	3.9 ± 0.2	3.26 ± 0.08	2.8 ± 0.1	3.41 ± 0.06	3.2 ± 0.1	3.4 ± 0.1	S Asia F	E Europe M
38	3.9 ± 0.2	4.50 ± 0.08	3.4 ± 0.1	4.9 ± 0.1	4.1 ± 0.1	3.7 ± 0.2	4.0 ± 0.2	3.29 ± 0.08	2.8 ± 0.1	3.41 ± 0.07	3.3 ± 0.2	3.4 ± 0.1	S Asia F	E Europe M
39	3.9 ± 0.2	4.55 ± 0.08	3.3 ± 0.1	5.0 ± 0.1	4.2 ± 0.1	3.5 ± 0.2	3.9 ± 0.2	3.37 ± 0.09	2.9 ± 0.1	3.44 ± 0.07	3.3 ± 0.2	3.5 ± 0.1	S Asia F	E Europe M
40	4.1 ± 0.2	4.69 ± 0.08	3.3 ± 0.1	5.0 ± 0.1	4.4 ± 0.1	3.9 ± 0.2	4.2 ± 0.2	3.34 ± 0.09	3.0 ± 0.1	3.48 ± 0.08	3.3 ± 0.2	3.7 ± 0.2	S Asia F	E Europe M
41	4.3 ± 0.2	4.78 ± 0.09	3.3 ± 0.1	5.1 ± 0.1	4.4 ± 0.1	4.0 ± 0.2	4.2 ± 0.2	3.35 ± 0.09	2.9 ± 0.1	3.58 ± 0.08	3.5 ± 0.2	3.9 ± 0.2	S Asia F	E Europe M
42	4.3 ± 0.3	4.82 ± 0.08	3.3 ± 0.2	4.8 ± 0.1	4.3 ± 0.2	4.1 ± 0.2	4.3 ± 0.2	3.47 ± 0.09	2.9 ± 0.1	3.55 ± 0.09	3.5 ± 0.2	3.9 ± 0.2	E Asia F	E Europe M
43	4.3 ± 0.3	4.96 ± 0.09	3.3 ± 0.1	5.0 ± 0.1	4.5 ± 0.2	4.1 ± 0.2	4.3 ± 0.3	3.60 ± 0.09	2.8 ± 0.1	3.54 ± 0.09	3.6 ± 0.2	4.0 ± 0.2	S Asia F	E Europe M
44	4.9 ± 0.3	5.14 ± 0.09	3.3 ± 0.2	4.9 ± 0.2	4.4 ± 0.2	4.4 ± 0.2	4.2 ± 0.3	3.63 ± 0.09	2.8 ± 0.1	3.7 ± 0.1	3.7 ± 0.2	4.0 ± 0.2	E Asia F	E Europe M
45	4.5 ± 0.3	5.19 ± 0.09	3.4 ± 0.2	4.9 ± 0.2	4.4 ± 0.2	4.4 ± 0.2	4.5 ± 0.3	3.76 ± 0.09	2.9 ± 0.1	3.6 ± 0.1	3.8 ± 0.2	4.4 ± 0.2	E Asia F	E Europe M
46	5.1 ± 0.4	5.40 ± 0.10	3.4 ± 0.2	4.6 ± 0.2	4.8 ± 0.2	4.3 ± 0.2	4.6 ± 0.3	3.76 ± 0.09	3.2 ± 0.2	3.5 ± 0.1	3.8 ± 0.2	4.3 ± 0.2	E Asia F	E Europe M
47	5.0 ± 0.4	5.3 ± 0.1	3.5 ± 0.2	4.7 ± 0.2	4.5 ± 0.2	4.6 ± 0.2	5.0 ± 0.4	3.8 ± 0.1	3.0 ± 0.2	3.7 ± 0.1	3.8 ± 0.2	4.5 ± 0.2	E Asia F	E Europe M
48	4.9 ± 0.4	5.4 ± 0.1	3.6 ± 0.2	4.8 ± 0.2	4.7 ± 0.2	4.7 ± 0.3	4.9 ± 0.4	3.81 ± 0.10	3.3 ± 0.2	3.7 ± 0.1	3.9 ± 0.2	4.6 ± 0.2	E Asia F	E Europe M
49	4.9 ± 0.4	5.5 ± 0.1	4.0 ± 0.2	4.6 ± 0.2	4.6 ± 0.2	5.2 ± 0.3	4.9 ± 0.4	3.9 ± 0.1	3.4 ± 0.2	3.8 ± 0.1	3.6 ± 0.2	4.3 ± 0.2	E Asia F	E Europe M
50	5.3 ± 0.4	5.5 ± 0.1	3.9 ± 0.2	4.6 ± 0.2	4.7 ± 0.2	5.0 ± 0.3	4.8 ± 0.4	4.0 ± 0.1	3.5 ± 0.2	4.0 ± 0.1	3.9 ± 0.2	4.5 ± 0.2	E Asia F	E Europe M
51	5.5 ± 0.4	5.6 ± 0.1	4.2 ± 0.2	4.6 ± 0.2	4.9 ± 0.2	5.2 ± 0.3	5.1 ± 0.4	4.0 ± 0.1	3.4 ± 0.2	4.2 ± 0.2	3.8 ± 0.2	4.8 ± 0.3	E Asia F	E Europe M
52	5.7 ± 0.4	5.6 ± 0.1	4.2 ± 0.2	4.9 ± 0.2	4.7 ± 0.2	5.1 ± 0.3	5.0 ± 0.4	3.9 ± 0.1	3.8 ± 0.2	4.1 ± 0.1	4.0 ± 0.2	5.0 ± 0.3	E Africa F	E Europe M

Table 91. *Mean absolute error for Application-type images for algorithm jumio-000. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	5.6 ± 0.3	4.6 ± 0.1	4.7 ± 0.3	4.8 ± 0.1	4.9 ± 0.3	6.0 ± 0.3	4.3 ± 0.2	3.23 ± 0.10	4.0 ± 0.4	3.1 ± 0.1	3.2 ± 0.2	3.8 ± 0.3	W Africa F	S Asia M
15	5.9 ± 0.3	4.5 ± 0.1	4.7 ± 0.3	4.9 ± 0.2	4.9 ± 0.3	6.0 ± 0.4	3.4 ± 0.2	3.09 ± 0.08	4.0 ± 0.5	2.7 ± 0.1	3.1 ± 0.1	3.5 ± 0.3	W Africa F	S Asia M
16	5.4 ± 0.4	4.2 ± 0.1	4.7 ± 0.3	4.7 ± 0.2	4.9 ± 0.3	6.2 ± 0.5	3.1 ± 0.2	2.73 ± 0.08	4.0 ± 0.5	2.39 ± 0.10	2.6 ± 0.2	3.1 ± 0.3	W Africa F	S Asia M
17	5.5 ± 0.4	4.1 ± 0.1	4.6 ± 0.3	4.6 ± 0.2	4.7 ± 0.3	5.9 ± 0.4	2.6 ± 0.2	2.50 ± 0.10	3.6 ± 0.5	2.3 ± 0.1	2.5 ± 0.2	3.2 ± 0.4	W Africa F	S Asia M
18	5.0 ± 0.3	3.8 ± 0.1	4.1 ± 0.3	4.1 ± 0.1	4.3 ± 0.2	5.8 ± 0.4	2.6 ± 0.2	2.30 ± 0.08	3.3 ± 0.3	2.13 ± 0.10	2.2 ± 0.2	2.9 ± 0.2	W Africa F	S Asia M
19	5.3 ± 0.3	3.7 ± 0.1	3.9 ± 0.2	4.1 ± 0.1	4.2 ± 0.2	6.0 ± 0.4	2.9 ± 0.2	2.36 ± 0.09	2.8 ± 0.3	2.3 ± 0.1	2.4 ± 0.1	3.3 ± 0.3	W Africa F	S Asia M
20	5.5 ± 0.3	3.6 ± 0.1	3.7 ± 0.2	3.9 ± 0.1	4.1 ± 0.2	5.7 ± 0.3	3.3 ± 0.2	2.39 ± 0.09	2.9 ± 0.3	2.5 ± 0.1	2.5 ± 0.1	3.4 ± 0.3	W Africa F	E Asia M
21	5.3 ± 0.3	3.5 ± 0.1	3.5 ± 0.2	3.7 ± 0.1	4.0 ± 0.1	5.9 ± 0.3	3.4 ± 0.2	2.53 ± 0.08	2.7 ± 0.2	2.63 ± 0.10	2.6 ± 0.1	3.7 ± 0.3	W Africa F	E Asia M
22	5.3 ± 0.3	3.38 ± 0.10	3.3 ± 0.1	3.6 ± 0.1	4.0 ± 0.1	5.7 ± 0.3	4.1 ± 0.2	2.60 ± 0.09	2.6 ± 0.2	2.7 ± 0.1	2.6 ± 0.1	3.5 ± 0.2	W Africa F	S E Asia M
23	5.3 ± 0.2	3.26 ± 0.09	3.3 ± 0.1	3.54 ± 0.10	3.8 ± 0.1	5.9 ± 0.3	3.8 ± 0.2	2.55 ± 0.08	2.4 ± 0.1	2.72 ± 0.10	2.6 ± 0.1	3.8 ± 0.2	W Africa F	E Europe M
24	5.4 ± 0.2	3.22 ± 0.08	3.2 ± 0.1	3.39 ± 0.08	3.7 ± 0.1	5.4 ± 0.2	3.8 ± 0.2	2.57 ± 0.08	2.4 ± 0.1	2.76 ± 0.09	2.6 ± 0.1	3.9 ± 0.2	W Africa F	E Europe M
25	5.3 ± 0.2	3.16 ± 0.07	3.08 ± 0.09	3.30 ± 0.08	3.7 ± 0.1	5.4 ± 0.2	3.9 ± 0.2	2.58 ± 0.08	2.4 ± 0.1	2.66 ± 0.08	2.6 ± 0.1	3.8 ± 0.2	W Africa F	E Europe M
26	5.2 ± 0.2	3.14 ± 0.07	2.95 ± 0.09	3.16 ± 0.07	3.66 ± 0.10	5.2 ± 0.2	3.8 ± 0.2	2.45 ± 0.07	2.3 ± 0.1	2.70 ± 0.07	2.6 ± 0.1	3.6 ± 0.2	E Africa F	E Europe M
27	5.3 ± 0.2	3.08 ± 0.06	2.97 ± 0.09	3.10 ± 0.06	3.56 ± 0.10	5.4 ± 0.2	3.8 ± 0.2	2.50 ± 0.07	2.14 ± 0.09	2.68 ± 0.07	2.8 ± 0.1	3.6 ± 0.2	W Africa F	E Europe M
28	5.0 ± 0.2	3.04 ± 0.06	2.82 ± 0.08	3.11 ± 0.06	3.46 ± 0.09	5.1 ± 0.2	3.5 ± 0.1	2.46 ± 0.08	2.32 ± 0.09	2.65 ± 0.06	2.7 ± 0.1	3.5 ± 0.1	W Africa F	E Europe M
29	5.2 ± 0.2	2.95 ± 0.06	2.84 ± 0.09	3.13 ± 0.06	3.49 ± 0.09	5.0 ± 0.2	3.6 ± 0.2	2.37 ± 0.07	2.17 ± 0.09	2.64 ± 0.06	2.5 ± 0.1	3.6 ± 0.1	E Africa F	E Europe M
30	4.9 ± 0.2	2.89 ± 0.06	2.81 ± 0.08	3.15 ± 0.06	3.42 ± 0.09	4.8 ± 0.2	3.5 ± 0.2	2.39 ± 0.06	2.10 ± 0.09	2.70 ± 0.06	2.7 ± 0.1	3.5 ± 0.1	E Africa F	E Europe M
31	4.9 ± 0.2	2.96 ± 0.06	2.68 ± 0.09	3.11 ± 0.06	3.32 ± 0.09	4.6 ± 0.2	3.5 ± 0.2	2.26 ± 0.07	2.15 ± 0.09	2.75 ± 0.06	2.6 ± 0.1	3.4 ± 0.1	E Africa F	E Europe M
32	5.1 ± 0.2	2.91 ± 0.06	2.72 ± 0.09	3.17 ± 0.07	3.34 ± 0.10	4.8 ± 0.2	3.4 ± 0.2	2.33 ± 0.06	2.15 ± 0.09	2.79 ± 0.05	2.6 ± 0.1	3.4 ± 0.1	E Africa F	E Europe M
33	4.8 ± 0.2	2.88 ± 0.06	2.78 ± 0.10	3.23 ± 0.07	3.25 ± 0.10	4.5 ± 0.2	3.6 ± 0.2	2.35 ± 0.07	2.19 ± 0.09	2.82 ± 0.06	2.5 ± 0.1	3.4 ± 0.1	E Africa F	E Europe M
34	4.8 ± 0.2	2.90 ± 0.06	2.69 ± 0.09	3.19 ± 0.07	3.07 ± 0.09	4.6 ± 0.2	3.5 ± 0.2	2.36 ± 0.07	2.25 ± 0.09	2.91 ± 0.06	2.5 ± 0.1	3.5 ± 0.1	E Africa F	E Europe M
35	4.8 ± 0.2	2.93 ± 0.06	2.76 ± 0.10	3.28 ± 0.07	3.02 ± 0.10	4.4 ± 0.2	3.5 ± 0.2	2.45 ± 0.07	2.2 ± 0.1	2.97 ± 0.06	2.6 ± 0.1	3.6 ± 0.2	E Africa F	E Europe M
36	4.7 ± 0.2	2.86 ± 0.06	2.76 ± 0.10	3.26 ± 0.07	3.00 ± 0.10	4.4 ± 0.2	3.7 ± 0.2	2.42 ± 0.07	2.3 ± 0.1	2.94 ± 0.06	2.6 ± 0.1	3.7 ± 0.2	E Africa F	E Europe M
37	4.7 ± 0.2	2.75 ± 0.06	2.8 ± 0.1	3.41 ± 0.08	2.9 ± 0.1	4.4 ± 0.2	3.6 ± 0.2	2.47 ± 0.07	2.33 ± 0.10	3.03 ± 0.07	2.5 ± 0.1	3.6 ± 0.2	E Africa F	E Europe M
38	4.9 ± 0.2	2.81 ± 0.06	2.8 ± 0.1	3.42 ± 0.08	2.9 ± 0.1	4.3 ± 0.2	3.7 ± 0.2	2.56 ± 0.07	2.4 ± 0.1	3.08 ± 0.07	2.6 ± 0.1	3.8 ± 0.2	E Africa F	E Europe M
39	4.5 ± 0.2	2.85 ± 0.06	2.8 ± 0.1	3.43 ± 0.09	2.82 ± 0.10	4.2 ± 0.2	3.9 ± 0.2	2.58 ± 0.07	2.5 ± 0.1	3.11 ± 0.07	2.6 ± 0.1	3.9 ± 0.2	E Africa F	E Europe M
40	4.5 ± 0.2	2.89 ± 0.06	2.9 ± 0.1	3.38 ± 0.09	2.8 ± 0.1	4.2 ± 0.2	3.9 ± 0.2	2.58 ± 0.07	2.6 ± 0.1	3.22 ± 0.08	2.5 ± 0.1	4.1 ± 0.2	E Africa F	S E Asia M
41	4.6 ± 0.3	2.88 ± 0.06	3.0 ± 0.1	3.46 ± 0.10	2.8 ± 0.1	4.1 ± 0.2	4.0 ± 0.2	2.65 ± 0.07	2.6 ± 0.1	3.13 ± 0.08	2.7 ± 0.1	4.2 ± 0.2	E Africa F	E Europe M
42	4.8 ± 0.3	2.90 ± 0.06	3.0 ± 0.1	3.5 ± 0.1	2.7 ± 0.1	4.1 ± 0.2	4.0 ± 0.2	2.74 ± 0.07	2.7 ± 0.1	3.22 ± 0.08	2.7 ± 0.1	4.1 ± 0.2	E Africa F	S E Asia F
43	4.8 ± 0.3	2.96 ± 0.06	3.2 ± 0.1	3.5 ± 0.1	2.9 ± 0.1	4.1 ± 0.2	4.1 ± 0.2	2.79 ± 0.07	2.7 ± 0.1	3.22 ± 0.09	2.9 ± 0.1	4.3 ± 0.2	E Africa F	E Europe M
44	5.0 ± 0.3	3.02 ± 0.07	3.1 ± 0.1	3.5 ± 0.1	2.9 ± 0.1	4.2 ± 0.2	4.1 ± 0.2	2.89 ± 0.08	2.8 ± 0.1	3.24 ± 0.09	2.9 ± 0.1	4.2 ± 0.2	E Africa F	E Europe M
45	4.7 ± 0.3	3.04 ± 0.07	3.0 ± 0.1	3.4 ± 0.1	2.8 ± 0.1	4.0 ± 0.2	4.2 ± 0.3	2.95 ± 0.08	2.7 ± 0.1	3.25 ± 0.10	3.0 ± 0.1	4.4 ± 0.2	E Africa F	E Europe M
46	4.9 ± 0.3	3.16 ± 0.07	3.1 ± 0.1	3.4 ± 0.1	3.0 ± 0.1	4.0 ± 0.2	4.1 ± 0.3	2.95 ± 0.08	3.0 ± 0.2	3.2 ± 0.1	3.1 ± 0.2	4.3 ± 0.2	E Africa F	E Asia M
47	4.7 ± 0.4	3.14 ± 0.07	3.1 ± 0.2	3.3 ± 0.1	2.9 ± 0.1	4.2 ± 0.2	4.2 ± 0.3	2.98 ± 0.09	2.7 ± 0.2	3.4 ± 0.1	3.1 ± 0.2	4.5 ± 0.2	E Africa F	E Europe M
48	4.6 ± 0.3	3.10 ± 0.08	3.1 ± 0.1	3.4 ± 0.1	3.0 ± 0.1	3.8 ± 0.2	4.4 ± 0.3	2.99 ± 0.08	2.8 ± 0.2	3.3 ± 0.1	3.0 ± 0.2	4.4 ± 0.2	E Africa F	E Europe M
49	4.7 ± 0.3	3.21 ± 0.08	3.0 ± 0.1	3.2 ± 0.1	3.0 ± 0.1	4.0 ± 0.3	4.3 ± 0.3	3.09 ± 0.09	3.0 ± 0.2	3.3 ± 0.1	3.0 ± 0.2	4.2 ± 0.2	E Africa F	E Europe M
50	4.8 ± 0.4	3.20 ± 0.08	2.9 ± 0.1	3.2 ± 0.1	3.0 ± 0.1	3.9 ± 0.2	3.9 ± 0.3	2.99 ± 0.08	2.9 ± 0.2	3.2 ± 0.1	3.1 ± 0.2	4.3 ± 0.2	E Africa F	E Europe M
51	4.4 ± 0.3	3.22 ± 0.08	2.9 ± 0.2	3.1 ± 0.1	3.0 ± 0.1	4.0 ± 0.3	4.2 ± 0.4	3.07 ± 0.09	2.7 ± 0.1	3.5 ± 0.1	3.0 ± 0.2	4.5 ± 0.3	W Africa M	E Europe M
52	4.4 ± 0.4	3.15 ± 0.08	2.9 ± 0.1	3.1 ± 0.1	3.0 ± 0.1	3.8 ± 0.3	4.1 ± 0.3	3.05 ± 0.09	2.9 ± 0.2	3.2 ± 0.1	3.1 ± 0.2	4.4 ± 0.3	W Africa M	E Europe M

Table 92. *Mean absolute error for Application-type images for algorithm neurotechnology-000. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	6.3 ± 0.4	6.0 ± 0.2	4.3 ± 0.2	4.5 ± 0.2	5.1 ± 0.3	9.5 ± 0.5	8.9 ± 0.4	6.7 ± 0.2	4.0 ± 0.2	5.3 ± 0.1	5.8 ± 0.3	11.1 ± 0.5	W Africa M	E Europe M
15	5.7 ± 0.4	6.2 ± 0.2	3.8 ± 0.2	4.5 ± 0.2	5.2 ± 0.3	8.6 ± 0.5	9.0 ± 0.4	6.8 ± 0.1	3.8 ± 0.2	5.4 ± 0.2	6.2 ± 0.3	10.4 ± 0.4	W Africa M	E Europe F
16	6.1 ± 0.4	5.5 ± 0.2	3.9 ± 0.3	4.2 ± 0.2	5.2 ± 0.3	8.6 ± 0.5	9.3 ± 0.3	6.5 ± 0.1	3.9 ± 0.2	5.3 ± 0.2	6.0 ± 0.3	9.9 ± 0.4	W Africa M	E Europe F
17	6.1 ± 0.4	5.2 ± 0.1	3.7 ± 0.3	3.9 ± 0.2	4.8 ± 0.3	8.4 ± 0.4	9.2 ± 0.3	5.9 ± 0.1	3.3 ± 0.2	5.1 ± 0.2	5.6 ± 0.2	9.8 ± 0.4	W Africa M	E Europe M
18	5.3 ± 0.3	4.5 ± 0.1	3.2 ± 0.2	3.4 ± 0.1	4.2 ± 0.2	7.4 ± 0.3	8.6 ± 0.3	5.34 ± 0.10	3.1 ± 0.2	4.7 ± 0.1	5.1 ± 0.2	9.0 ± 0.3	W Africa M	E Europe M
19	5.2 ± 0.3	3.93 ± 0.10	3.0 ± 0.2	3.3 ± 0.1	3.7 ± 0.2	7.1 ± 0.3	8.4 ± 0.3	4.69 ± 0.10	2.5 ± 0.2	4.4 ± 0.1	4.4 ± 0.2	8.5 ± 0.3	W Africa M	E Europe M
20	4.8 ± 0.2	3.4 ± 0.1	2.8 ± 0.2	3.0 ± 0.1	3.3 ± 0.1	6.4 ± 0.3	7.9 ± 0.3	4.06 ± 0.09	2.4 ± 0.2	4.1 ± 0.1	3.7 ± 0.1	8.2 ± 0.3	W Africa M	E Europe M
21	4.6 ± 0.2	3.11 ± 0.09	2.7 ± 0.2	2.90 ± 0.09	3.0 ± 0.1	6.1 ± 0.3	7.4 ± 0.3	3.33 ± 0.08	2.5 ± 0.2	3.6 ± 0.1	3.3 ± 0.1	7.6 ± 0.3	W Africa M	E Europe M
22	4.6 ± 0.2	2.86 ± 0.09	2.8 ± 0.1	2.83 ± 0.09	2.7 ± 0.1	5.5 ± 0.3	7.2 ± 0.2	2.75 ± 0.08	2.5 ± 0.2	3.2 ± 0.1	2.7 ± 0.1	7.0 ± 0.2	E Africa M	E Europe M
23	4.1 ± 0.2	2.72 ± 0.08	3.0 ± 0.1	2.95 ± 0.08	2.7 ± 0.1	4.8 ± 0.2	6.4 ± 0.2	2.43 ± 0.07	2.3 ± 0.1	3.0 ± 0.1	2.3 ± 0.1	6.3 ± 0.2	E Africa M	S E Asia M
24	3.9 ± 0.2	2.82 ± 0.08	3.0 ± 0.1	3.05 ± 0.08	2.61 ± 0.09	4.5 ± 0.2	6.1 ± 0.2	2.09 ± 0.07	2.4 ± 0.1	2.80 ± 0.09	1.94 ± 0.10	5.7 ± 0.2	E Africa M	S E Asia M
25	3.9 ± 0.2	2.98 ± 0.08	3.3 ± 0.1	3.32 ± 0.07	3.0 ± 0.1	4.1 ± 0.2	5.5 ± 0.2	1.90 ± 0.07	2.5 ± 0.1	2.65 ± 0.08	1.99 ± 0.09	5.2 ± 0.2	E Africa M	E Asia M
26	3.9 ± 0.2	3.33 ± 0.08	3.44 ± 0.09	3.70 ± 0.07	3.18 ± 0.10	3.7 ± 0.2	5.0 ± 0.2	1.86 ± 0.07	2.8 ± 0.1	2.64 ± 0.07	2.1 ± 0.1	4.6 ± 0.2	E Africa M	E Asia M
27	4.0 ± 0.2	3.76 ± 0.09	3.62 ± 0.09	4.11 ± 0.08	3.5 ± 0.1	3.4 ± 0.2	4.3 ± 0.2	2.08 ± 0.07	2.9 ± 0.1	2.68 ± 0.06	2.3 ± 0.1	4.0 ± 0.1	E Africa M	E Asia M
28	4.0 ± 0.2	4.16 ± 0.08	3.87 ± 0.10	4.61 ± 0.08	4.0 ± 0.1	3.4 ± 0.2	3.9 ± 0.2	2.46 ± 0.07	3.0 ± 0.1	2.86 ± 0.06	2.7 ± 0.1	3.5 ± 0.1	S Asia F	E Asia M
29	4.0 ± 0.2	4.66 ± 0.08	4.1 ± 0.1	4.98 ± 0.08	4.6 ± 0.1	3.4 ± 0.2	3.6 ± 0.2	2.82 ± 0.07	3.3 ± 0.1	3.09 ± 0.06	3.1 ± 0.1	3.2 ± 0.1	S Asia F	E Asia M
30	4.4 ± 0.2	5.18 ± 0.08	4.4 ± 0.1	5.50 ± 0.08	4.9 ± 0.1	3.5 ± 0.2	3.5 ± 0.2	3.35 ± 0.07	3.3 ± 0.1	3.37 ± 0.06	3.5 ± 0.1	2.9 ± 0.1	S Asia F	W Africa M
31	4.6 ± 0.2	5.72 ± 0.08	4.7 ± 0.1	6.01 ± 0.09	5.4 ± 0.1	3.7 ± 0.2	3.2 ± 0.1	3.89 ± 0.08	3.6 ± 0.1	3.68 ± 0.07	4.1 ± 0.1	2.7 ± 0.1	S Asia F	W Africa M
32	4.7 ± 0.2	6.29 ± 0.09	4.8 ± 0.1	6.49 ± 0.10	5.9 ± 0.1	4.1 ± 0.2	3.1 ± 0.1	4.40 ± 0.08	3.7 ± 0.1	4.01 ± 0.07	4.4 ± 0.1	2.6 ± 0.1	S Asia F	W Africa M
33	5.1 ± 0.2	6.81 ± 0.09	5.1 ± 0.1	7.0 ± 0.1	6.4 ± 0.1	4.2 ± 0.2	3.3 ± 0.2	5.03 ± 0.09	3.6 ± 0.1	4.39 ± 0.07	4.7 ± 0.2	2.7 ± 0.1	S Asia F	W Africa M
34	5.2 ± 0.2	7.27 ± 0.09	5.3 ± 0.2	7.4 ± 0.1	6.8 ± 0.2	4.7 ± 0.2	3.2 ± 0.1	5.47 ± 0.09	3.8 ± 0.1	4.69 ± 0.08	5.3 ± 0.2	2.8 ± 0.1	S Asia F	W Africa M
35	5.5 ± 0.2	7.79 ± 0.10	5.5 ± 0.2	7.9 ± 0.1	7.3 ± 0.2	4.8 ± 0.2	3.4 ± 0.1	5.96 ± 0.10	3.9 ± 0.2	5.10 ± 0.09	5.6 ± 0.2	3.2 ± 0.1	S Asia F	W Africa M
36	6.1 ± 0.3	8.2 ± 0.1	5.6 ± 0.2	8.3 ± 0.1	7.4 ± 0.2	5.2 ± 0.2	3.8 ± 0.2	6.3 ± 0.1	4.1 ± 0.2	5.41 ± 0.09	5.9 ± 0.2	3.6 ± 0.1	S Asia F	W Africa M
37	5.9 ± 0.3	8.6 ± 0.1	5.8 ± 0.2	8.5 ± 0.1	8.0 ± 0.2	5.7 ± 0.2	3.9 ± 0.2	6.6 ± 0.1	4.3 ± 0.2	5.76 ± 0.10	6.2 ± 0.2	3.8 ± 0.1	E Asia F	W Africa M
38	6.2 ± 0.3	9.0 ± 0.1	5.7 ± 0.2	8.8 ± 0.1	8.2 ± 0.2	6.3 ± 0.2	4.2 ± 0.2	7.0 ± 0.1	4.3 ± 0.2	6.1 ± 0.1	6.2 ± 0.2	4.2 ± 0.1	E Asia F	E Africa M
39	6.3 ± 0.3	9.5 ± 0.1	5.9 ± 0.2	9.3 ± 0.2	8.2 ± 0.2	6.1 ± 0.2	4.4 ± 0.2	7.4 ± 0.1	4.4 ± 0.2	6.2 ± 0.1	6.5 ± 0.2	4.7 ± 0.2	E Asia F	E Africa M
40	6.6 ± 0.3	9.7 ± 0.1	5.9 ± 0.2	9.4 ± 0.2	8.7 ± 0.2	6.5 ± 0.2	4.6 ± 0.2	7.6 ± 0.1	4.6 ± 0.2	6.4 ± 0.1	6.5 ± 0.2	5.2 ± 0.2	E Asia F	E Europe M
41	7.2 ± 0.3	9.9 ± 0.1	6.1 ± 0.2	9.6 ± 0.2	9.0 ± 0.2	7.3 ± 0.3	5.0 ± 0.2	7.7 ± 0.1	4.7 ± 0.2	6.6 ± 0.1	6.9 ± 0.2	5.8 ± 0.2	E Asia F	E Europe M
42	6.7 ± 0.3	10.2 ± 0.1	6.1 ± 0.3	9.5 ± 0.2	8.9 ± 0.2	7.1 ± 0.3	5.1 ± 0.3	7.9 ± 0.1	4.5 ± 0.2	6.7 ± 0.1	6.8 ± 0.2	5.8 ± 0.2	E Asia F	E Europe M
43	7.6 ± 0.4	10.3 ± 0.1	6.0 ± 0.3	9.8 ± 0.2	9.2 ± 0.2	7.5 ± 0.3	5.2 ± 0.3	7.9 ± 0.2	4.7 ± 0.2	6.8 ± 0.2	6.9 ± 0.3	6.5 ± 0.2	E Asia F	E Europe M
44	7.6 ± 0.4	10.7 ± 0.1	6.1 ± 0.3	9.8 ± 0.3	8.9 ± 0.3	7.7 ± 0.4	5.4 ± 0.3	8.0 ± 0.2	4.6 ± 0.2	6.8 ± 0.2	6.8 ± 0.3	6.4 ± 0.2	E Asia F	E Europe M
45	7.9 ± 0.4	10.8 ± 0.2	6.1 ± 0.3	9.7 ± 0.3	9.1 ± 0.3	7.6 ± 0.4	5.5 ± 0.3	8.2 ± 0.2	4.6 ± 0.2	6.8 ± 0.2	6.7 ± 0.3	6.9 ± 0.3	E Asia F	E Europe M
46	7.4 ± 0.5	11.1 ± 0.2	5.9 ± 0.3	9.5 ± 0.3	9.3 ± 0.3	8.0 ± 0.4	5.5 ± 0.3	8.1 ± 0.2	4.9 ± 0.3	6.6 ± 0.2	6.3 ± 0.3	7.1 ± 0.3	E Asia F	E Europe M
47	7.2 ± 0.5	10.8 ± 0.2	5.9 ± 0.3	9.6 ± 0.3	8.9 ± 0.3	7.9 ± 0.4	5.6 ± 0.3	8.0 ± 0.2	5.0 ± 0.3	6.5 ± 0.2	6.4 ± 0.3	7.2 ± 0.3	E Asia F	E Europe M
48	7.5 ± 0.5	10.7 ± 0.2	5.7 ± 0.3	9.5 ± 0.3	9.0 ± 0.3	8.0 ± 0.4	6.2 ± 0.4	8.0 ± 0.2	5.0 ± 0.3	6.6 ± 0.2	6.6 ± 0.3	7.9 ± 0.3	E Asia F	E Europe M
49	7.3 ± 0.5	10.9 ± 0.2	6.0 ± 0.3	9.3 ± 0.3	8.5 ± 0.3	8.4 ± 0.5	6.1 ± 0.4	7.9 ± 0.2	5.2 ± 0.3	6.4 ± 0.2	6.0 ± 0.3	7.8 ± 0.3	E Asia F	E Europe M
50	7.8 ± 0.6	10.6 ± 0.2	5.5 ± 0.3	9.1 ± 0.3	8.7 ± 0.3	7.9 ± 0.5	6.3 ± 0.4	7.7 ± 0.2	5.0 ± 0.3	6.6 ± 0.2	6.1 ± 0.3	7.6 ± 0.3	E Asia F	E Europe M
51	7.1 ± 0.5	10.6 ± 0.2	5.7 ± 0.3	8.9 ± 0.3	8.5 ± 0.3	8.2 ± 0.5	6.6 ± 0.5	7.6 ± 0.2	4.8 ± 0.3	6.6 ± 0.2	6.0 ± 0.3	8.2 ± 0.4	E Asia F	E Europe M
52	7.2 ± 0.6	10.5 ± 0.2	5.4 ± 0.3	9.1 ± 0.3	7.7 ± 0.3	8.1 ± 0.5	6.0 ± 0.4	7.3 ± 0.2	4.9 ± 0.3	6.4 ± 0.2	5.9 ± 0.3	8.0 ± 0.4	E Asia F	E Europe M

Table 93. *Mean absolute error for Application-type images for algorithm neurotechnology-001. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	4.5 ± 0.2	6.1 ± 0.2	4.3 ± 0.2	4.5 ± 0.2	5.2 ± 0.3	5.7 ± 0.3	4.8 ± 0.3	6.8 ± 0.1	4.0 ± 0.2	5.3 ± 0.1	5.8 ± 0.3	4.7 ± 0.3	E Asia M	E Europe M
15	4.3 ± 0.3	6.2 ± 0.2	3.8 ± 0.2	4.6 ± 0.2	5.3 ± 0.3	5.0 ± 0.3	4.5 ± 0.3	6.9 ± 0.1	3.8 ± 0.2	5.4 ± 0.2	6.2 ± 0.3	4.9 ± 0.4	E Asia M	E Europe M
16	4.1 ± 0.3	5.6 ± 0.2	4.0 ± 0.3	4.2 ± 0.2	5.3 ± 0.3	5.0 ± 0.4	4.4 ± 0.2	6.5 ± 0.1	4.0 ± 0.2	5.3 ± 0.2	6.1 ± 0.3	4.6 ± 0.3	E Asia M	E Europe M
17	3.7 ± 0.3	5.2 ± 0.1	3.7 ± 0.3	3.9 ± 0.2	4.8 ± 0.3	4.4 ± 0.3	4.6 ± 0.3	6.0 ± 0.1	3.3 ± 0.2	5.0 ± 0.2	5.6 ± 0.2	4.9 ± 0.4	E Asia M	E Europe M
18	3.3 ± 0.2	4.5 ± 0.1	3.3 ± 0.2	3.4 ± 0.1	4.3 ± 0.2	3.7 ± 0.2	4.4 ± 0.3	5.36 ± 0.10	3.1 ± 0.2	4.6 ± 0.1	5.1 ± 0.2	4.1 ± 0.3	E Asia M	E Europe M
19	3.1 ± 0.2	3.96 ± 0.10	3.1 ± 0.2	3.2 ± 0.1	3.7 ± 0.1	3.2 ± 0.2	4.1 ± 0.3	4.73 ± 0.10	2.5 ± 0.2	4.2 ± 0.1	4.4 ± 0.2	3.7 ± 0.3	E Asia M	E Europe M
20	2.9 ± 0.2	3.4 ± 0.1	2.8 ± 0.2	3.0 ± 0.1	3.3 ± 0.1	2.8 ± 0.2	4.1 ± 0.3	4.10 ± 0.09	2.5 ± 0.2	3.9 ± 0.1	3.7 ± 0.1	3.6 ± 0.3	E Asia M	E Europe M
21	2.7 ± 0.2	3.12 ± 0.09	2.8 ± 0.1	2.85 ± 0.09	3.0 ± 0.1	2.6 ± 0.3	3.7 ± 0.3	3.38 ± 0.08	2.5 ± 0.2	3.5 ± 0.1	3.3 ± 0.1	3.3 ± 0.3	E Africa M	E Europe M
22	2.8 ± 0.2	2.85 ± 0.09	2.8 ± 0.1	2.82 ± 0.09	2.7 ± 0.1	2.6 ± 0.2	3.8 ± 0.3	2.79 ± 0.08	2.5 ± 0.2	3.1 ± 0.1	2.7 ± 0.1	3.1 ± 0.3	E Africa M	E Europe M
23	2.7 ± 0.2	2.70 ± 0.08	3.1 ± 0.1	2.94 ± 0.08	2.6 ± 0.1	2.5 ± 0.2	3.4 ± 0.3	2.44 ± 0.07	2.3 ± 0.1	2.8 ± 0.1	2.3 ± 0.1	3.0 ± 0.2	E Africa M	S E Asia M
24	2.9 ± 0.2	2.78 ± 0.08	3.1 ± 0.1	3.03 ± 0.07	2.61 ± 0.09	2.9 ± 0.2	3.4 ± 0.3	2.10 ± 0.07	2.4 ± 0.1	2.73 ± 0.09	1.94 ± 0.10	2.6 ± 0.2	E Africa M	S E Asia M
25	3.4 ± 0.2	2.94 ± 0.08	3.3 ± 0.1	3.31 ± 0.07	2.9 ± 0.1	3.3 ± 0.2	3.4 ± 0.2	1.92 ± 0.07	2.5 ± 0.1	2.59 ± 0.08	1.97 ± 0.09	2.8 ± 0.2	E Africa M	E Asia M
26	3.8 ± 0.2	3.27 ± 0.08	3.45 ± 0.10	3.67 ± 0.07	3.16 ± 0.10	3.5 ± 0.2	3.5 ± 0.2	1.86 ± 0.07	2.8 ± 0.1	2.62 ± 0.07	2.2 ± 0.1	2.9 ± 0.2	E Africa F	E Asia M
27	4.3 ± 0.2	3.72 ± 0.08	3.63 ± 0.10	4.09 ± 0.07	3.5 ± 0.1	4.3 ± 0.1	3.6 ± 0.2	2.06 ± 0.06	2.9 ± 0.1	2.70 ± 0.06	2.3 ± 0.1	3.3 ± 0.2	E Africa F	E Asia M
28	4.9 ± 0.2	4.10 ± 0.08	3.86 ± 0.10	4.59 ± 0.08	4.0 ± 0.1	4.9 ± 0.1	4.0 ± 0.2	2.44 ± 0.07	3.0 ± 0.1	2.89 ± 0.06	2.7 ± 0.1	3.8 ± 0.1	E Africa F	E Asia M
29	5.3 ± 0.1	4.60 ± 0.08	4.1 ± 0.1	4.94 ± 0.08	4.6 ± 0.1	5.4 ± 0.1	4.4 ± 0.1	2.78 ± 0.07	3.3 ± 0.1	3.14 ± 0.06	3.1 ± 0.1	4.2 ± 0.1	W Africa F	E Asia M
30	5.8 ± 0.1	5.14 ± 0.08	4.4 ± 0.1	5.48 ± 0.08	4.9 ± 0.1	5.9 ± 0.1	4.8 ± 0.1	3.31 ± 0.07	3.3 ± 0.1	3.47 ± 0.06	3.5 ± 0.1	4.61 ± 0.10	W Africa F	E Asia M
31	6.3 ± 0.2	5.66 ± 0.08	4.7 ± 0.1	5.98 ± 0.09	5.4 ± 0.1	6.3 ± 0.1	4.8 ± 0.1	3.85 ± 0.08	3.6 ± 0.1	3.79 ± 0.07	4.1 ± 0.1	4.91 ± 0.09	W Africa F	E Europe M
32	6.6 ± 0.2	6.24 ± 0.09	4.8 ± 0.1	6.47 ± 0.10	5.9 ± 0.1	6.6 ± 0.1	5.0 ± 0.1	4.35 ± 0.08	3.6 ± 0.1	4.15 ± 0.07	4.4 ± 0.1	5.1 ± 0.1	W Africa F	E Europe M
33	6.7 ± 0.2	6.75 ± 0.09	5.1 ± 0.1	7.0 ± 0.1	6.4 ± 0.1	6.9 ± 0.2	5.0 ± 0.2	4.98 ± 0.09	3.6 ± 0.1	4.52 ± 0.07	4.7 ± 0.2	5.0 ± 0.1	S Asia F	E Europe M
34	6.8 ± 0.2	7.20 ± 0.09	5.3 ± 0.2	7.4 ± 0.1	6.7 ± 0.2	7.2 ± 0.2	4.9 ± 0.2	5.43 ± 0.09	3.8 ± 0.1	4.84 ± 0.08	5.3 ± 0.2	4.9 ± 0.2	S Asia F	E Europe M
35	6.9 ± 0.2	7.70 ± 0.10	5.4 ± 0.2	7.9 ± 0.1	7.2 ± 0.2	7.2 ± 0.2	4.8 ± 0.2	5.90 ± 0.10	3.8 ± 0.2	5.22 ± 0.09	5.6 ± 0.2	5.1 ± 0.2	S Asia F	E Europe M
36	7.5 ± 0.3	8.11 ± 0.10	5.5 ± 0.2	8.3 ± 0.1	7.3 ± 0.2	7.3 ± 0.3	5.2 ± 0.2	6.2 ± 0.1	4.1 ± 0.2	5.53 ± 0.09	5.8 ± 0.2	5.4 ± 0.2	S Asia F	E Europe M
37	7.3 ± 0.3	8.5 ± 0.1	5.7 ± 0.2	8.5 ± 0.1	8.0 ± 0.2	7.7 ± 0.3	5.0 ± 0.2	6.6 ± 0.1	4.3 ± 0.2	5.9 ± 0.1	6.2 ± 0.2	5.3 ± 0.2	E Asia F	E Europe M
38	7.4 ± 0.3	8.9 ± 0.1	5.7 ± 0.2	8.8 ± 0.2	8.0 ± 0.2	8.0 ± 0.3	5.1 ± 0.3	6.9 ± 0.1	4.2 ± 0.2	6.2 ± 0.1	6.1 ± 0.2	5.4 ± 0.2	E Asia F	E Europe M
39	7.2 ± 0.3	9.4 ± 0.1	5.8 ± 0.2	9.2 ± 0.2	8.2 ± 0.2	7.8 ± 0.3	5.2 ± 0.3	7.3 ± 0.1	4.4 ± 0.2	6.3 ± 0.1	6.4 ± 0.2	5.9 ± 0.2	E Asia F	E Europe M
40	7.4 ± 0.4	9.7 ± 0.1	5.9 ± 0.2	9.3 ± 0.2	8.6 ± 0.2	8.0 ± 0.3	5.3 ± 0.3	7.6 ± 0.1	4.6 ± 0.2	6.5 ± 0.1	6.5 ± 0.2	6.3 ± 0.3	E Asia F	E Europe M
41	8.1 ± 0.4	9.8 ± 0.1	6.1 ± 0.2	9.6 ± 0.2	8.9 ± 0.2	8.8 ± 0.4	5.5 ± 0.3	7.6 ± 0.1	4.6 ± 0.2	6.6 ± 0.1	6.9 ± 0.3	6.8 ± 0.3	E Asia F	E Europe M
42	7.4 ± 0.4	10.1 ± 0.1	6.0 ± 0.3	9.4 ± 0.2	8.8 ± 0.2	8.2 ± 0.4	5.6 ± 0.3	7.8 ± 0.1	4.4 ± 0.2	6.8 ± 0.1	6.7 ± 0.3	6.5 ± 0.3	E Asia F	E Europe M
43	8.1 ± 0.5	10.3 ± 0.1	5.9 ± 0.3	9.7 ± 0.2	9.0 ± 0.2	8.5 ± 0.4	5.4 ± 0.3	7.8 ± 0.2	4.7 ± 0.2	6.9 ± 0.2	6.9 ± 0.3	7.1 ± 0.3	E Asia F	E Europe M
44	8.3 ± 0.5	10.6 ± 0.1	6.0 ± 0.3	9.7 ± 0.3	8.8 ± 0.3	8.4 ± 0.4	5.6 ± 0.3	8.0 ± 0.2	4.7 ± 0.2	6.8 ± 0.2	6.8 ± 0.3	6.9 ± 0.3	E Asia F	E Europe M
45	8.4 ± 0.5	10.6 ± 0.2	6.0 ± 0.3	9.7 ± 0.3	9.0 ± 0.3	8.1 ± 0.4	5.7 ± 0.3	8.1 ± 0.2	4.6 ± 0.2	6.8 ± 0.2	6.7 ± 0.3	7.4 ± 0.3	E Asia F	E Europe M
46	7.8 ± 0.5	10.9 ± 0.2	5.8 ± 0.3	9.4 ± 0.3	9.2 ± 0.3	8.6 ± 0.4	5.7 ± 0.4	8.1 ± 0.2	4.9 ± 0.3	6.6 ± 0.2	6.3 ± 0.3	7.5 ± 0.3	E Asia F	E Europe M
47	7.3 ± 0.5	10.7 ± 0.2	5.8 ± 0.3	9.5 ± 0.3	8.7 ± 0.3	8.3 ± 0.5	5.6 ± 0.3	7.9 ± 0.2	5.0 ± 0.3	6.6 ± 0.2	6.4 ± 0.3	7.5 ± 0.3	E Asia F	E Europe M
48	7.8 ± 0.6	10.6 ± 0.2	5.7 ± 0.3	9.4 ± 0.3	8.8 ± 0.3	8.3 ± 0.5	6.3 ± 0.4	7.8 ± 0.2	4.9 ± 0.3	6.6 ± 0.2	6.5 ± 0.3	8.2 ± 0.4	E Asia F	E Europe M
49	7.7 ± 0.6	10.8 ± 0.2	5.9 ± 0.3	9.2 ± 0.3	8.4 ± 0.3	8.8 ± 0.5	6.3 ± 0.4	7.8 ± 0.2	5.1 ± 0.3	6.4 ± 0.2	6.1 ± 0.3	8.0 ± 0.4	E Asia F	E Europe M
50	7.9 ± 0.7	10.5 ± 0.2	5.4 ± 0.3	9.1 ± 0.3	8.6 ± 0.3	8.2 ± 0.5	6.4 ± 0.4	7.7 ± 0.2	5.0 ± 0.3	6.6 ± 0.2	6.0 ± 0.3	7.8 ± 0.3	E Asia F	E Europe M
51	7.2 ± 0.6	10.5 ± 0.2	5.7 ± 0.3	8.9 ± 0.3	8.3 ± 0.3	8.5 ± 0.5	6.7 ± 0.5	7.5 ± 0.2	4.8 ± 0.3	6.5 ± 0.2	5.8 ± 0.3	8.4 ± 0.4	E Asia F	E Europe M
52	7.3 ± 0.6	10.4 ± 0.2	5.4 ± 0.3	9.0 ± 0.3	7.5 ± 0.3	8.3 ± 0.5	5.9 ± 0.4	7.2 ± 0.2	4.8 ± 0.3	6.4 ± 0.2	5.8 ± 0.3	8.1 ± 0.4	E Asia F	E Europe M

Table 94. *Mean absolute error for Application-type images for algorithm nominder-000. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	3.9 ± 0.3	3.7 ± 0.1	2.8 ± 0.2	2.5 ± 0.1	3.2 ± 0.3	4.6 ± 0.5	2.2 ± 0.2	2.5 ± 0.1	1.8 ± 0.2	1.8 ± 0.1	2.0 ± 0.2	2.5 ± 0.3	W Africa F	E Europe M
15	4.1 ± 0.3	4.0 ± 0.1	2.8 ± 0.2	3.1 ± 0.2	3.6 ± 0.3	4.8 ± 0.5	2.3 ± 0.2	2.9 ± 0.1	1.8 ± 0.2	2.3 ± 0.1	2.7 ± 0.2	2.9 ± 0.3	W Africa F	E Europe M
16	4.0 ± 0.3	4.1 ± 0.1	2.9 ± 0.2	3.2 ± 0.2	3.8 ± 0.3	5.3 ± 0.5	2.8 ± 0.3	3.2 ± 0.1	2.0 ± 0.2	2.7 ± 0.1	3.0 ± 0.2	3.2 ± 0.3	W Africa F	E Europe M
17	4.6 ± 0.3	4.0 ± 0.1	3.0 ± 0.2	3.4 ± 0.1	3.7 ± 0.3	5.3 ± 0.4	3.1 ± 0.3	3.4 ± 0.1	1.8 ± 0.2	3.2 ± 0.2	3.0 ± 0.2	3.7 ± 0.4	W Africa F	E Europe M
18	4.2 ± 0.2	3.71 ± 0.10	2.8 ± 0.2	3.1 ± 0.1	3.3 ± 0.2	5.2 ± 0.4	3.3 ± 0.2	3.36 ± 0.09	2.1 ± 0.2	3.4 ± 0.1	3.2 ± 0.2	3.7 ± 0.2	W Africa F	E Europe M
19	4.1 ± 0.3	3.43 ± 0.09	2.8 ± 0.2	3.0 ± 0.1	3.2 ± 0.1	5.5 ± 0.3	3.4 ± 0.2	3.3 ± 0.1	2.3 ± 0.2	3.5 ± 0.1	3.1 ± 0.2	3.9 ± 0.3	W Africa F	E Europe M
20	4.0 ± 0.2	3.2 ± 0.1	2.6 ± 0.2	3.0 ± 0.1	3.0 ± 0.1	5.3 ± 0.3	3.6 ± 0.2	3.13 ± 0.10	2.3 ± 0.2	3.5 ± 0.1	3.0 ± 0.2	4.1 ± 0.3	W Africa F	E Europe M
21	3.9 ± 0.2	2.78 ± 0.09	2.5 ± 0.1	2.84 ± 0.09	2.7 ± 0.1	5.3 ± 0.3	3.6 ± 0.2	2.88 ± 0.09	2.4 ± 0.2	3.4 ± 0.1	2.8 ± 0.2	4.0 ± 0.3	W Africa F	E Europe M
22	3.9 ± 0.2	2.49 ± 0.08	2.5 ± 0.1	2.72 ± 0.09	2.6 ± 0.1	4.9 ± 0.3	4.0 ± 0.2	2.69 ± 0.10	2.6 ± 0.2	3.4 ± 0.1	2.5 ± 0.1	3.8 ± 0.3	W Africa F	E Europe F
23	3.6 ± 0.2	2.35 ± 0.07	2.5 ± 0.1	2.70 ± 0.08	2.39 ± 0.10	5.0 ± 0.3	3.8 ± 0.2	2.58 ± 0.09	2.6 ± 0.2	3.4 ± 0.1	2.6 ± 0.1	3.8 ± 0.2	W Africa F	E Asia F
24	3.8 ± 0.2	2.32 ± 0.06	2.45 ± 0.09	2.75 ± 0.07	2.42 ± 0.08	4.6 ± 0.2	3.8 ± 0.2	2.54 ± 0.09	2.6 ± 0.1	3.5 ± 0.1	2.4 ± 0.1	3.8 ± 0.2	W Africa F	E Asia F
25	3.8 ± 0.2	2.44 ± 0.06	2.62 ± 0.08	2.97 ± 0.06	2.67 ± 0.08	4.8 ± 0.2	4.0 ± 0.2	2.83 ± 0.09	2.7 ± 0.1	3.49 ± 0.09	2.8 ± 0.1	3.8 ± 0.2	W Africa F	E Asia F
26	3.8 ± 0.2	2.60 ± 0.05	2.74 ± 0.08	3.12 ± 0.06	2.78 ± 0.07	4.5 ± 0.2	3.9 ± 0.2	2.72 ± 0.08	2.9 ± 0.1	3.58 ± 0.08	2.9 ± 0.1	3.8 ± 0.2	W Africa F	E Asia F
27	3.9 ± 0.2	2.69 ± 0.05	2.87 ± 0.09	3.30 ± 0.06	2.86 ± 0.08	4.3 ± 0.2	3.8 ± 0.2	2.87 ± 0.08	3.0 ± 0.1	3.43 ± 0.08	3.0 ± 0.1	3.7 ± 0.2	W Africa F	E Asia F
28	3.8 ± 0.2	2.83 ± 0.05	2.81 ± 0.08	3.52 ± 0.06	3.05 ± 0.08	4.2 ± 0.2	3.9 ± 0.2	2.96 ± 0.08	3.0 ± 0.1	3.32 ± 0.07	3.0 ± 0.1	3.7 ± 0.1	W Africa F	E Europe F
29	3.9 ± 0.2	2.89 ± 0.05	2.94 ± 0.09	3.64 ± 0.07	3.19 ± 0.08	3.9 ± 0.1	3.8 ± 0.2	2.82 ± 0.07	2.9 ± 0.1	3.19 ± 0.06	3.1 ± 0.1	3.7 ± 0.1	E Africa F	E Asia M
30	3.8 ± 0.2	3.06 ± 0.06	3.00 ± 0.09	3.90 ± 0.07	3.20 ± 0.09	3.9 ± 0.2	3.8 ± 0.2	2.90 ± 0.07	2.8 ± 0.1	3.09 ± 0.06	3.0 ± 0.1	3.7 ± 0.1	S Asia F	E Europe M
31	3.8 ± 0.2	3.20 ± 0.06	3.14 ± 0.10	4.10 ± 0.08	3.33 ± 0.09	3.7 ± 0.1	3.8 ± 0.2	2.91 ± 0.08	2.7 ± 0.1	3.02 ± 0.06	3.1 ± 0.1	3.6 ± 0.1	S Asia F	E Europe M
32	3.9 ± 0.2	3.33 ± 0.06	3.13 ± 0.10	4.26 ± 0.08	3.4 ± 0.1	3.7 ± 0.1	3.6 ± 0.2	2.89 ± 0.08	2.6 ± 0.1	2.92 ± 0.06	3.0 ± 0.1	3.5 ± 0.1	S Asia F	E Europe M
33	4.0 ± 0.2	3.49 ± 0.07	3.3 ± 0.1	4.42 ± 0.08	3.6 ± 0.1	3.5 ± 0.2	3.7 ± 0.2	2.85 ± 0.08	2.4 ± 0.1	2.93 ± 0.06	3.0 ± 0.1	3.4 ± 0.1	S Asia F	E Europe M
34	4.0 ± 0.2	3.63 ± 0.07	3.4 ± 0.1	4.66 ± 0.09	3.7 ± 0.1	3.5 ± 0.1	3.6 ± 0.2	2.97 ± 0.08	2.6 ± 0.1	3.06 ± 0.06	3.1 ± 0.2	3.6 ± 0.1	S Asia F	E Europe M
35	4.2 ± 0.2	3.92 ± 0.07	3.5 ± 0.1	4.85 ± 0.09	3.9 ± 0.1	3.6 ± 0.2	3.7 ± 0.2	2.96 ± 0.08	2.5 ± 0.1	3.16 ± 0.06	3.2 ± 0.2	3.7 ± 0.1	S Asia F	E Europe M
36	4.4 ± 0.2	4.06 ± 0.08	3.5 ± 0.1	5.11 ± 0.10	3.9 ± 0.1	3.5 ± 0.2	3.9 ± 0.2	3.06 ± 0.08	2.5 ± 0.1	3.25 ± 0.06	3.2 ± 0.2	3.6 ± 0.1	S Asia F	E Europe M
37	4.4 ± 0.2	4.23 ± 0.08	3.5 ± 0.1	5.2 ± 0.1	4.2 ± 0.1	3.8 ± 0.2	3.8 ± 0.2	3.14 ± 0.08	2.6 ± 0.1	3.33 ± 0.07	3.3 ± 0.2	3.5 ± 0.1	S Asia F	E Europe M
38	4.5 ± 0.2	4.38 ± 0.08	3.6 ± 0.1	5.3 ± 0.1	4.3 ± 0.1	4.1 ± 0.2	3.8 ± 0.2	3.20 ± 0.09	2.6 ± 0.1	3.31 ± 0.07	3.4 ± 0.2	3.8 ± 0.2	S Asia F	E Europe M
39	4.4 ± 0.2	4.57 ± 0.08	3.4 ± 0.1	5.5 ± 0.1	4.3 ± 0.1	4.0 ± 0.2	3.8 ± 0.2	3.20 ± 0.09	2.7 ± 0.1	3.42 ± 0.07	3.5 ± 0.2	3.9 ± 0.2	S Asia F	E Europe M
40	4.8 ± 0.3	4.67 ± 0.09	3.4 ± 0.1	5.5 ± 0.1	4.5 ± 0.1	4.3 ± 0.2	4.0 ± 0.2	3.23 ± 0.09	2.8 ± 0.1	3.42 ± 0.08	3.4 ± 0.2	3.9 ± 0.2	S Asia F	E Europe M
41	5.0 ± 0.3	4.78 ± 0.09	3.4 ± 0.1	5.7 ± 0.1	4.5 ± 0.2	4.6 ± 0.2	4.1 ± 0.2	3.35 ± 0.09	2.8 ± 0.1	3.53 ± 0.09	3.6 ± 0.2	4.2 ± 0.2	S Asia F	E Europe M
42	4.9 ± 0.3	4.93 ± 0.09	3.5 ± 0.2	5.4 ± 0.2	4.6 ± 0.2	4.6 ± 0.2	3.9 ± 0.2	3.34 ± 0.09	3.0 ± 0.1	3.52 ± 0.09	3.5 ± 0.2	4.2 ± 0.2	S Asia F	E Europe M
43	5.0 ± 0.3	5.19 ± 0.09	3.4 ± 0.1	5.7 ± 0.2	4.9 ± 0.2	4.9 ± 0.2	4.1 ± 0.2	3.41 ± 0.09	3.0 ± 0.2	3.52 ± 0.10	3.7 ± 0.2	4.5 ± 0.2	S Asia F	E Europe M
44	5.5 ± 0.3	5.41 ± 0.09	3.4 ± 0.2	5.7 ± 0.2	4.9 ± 0.2	5.5 ± 0.3	3.9 ± 0.2	3.53 ± 0.09	3.0 ± 0.2	3.6 ± 0.1	3.7 ± 0.2	4.3 ± 0.2	S Asia F	E Europe M
45	5.5 ± 0.3	5.58 ± 0.10	3.4 ± 0.2	5.8 ± 0.2	5.0 ± 0.2	5.3 ± 0.3	4.1 ± 0.2	3.73 ± 0.10	2.9 ± 0.2	3.6 ± 0.1	3.8 ± 0.2	4.7 ± 0.2	S Asia F	E Europe M
46	5.6 ± 0.3	5.84 ± 0.10	3.4 ± 0.2	5.6 ± 0.2	5.3 ± 0.2	5.5 ± 0.3	4.3 ± 0.3	3.81 ± 0.10	3.3 ± 0.2	3.6 ± 0.1	3.9 ± 0.2	4.6 ± 0.2	E Asia F	E Europe M
47	5.2 ± 0.4	5.8 ± 0.1	3.5 ± 0.2	5.6 ± 0.2	5.3 ± 0.2	5.6 ± 0.3	4.0 ± 0.2	3.9 ± 0.1	3.1 ± 0.2	3.8 ± 0.1	3.8 ± 0.2	4.7 ± 0.2	E Asia F	E Europe M
48	5.6 ± 0.4	5.9 ± 0.1	3.4 ± 0.2	5.6 ± 0.2	5.3 ± 0.2	5.8 ± 0.3	4.2 ± 0.3	3.85 ± 0.10	3.2 ± 0.2	3.6 ± 0.1	3.8 ± 0.2	5.0 ± 0.3	E Asia F	E Europe M
49	5.4 ± 0.4	6.1 ± 0.1	3.4 ± 0.2	5.5 ± 0.2	5.1 ± 0.2	6.2 ± 0.3	3.9 ± 0.3	3.8 ± 0.1	3.2 ± 0.2	3.6 ± 0.1	3.6 ± 0.2	4.9 ± 0.3	W Africa F	E Europe M
50	5.9 ± 0.5	6.1 ± 0.1	3.3 ± 0.2	5.3 ± 0.2	5.5 ± 0.2	6.2 ± 0.3	3.9 ± 0.3	3.8 ± 0.1	3.1 ± 0.2	3.5 ± 0.1	3.6 ± 0.2	5.1 ± 0.3	W Africa F	E Europe M
51	5.2 ± 0.4	6.1 ± 0.1	3.3 ± 0.2	5.3 ± 0.2	5.5 ± 0.2	6.3 ± 0.4	4.2 ± 0.4	3.8 ± 0.1	2.8 ± 0.2	3.5 ± 0.2	3.6 ± 0.2	5.3 ± 0.3	W Africa F	E Europe M
52	5.4 ± 0.4	6.2 ± 0.1	3.4 ± 0.2	5.5 ± 0.2	5.3 ± 0.2	6.7 ± 0.4	3.8 ± 0.4	3.8 ± 0.1	3.1 ± 0.2	3.4 ± 0.1	3.5 ± 0.2	5.1 ± 0.3	W Africa F	E Europe M

Table 95. *Mean absolute error for Application-type images for algorithm nominder-001. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	4.2 ± 0.2	4.1 ± 0.1	3.8 ± 0.2	3.7 ± 0.1	3.8 ± 0.2	5.4 ± 0.3	3.0 ± 0.2	3.2 ± 0.1	2.5 ± 0.2	2.47 ± 0.09	2.8 ± 0.2	3.2 ± 0.2	W Africa F	E Europe M
15	4.0 ± 0.2	4.1 ± 0.1	3.4 ± 0.2	3.8 ± 0.2	4.0 ± 0.2	5.3 ± 0.3	2.7 ± 0.2	3.5 ± 0.1	2.3 ± 0.2	2.5 ± 0.1	3.2 ± 0.2	3.1 ± 0.2	W Africa F	E Europe M
16	3.8 ± 0.2	4.0 ± 0.1	3.4 ± 0.2	3.6 ± 0.1	3.9 ± 0.2	5.3 ± 0.4	2.7 ± 0.2	3.28 ± 0.09	2.1 ± 0.2	2.5 ± 0.1	3.0 ± 0.2	2.6 ± 0.2	W Africa F	E Europe M
17	3.9 ± 0.3	3.6 ± 0.1	2.9 ± 0.2	3.4 ± 0.1	3.4 ± 0.2	5.0 ± 0.3	2.3 ± 0.2	3.1 ± 0.1	1.7 ± 0.2	2.4 ± 0.1	2.7 ± 0.2	2.8 ± 0.3	W Africa F	E Europe M
18	3.3 ± 0.2	3.14 ± 0.08	2.5 ± 0.2	2.85 ± 0.09	3.1 ± 0.1	4.7 ± 0.3	2.3 ± 0.2	2.82 ± 0.08	1.6 ± 0.1	2.21 ± 0.09	2.5 ± 0.2	2.5 ± 0.2	W Africa F	E Europe M
19	3.4 ± 0.2	2.71 ± 0.08	2.3 ± 0.2	2.56 ± 0.10	2.7 ± 0.1	4.7 ± 0.3	2.4 ± 0.2	2.61 ± 0.09	1.6 ± 0.1	2.17 ± 0.09	2.2 ± 0.1	2.7 ± 0.3	W Africa F	E Europe M
20	3.2 ± 0.2	2.46 ± 0.09	2.0 ± 0.1	2.3 ± 0.1	2.4 ± 0.1	4.3 ± 0.3	2.6 ± 0.2	2.32 ± 0.08	1.7 ± 0.2	2.24 ± 0.10	2.2 ± 0.1	2.9 ± 0.3	W Africa F	E Europe M
21	3.0 ± 0.2	2.08 ± 0.07	2.0 ± 0.1	2.17 ± 0.09	2.1 ± 0.1	4.1 ± 0.3	2.7 ± 0.2	2.17 ± 0.07	1.8 ± 0.1	2.23 ± 0.09	2.1 ± 0.1	3.0 ± 0.2	W Africa F	E Europe M
22	3.1 ± 0.2	1.80 ± 0.06	2.05 ± 0.10	2.06 ± 0.07	2.07 ± 0.09	3.8 ± 0.2	3.3 ± 0.2	2.05 ± 0.07	1.9 ± 0.1	2.35 ± 0.10	1.83 ± 0.10	2.9 ± 0.2	W Africa F	E Asia F
23	2.9 ± 0.2	1.78 ± 0.06	2.15 ± 0.09	2.12 ± 0.07	1.98 ± 0.08	3.9 ± 0.2	3.4 ± 0.2	2.00 ± 0.07	1.9 ± 0.1	2.46 ± 0.09	2.0 ± 0.1	3.2 ± 0.2	W Africa F	E Asia F
24	3.0 ± 0.2	1.88 ± 0.05	2.20 ± 0.07	2.28 ± 0.06	2.07 ± 0.07	3.7 ± 0.2	3.4 ± 0.2	2.01 ± 0.07	2.1 ± 0.1	2.60 ± 0.09	1.92 ± 0.09	3.2 ± 0.2	W Africa F	E Asia F
25	3.1 ± 0.1	2.06 ± 0.05	2.39 ± 0.07	2.47 ± 0.05	2.31 ± 0.07	3.7 ± 0.2	3.5 ± 0.2	2.16 ± 0.07	2.1 ± 0.1	2.63 ± 0.08	2.08 ± 0.09	3.3 ± 0.2	W Africa F	E Asia F
26	3.1 ± 0.1	2.31 ± 0.05	2.54 ± 0.07	2.70 ± 0.05	2.50 ± 0.07	3.6 ± 0.2	3.4 ± 0.2	2.07 ± 0.06	2.17 ± 0.10	2.76 ± 0.07	2.19 ± 0.09	3.3 ± 0.2	W Africa F	E Asia M
27	3.2 ± 0.1	2.51 ± 0.05	2.67 ± 0.08	2.94 ± 0.05	2.71 ± 0.07	3.8 ± 0.2	3.4 ± 0.2	2.27 ± 0.06	2.31 ± 0.10	2.73 ± 0.07	2.34 ± 0.10	3.3 ± 0.1	W Africa F	E Asia M
28	3.2 ± 0.1	2.79 ± 0.05	2.78 ± 0.07	3.21 ± 0.05	2.84 ± 0.07	3.6 ± 0.2	3.4 ± 0.1	2.35 ± 0.07	2.40 ± 0.10	2.72 ± 0.06	2.39 ± 0.10	3.3 ± 0.1	W Africa F	E Asia M
29	3.4 ± 0.1	3.02 ± 0.05	2.83 ± 0.08	3.38 ± 0.06	3.07 ± 0.08	3.6 ± 0.1	3.5 ± 0.1	2.37 ± 0.06	2.44 ± 0.09	2.72 ± 0.06	2.5 ± 0.1	3.4 ± 0.1	W Africa F	E Asia M
30	3.3 ± 0.1	3.29 ± 0.05	2.91 ± 0.08	3.59 ± 0.06	3.19 ± 0.08	3.6 ± 0.1	3.4 ± 0.1	2.48 ± 0.06	2.40 ± 0.09	2.77 ± 0.05	2.6 ± 0.1	3.4 ± 0.1	W Africa F	E Europe M
31	3.6 ± 0.1	3.54 ± 0.06	3.05 ± 0.09	3.83 ± 0.07	3.30 ± 0.09	3.5 ± 0.1	3.4 ± 0.1	2.61 ± 0.07	2.46 ± 0.09	2.78 ± 0.05	2.7 ± 0.1	3.4 ± 0.1	S Asia F	E Europe M
32	3.7 ± 0.1	3.74 ± 0.06	3.11 ± 0.09	4.00 ± 0.07	3.48 ± 0.10	3.6 ± 0.1	3.3 ± 0.1	2.72 ± 0.07	2.5 ± 0.1	2.74 ± 0.05	2.7 ± 0.1	3.3 ± 0.1	S Asia F	E Europe M
33	3.7 ± 0.1	4.04 ± 0.07	3.18 ± 0.10	4.04 ± 0.07	3.6 ± 0.1	3.4 ± 0.1	3.6 ± 0.2	2.84 ± 0.07	2.31 ± 0.09	2.74 ± 0.06	2.8 ± 0.1	3.3 ± 0.1	S Asia F	E Europe M
34	3.7 ± 0.2	4.19 ± 0.07	3.3 ± 0.1	4.16 ± 0.08	3.6 ± 0.1	3.4 ± 0.1	3.4 ± 0.2	3.07 ± 0.08	2.5 ± 0.1	2.86 ± 0.06	2.9 ± 0.1	3.3 ± 0.1	E Asia F	E Europe M
35	4.0 ± 0.2	4.50 ± 0.08	3.4 ± 0.1	4.28 ± 0.08	3.9 ± 0.1	3.5 ± 0.2	3.5 ± 0.2	3.09 ± 0.08	2.4 ± 0.1	2.93 ± 0.06	3.2 ± 0.1	3.5 ± 0.1	E Asia F	E Europe M
36	4.0 ± 0.2	4.58 ± 0.08	3.4 ± 0.1	4.42 ± 0.09	3.9 ± 0.1	3.6 ± 0.2	3.6 ± 0.2	3.21 ± 0.08	2.4 ± 0.1	3.00 ± 0.06	3.1 ± 0.1	3.6 ± 0.1	E Asia F	E Europe M
37	4.0 ± 0.2	4.72 ± 0.08	3.4 ± 0.1	4.47 ± 0.10	3.9 ± 0.1	3.8 ± 0.2	3.7 ± 0.2	3.41 ± 0.08	2.5 ± 0.1	3.06 ± 0.06	3.3 ± 0.2	3.4 ± 0.1	E Asia F	E Europe M
38	3.9 ± 0.2	4.96 ± 0.08	3.4 ± 0.1	4.54 ± 0.10	4.0 ± 0.1	3.8 ± 0.2	3.5 ± 0.2	3.50 ± 0.09	2.4 ± 0.1	3.13 ± 0.07	3.3 ± 0.2	3.5 ± 0.2	E Asia F	E Europe M
39	4.0 ± 0.2	5.01 ± 0.09	3.5 ± 0.1	4.7 ± 0.1	4.1 ± 0.1	3.9 ± 0.2	3.6 ± 0.2	3.68 ± 0.09	2.6 ± 0.1	3.13 ± 0.07	3.3 ± 0.1	3.5 ± 0.2	E Asia F	E Europe M
40	4.1 ± 0.2	5.11 ± 0.09	3.4 ± 0.1	4.6 ± 0.1	4.1 ± 0.1	3.9 ± 0.2	3.7 ± 0.2	3.71 ± 0.09	2.7 ± 0.1	3.28 ± 0.07	3.3 ± 0.2	3.7 ± 0.2	E Asia F	E Europe M
41	4.3 ± 0.2	5.18 ± 0.09	3.5 ± 0.1	4.9 ± 0.1	4.1 ± 0.1	4.2 ± 0.2	3.8 ± 0.2	3.81 ± 0.09	2.7 ± 0.1	3.30 ± 0.08	3.6 ± 0.2	3.7 ± 0.2	E Asia F	E Europe M
42	4.1 ± 0.2	5.17 ± 0.09	3.5 ± 0.1	4.5 ± 0.1	4.0 ± 0.1	4.1 ± 0.2	3.7 ± 0.2	3.82 ± 0.09	2.7 ± 0.1	3.36 ± 0.08	3.5 ± 0.2	3.7 ± 0.2	E Asia F	E Europe M
43	4.3 ± 0.3	5.38 ± 0.09	3.6 ± 0.2	4.8 ± 0.1	4.3 ± 0.2	4.2 ± 0.2	3.8 ± 0.2	3.98 ± 0.09	2.7 ± 0.1	3.37 ± 0.09	3.6 ± 0.2	3.9 ± 0.2	E Asia F	E Europe M
44	4.5 ± 0.3	5.45 ± 0.10	3.7 ± 0.2	4.8 ± 0.1	4.3 ± 0.2	4.5 ± 0.3	3.7 ± 0.2	4.04 ± 0.09	2.8 ± 0.1	3.47 ± 0.10	3.7 ± 0.2	3.7 ± 0.2	E Asia F	E Europe M
45	4.5 ± 0.3	5.5 ± 0.1	3.5 ± 0.2	4.8 ± 0.2	4.3 ± 0.2	4.3 ± 0.2	3.8 ± 0.2	4.16 ± 0.10	2.9 ± 0.1	3.51 ± 0.10	3.7 ± 0.2	4.0 ± 0.2	E Asia F	E Europe M
46	4.7 ± 0.3	5.7 ± 0.1	3.4 ± 0.2	4.7 ± 0.1	4.5 ± 0.2	4.4 ± 0.2	4.0 ± 0.3	4.2 ± 0.1	3.0 ± 0.1	3.5 ± 0.1	3.8 ± 0.2	3.8 ± 0.2	E Asia F	E Europe M
47	4.4 ± 0.3	5.5 ± 0.1	3.7 ± 0.2	4.7 ± 0.2	4.4 ± 0.2	4.4 ± 0.2	3.9 ± 0.2	4.2 ± 0.1	3.0 ± 0.2	3.7 ± 0.1	3.7 ± 0.2	4.1 ± 0.2	E Asia F	E Europe M
48	4.7 ± 0.4	5.5 ± 0.1	3.5 ± 0.2	4.8 ± 0.2	4.4 ± 0.2	4.5 ± 0.2	4.1 ± 0.3	4.3 ± 0.1	3.0 ± 0.2	3.6 ± 0.1	3.7 ± 0.2	4.0 ± 0.2	E Asia F	E Europe M
49	4.8 ± 0.4	5.6 ± 0.1	3.5 ± 0.2	4.6 ± 0.2	4.2 ± 0.2	4.9 ± 0.3	3.7 ± 0.3	4.3 ± 0.1	3.1 ± 0.2	3.6 ± 0.1	3.6 ± 0.2	3.8 ± 0.2	E Asia F	E Europe M
50	4.8 ± 0.4	5.5 ± 0.1	3.3 ± 0.2	4.6 ± 0.2	4.5 ± 0.2	4.7 ± 0.3	3.6 ± 0.3	4.2 ± 0.1	3.0 ± 0.2	3.5 ± 0.1	3.4 ± 0.2	3.8 ± 0.2	E Asia F	E Europe M
51	4.3 ± 0.3	5.4 ± 0.1	3.4 ± 0.2	4.5 ± 0.2	4.4 ± 0.2	4.8 ± 0.3	3.8 ± 0.3	4.3 ± 0.1	2.7 ± 0.2	3.6 ± 0.2	3.5 ± 0.2	3.7 ± 0.2	E Asia F	E Europe M
52	5.0 ± 0.4	5.4 ± 0.1	3.3 ± 0.2	4.7 ± 0.2	4.3 ± 0.2	4.7 ± 0.3	3.6 ± 0.3	4.3 ± 0.1	3.0 ± 0.2	3.5 ± 0.1	3.6 ± 0.2	3.8 ± 0.3	E Asia F	E Europe M

Table 96. *Mean absolute error for Application-type images for algorithm ondato-000. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	5.5 ± 0.3	5.0 ± 0.1	3.5 ± 0.2	4.6 ± 0.1	4.9 ± 0.2	5.8 ± 0.4	4.1 ± 0.3	3.3 ± 0.1	2.3 ± 0.2	2.8 ± 0.1	3.0 ± 0.2	4.0 ± 0.3	W Africa F	E Europe M
15	5.4 ± 0.3	4.9 ± 0.1	3.4 ± 0.2	4.4 ± 0.2	4.8 ± 0.3	5.9 ± 0.5	3.4 ± 0.3	3.1 ± 0.1	1.9 ± 0.2	2.5 ± 0.1	3.0 ± 0.2	3.6 ± 0.4	W Africa F	E Europe M
16	4.9 ± 0.3	4.6 ± 0.1	3.6 ± 0.3	4.1 ± 0.2	4.7 ± 0.3	6.0 ± 0.5	3.2 ± 0.3	2.9 ± 0.1	1.9 ± 0.2	2.5 ± 0.1	2.8 ± 0.2	3.4 ± 0.4	W Africa F	E Europe M
17	5.1 ± 0.4	4.2 ± 0.1	3.3 ± 0.3	3.9 ± 0.2	4.3 ± 0.3	5.8 ± 0.4	3.1 ± 0.3	3.0 ± 0.1	1.8 ± 0.2	2.8 ± 0.2	2.9 ± 0.2	3.7 ± 0.4	W Africa F	E Europe M
18	4.6 ± 0.3	3.8 ± 0.1	2.9 ± 0.2	3.5 ± 0.1	3.8 ± 0.2	5.6 ± 0.4	3.3 ± 0.2	2.82 ± 0.09	2.0 ± 0.1	2.7 ± 0.1	2.9 ± 0.2	3.7 ± 0.3	W Africa F	E Europe M
19	4.6 ± 0.3	3.50 ± 0.10	2.9 ± 0.2	3.3 ± 0.1	3.4 ± 0.2	5.5 ± 0.4	3.8 ± 0.3	2.83 ± 0.09	2.1 ± 0.1	2.9 ± 0.1	2.9 ± 0.2	4.0 ± 0.4	W Africa F	E Europe M
20	4.5 ± 0.3	3.2 ± 0.1	2.7 ± 0.2	3.1 ± 0.1	3.2 ± 0.1	5.5 ± 0.4	4.0 ± 0.3	2.68 ± 0.09	2.1 ± 0.2	3.0 ± 0.1	2.9 ± 0.1	4.3 ± 0.3	W Africa F	E Europe M
21	4.2 ± 0.2	2.96 ± 0.10	2.5 ± 0.1	2.9 ± 0.1	3.0 ± 0.1	5.5 ± 0.4	4.3 ± 0.3	2.59 ± 0.08	2.0 ± 0.1	3.1 ± 0.1	2.9 ± 0.1	4.5 ± 0.3	W Africa F	E Europe M
22	4.5 ± 0.3	2.66 ± 0.08	2.6 ± 0.1	2.73 ± 0.09	2.8 ± 0.1	5.3 ± 0.3	4.8 ± 0.3	2.51 ± 0.09	2.1 ± 0.1	3.1 ± 0.1	2.6 ± 0.1	4.3 ± 0.3	W Africa F	E Europe M
23	4.4 ± 0.2	2.43 ± 0.07	2.6 ± 0.1	2.74 ± 0.08	2.66 ± 0.10	5.4 ± 0.3	4.7 ± 0.3	2.43 ± 0.08	2.0 ± 0.1	3.1 ± 0.1	2.6 ± 0.1	4.5 ± 0.3	W Africa F	E Europe M
24	4.5 ± 0.2	2.26 ± 0.06	2.51 ± 0.09	2.67 ± 0.07	2.50 ± 0.08	5.0 ± 0.3	4.4 ± 0.2	2.34 ± 0.09	2.1 ± 0.1	3.1 ± 0.1	2.5 ± 0.1	4.4 ± 0.2	W Africa F	E Europe M
25	4.5 ± 0.2	2.25 ± 0.06	2.48 ± 0.08	2.71 ± 0.07	2.50 ± 0.09	5.2 ± 0.3	4.7 ± 0.2	2.34 ± 0.08	2.2 ± 0.1	3.07 ± 0.09	2.4 ± 0.1	4.4 ± 0.2	W Africa F	E Europe M
26	4.5 ± 0.2	2.23 ± 0.05	2.50 ± 0.08	2.77 ± 0.06	2.53 ± 0.08	5.0 ± 0.2	4.5 ± 0.2	2.26 ± 0.07	2.2 ± 0.1	3.00 ± 0.08	2.5 ± 0.1	4.4 ± 0.2	W Africa F	E Europe M
27	4.6 ± 0.2	2.28 ± 0.05	2.65 ± 0.08	2.90 ± 0.06	2.55 ± 0.08	5.1 ± 0.2	4.5 ± 0.2	2.35 ± 0.07	2.26 ± 0.10	2.99 ± 0.08	2.6 ± 0.1	4.3 ± 0.2	W Africa F	E Europe M
28	4.3 ± 0.2	2.37 ± 0.05	2.65 ± 0.08	3.14 ± 0.06	2.70 ± 0.08	4.9 ± 0.2	4.4 ± 0.2	2.45 ± 0.08	2.35 ± 0.10	2.97 ± 0.07	2.7 ± 0.1	4.2 ± 0.2	W Africa F	E Europe M
29	4.6 ± 0.2	2.60 ± 0.05	2.80 ± 0.08	3.28 ± 0.06	2.87 ± 0.08	4.9 ± 0.2	4.4 ± 0.2	2.53 ± 0.07	2.42 ± 0.10	3.00 ± 0.07	2.7 ± 0.1	4.7 ± 0.2	W Africa F	E Europe M
30	4.7 ± 0.2	2.78 ± 0.05	2.83 ± 0.08	3.47 ± 0.06	3.02 ± 0.08	4.9 ± 0.2	4.4 ± 0.2	2.63 ± 0.07	2.5 ± 0.1	3.06 ± 0.06	2.8 ± 0.1	4.5 ± 0.2	W Africa F	E Europe M
31	4.7 ± 0.2	3.00 ± 0.05	2.96 ± 0.09	3.67 ± 0.07	3.15 ± 0.09	5.1 ± 0.2	4.5 ± 0.2	2.76 ± 0.08	2.6 ± 0.1	3.16 ± 0.06	3.0 ± 0.1	4.4 ± 0.2	W Africa F	E Europe M
32	4.9 ± 0.2	3.27 ± 0.06	3.07 ± 0.09	3.88 ± 0.07	3.33 ± 0.10	5.2 ± 0.2	4.2 ± 0.2	2.82 ± 0.07	2.6 ± 0.1	3.21 ± 0.06	3.0 ± 0.1	4.6 ± 0.2	W Africa F	E Europe M
33	5.1 ± 0.2	3.47 ± 0.06	3.16 ± 0.10	4.07 ± 0.08	3.34 ± 0.10	5.1 ± 0.2	4.7 ± 0.2	2.93 ± 0.08	2.6 ± 0.1	3.21 ± 0.06	3.0 ± 0.1	4.6 ± 0.2	W Africa F	E Europe M
34	4.9 ± 0.2	3.68 ± 0.07	3.3 ± 0.1	4.15 ± 0.08	3.4 ± 0.1	5.2 ± 0.2	4.5 ± 0.2	3.02 ± 0.08	2.7 ± 0.1	3.34 ± 0.07	3.0 ± 0.1	4.6 ± 0.2	W Africa F	E Europe M
35	5.2 ± 0.2	3.90 ± 0.07	3.4 ± 0.1	4.34 ± 0.08	3.7 ± 0.1	4.9 ± 0.2	4.7 ± 0.2	3.11 ± 0.08	2.6 ± 0.1	3.41 ± 0.07	3.3 ± 0.2	4.6 ± 0.2	E Africa F	E Europe M
36	5.0 ± 0.2	4.02 ± 0.07	3.5 ± 0.1	4.49 ± 0.09	3.6 ± 0.1	5.2 ± 0.2	4.7 ± 0.2	3.09 ± 0.09	2.8 ± 0.1	3.36 ± 0.07	3.2 ± 0.2	4.7 ± 0.2	W Africa F	E Europe M
37	5.1 ± 0.2	4.12 ± 0.08	3.5 ± 0.1	4.49 ± 0.09	3.5 ± 0.1	5.2 ± 0.2	4.6 ± 0.2	3.07 ± 0.08	2.8 ± 0.1	3.46 ± 0.07	3.2 ± 0.2	4.5 ± 0.2	W Africa F	E Europe M
38	5.1 ± 0.2	4.33 ± 0.08	3.5 ± 0.1	4.6 ± 0.1	3.8 ± 0.1	5.0 ± 0.2	4.5 ± 0.2	3.23 ± 0.09	2.6 ± 0.1	3.40 ± 0.07	3.3 ± 0.2	4.5 ± 0.2	E Africa F	E Europe M
39	5.0 ± 0.2	4.34 ± 0.08	3.5 ± 0.1	4.6 ± 0.1	3.8 ± 0.1	5.2 ± 0.2	4.5 ± 0.2	3.24 ± 0.09	2.9 ± 0.1	3.39 ± 0.08	3.4 ± 0.2	4.4 ± 0.2	W Africa F	E Europe M
40	5.1 ± 0.3	4.49 ± 0.09	3.6 ± 0.1	4.6 ± 0.1	3.9 ± 0.1	5.1 ± 0.2	4.4 ± 0.2	3.30 ± 0.09	2.8 ± 0.1	3.59 ± 0.08	3.2 ± 0.2	4.4 ± 0.2	E Africa F	E Europe M
41	5.0 ± 0.3	4.54 ± 0.09	3.6 ± 0.1	4.6 ± 0.1	4.0 ± 0.1	4.9 ± 0.2	4.5 ± 0.2	3.34 ± 0.09	3.0 ± 0.1	3.54 ± 0.08	3.4 ± 0.2	4.5 ± 0.2	E Africa F	E Europe M
42	5.0 ± 0.3	4.44 ± 0.09	3.7 ± 0.2	4.5 ± 0.1	3.7 ± 0.1	4.8 ± 0.2	4.5 ± 0.2	3.35 ± 0.09	3.1 ± 0.1	3.54 ± 0.09	3.4 ± 0.2	4.5 ± 0.2	E Africa F	E Europe M
43	4.9 ± 0.3	4.56 ± 0.09	3.7 ± 0.2	4.3 ± 0.1	4.1 ± 0.2	4.8 ± 0.2	4.6 ± 0.2	3.38 ± 0.09	3.0 ± 0.1	3.52 ± 0.09	3.5 ± 0.2	4.5 ± 0.2	E Africa F	E Europe M
44	5.1 ± 0.3	4.62 ± 0.09	3.5 ± 0.2	4.4 ± 0.1	3.9 ± 0.1	4.8 ± 0.3	4.2 ± 0.2	3.41 ± 0.09	3.0 ± 0.2	3.50 ± 0.10	3.5 ± 0.2	4.3 ± 0.2	E Africa F	E Europe M
45	4.8 ± 0.3	4.49 ± 0.10	3.5 ± 0.2	4.4 ± 0.1	3.8 ± 0.2	4.4 ± 0.2	4.3 ± 0.2	3.44 ± 0.09	3.0 ± 0.2	3.5 ± 0.1	3.5 ± 0.2	4.3 ± 0.2	E Africa F	E Europe M
46	5.0 ± 0.3	4.48 ± 0.10	3.3 ± 0.2	4.1 ± 0.1	3.8 ± 0.2	4.2 ± 0.2	4.4 ± 0.3	3.36 ± 0.09	3.1 ± 0.2	3.4 ± 0.1	3.5 ± 0.2	4.2 ± 0.2	E Africa F	E Europe M
47	4.5 ± 0.3	4.2 ± 0.1	3.5 ± 0.2	3.9 ± 0.2	3.8 ± 0.2	4.4 ± 0.3	4.3 ± 0.3	3.25 ± 0.09	3.0 ± 0.2	3.5 ± 0.1	3.4 ± 0.2	4.2 ± 0.2	E Africa F	E Europe M
48	4.5 ± 0.4	4.1 ± 0.1	3.3 ± 0.2	3.9 ± 0.2	3.6 ± 0.2	4.1 ± 0.2	4.4 ± 0.3	3.27 ± 0.09	3.1 ± 0.2	3.4 ± 0.1	3.3 ± 0.2	4.0 ± 0.2	E Africa F	E Europe M
49	4.2 ± 0.3	4.1 ± 0.1	3.2 ± 0.2	3.6 ± 0.2	3.6 ± 0.2	4.2 ± 0.3	4.1 ± 0.3	3.23 ± 0.09	2.9 ± 0.2	3.3 ± 0.1	3.4 ± 0.2	4.0 ± 0.2	E Africa F	E Europe M
50	4.5 ± 0.4	3.9 ± 0.1	3.1 ± 0.2	3.6 ± 0.1	3.4 ± 0.2	3.9 ± 0.3	3.6 ± 0.3	3.00 ± 0.09	2.9 ± 0.2	3.3 ± 0.1	3.2 ± 0.2	3.8 ± 0.2	E Africa F	E Europe M
51	4.2 ± 0.3	3.8 ± 0.1	3.0 ± 0.2	3.5 ± 0.1	3.3 ± 0.2	4.1 ± 0.3	4.0 ± 0.4	3.03 ± 0.09	2.9 ± 0.2	3.4 ± 0.1	3.2 ± 0.2	3.9 ± 0.2	E Africa F	E Europe M
52	4.4 ± 0.4	3.7 ± 0.1	3.1 ± 0.2	3.6 ± 0.1	3.4 ± 0.2	3.6 ± 0.3	3.7 ± 0.3	2.98 ± 0.09	2.9 ± 0.2	3.1 ± 0.1	3.1 ± 0.2	3.7 ± 0.3	E Africa F	E Europe M

Table 97. *Mean absolute error for Application-type images for algorithm ondato-001. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	5.0 ± 0.3	4.98 ± 0.10	3.8 ± 0.2	4.4 ± 0.1	4.7 ± 0.2	5.8 ± 0.3	4.0 ± 0.2	3.61 ± 0.09	2.4 ± 0.2	2.70 ± 0.10	3.1 ± 0.2	3.7 ± 0.3	W Africa F	E Europe M
15	5.2 ± 0.3	4.9 ± 0.1	3.7 ± 0.2	4.5 ± 0.2	4.8 ± 0.3	5.3 ± 0.4	3.4 ± 0.2	3.41 ± 0.09	2.1 ± 0.2	2.7 ± 0.1	3.1 ± 0.2	3.5 ± 0.3	W Africa F	E Europe M
16	4.8 ± 0.3	4.6 ± 0.1	3.6 ± 0.2	4.2 ± 0.2	4.5 ± 0.3	5.4 ± 0.4	3.3 ± 0.3	3.12 ± 0.09	2.1 ± 0.2	2.6 ± 0.1	2.9 ± 0.2	3.2 ± 0.3	W Africa F	E Europe M
17	4.8 ± 0.3	4.2 ± 0.1	3.3 ± 0.2	4.0 ± 0.2	4.3 ± 0.2	5.2 ± 0.3	3.2 ± 0.2	2.90 ± 0.10	1.8 ± 0.1	2.7 ± 0.1	2.9 ± 0.2	3.4 ± 0.4	W Africa F	E Europe M
18	4.3 ± 0.2	3.79 ± 0.09	3.0 ± 0.2	3.6 ± 0.1	4.0 ± 0.2	4.9 ± 0.3	3.1 ± 0.2	2.56 ± 0.07	1.9 ± 0.1	2.65 ± 0.10	2.6 ± 0.2	3.2 ± 0.2	W Africa F	E Europe M
19	4.3 ± 0.3	3.47 ± 0.10	2.9 ± 0.2	3.4 ± 0.1	3.6 ± 0.1	4.8 ± 0.3	3.3 ± 0.3	2.39 ± 0.08	1.9 ± 0.1	2.6 ± 0.1	2.6 ± 0.1	3.5 ± 0.3	W Africa F	E Europe M
20	4.2 ± 0.3	3.2 ± 0.1	2.7 ± 0.2	3.3 ± 0.1	3.4 ± 0.1	4.5 ± 0.3	3.5 ± 0.2	2.27 ± 0.08	1.9 ± 0.2	2.8 ± 0.1	2.5 ± 0.1	3.7 ± 0.3	W Africa F	E Europe M
21	3.9 ± 0.2	3.08 ± 0.10	2.5 ± 0.1	2.92 ± 0.10	3.3 ± 0.1	4.4 ± 0.3	3.6 ± 0.2	2.16 ± 0.07	1.9 ± 0.1	2.70 ± 0.10	2.5 ± 0.1	3.6 ± 0.3	W Africa F	E Europe M
22	4.0 ± 0.2	2.80 ± 0.08	2.5 ± 0.1	2.71 ± 0.08	3.0 ± 0.1	4.0 ± 0.2	4.1 ± 0.2	2.10 ± 0.08	2.0 ± 0.1	2.7 ± 0.1	2.2 ± 0.1	3.4 ± 0.2	E Africa M	E Europe M
23	3.9 ± 0.2	2.62 ± 0.07	2.53 ± 0.10	2.68 ± 0.08	2.82 ± 0.10	4.1 ± 0.2	3.8 ± 0.2	2.10 ± 0.07	1.9 ± 0.1	2.67 ± 0.10	2.3 ± 0.1	3.6 ± 0.2	W Africa F	E Europe M
24	3.9 ± 0.2	2.46 ± 0.06	2.46 ± 0.08	2.58 ± 0.07	2.65 ± 0.08	3.8 ± 0.2	3.6 ± 0.2	2.09 ± 0.07	1.97 ± 0.10	2.70 ± 0.09	2.3 ± 0.1	3.5 ± 0.2	E Africa F	E Europe M
25	3.8 ± 0.2	2.37 ± 0.06	2.43 ± 0.08	2.54 ± 0.06	2.68 ± 0.08	3.8 ± 0.2	3.8 ± 0.2	2.12 ± 0.07	1.99 ± 0.10	2.60 ± 0.08	2.2 ± 0.1	3.4 ± 0.2	W Africa F	E Europe M
26	3.9 ± 0.2	2.38 ± 0.05	2.42 ± 0.07	2.56 ± 0.06	2.62 ± 0.08	3.7 ± 0.2	3.5 ± 0.2	2.06 ± 0.07	2.03 ± 0.10	2.58 ± 0.07	2.2 ± 0.1	3.2 ± 0.2	E Africa F	E Europe M
27	4.0 ± 0.2	2.32 ± 0.05	2.50 ± 0.08	2.70 ± 0.05	2.55 ± 0.08	3.8 ± 0.2	3.6 ± 0.2	2.18 ± 0.07	2.10 ± 0.09	2.57 ± 0.07	2.4 ± 0.1	3.2 ± 0.2	E Africa F	E Europe M
28	3.9 ± 0.2	2.35 ± 0.05	2.45 ± 0.07	2.88 ± 0.05	2.63 ± 0.07	3.8 ± 0.2	3.4 ± 0.2	2.26 ± 0.07	2.21 ± 0.09	2.60 ± 0.06	2.5 ± 0.1	3.1 ± 0.1	E Africa F	E Europe M
29	4.1 ± 0.2	2.45 ± 0.05	2.56 ± 0.07	3.02 ± 0.06	2.74 ± 0.08	3.9 ± 0.2	3.5 ± 0.2	2.34 ± 0.06	2.24 ± 0.09	2.67 ± 0.06	2.4 ± 0.1	3.3 ± 0.1	E Africa F	E Europe M
30	4.1 ± 0.2	2.60 ± 0.05	2.56 ± 0.08	3.16 ± 0.06	2.82 ± 0.08	3.9 ± 0.2	3.5 ± 0.2	2.40 ± 0.06	2.30 ± 0.09	2.73 ± 0.05	2.6 ± 0.1	3.4 ± 0.1	E Africa F	E Europe M
31	4.1 ± 0.2	2.72 ± 0.05	2.64 ± 0.08	3.30 ± 0.06	2.86 ± 0.08	3.9 ± 0.2	3.5 ± 0.2	2.48 ± 0.07	2.39 ± 0.09	2.79 ± 0.05	2.7 ± 0.1	3.3 ± 0.1	E Africa F	E Europe M
32	4.3 ± 0.2	2.88 ± 0.05	2.68 ± 0.08	3.52 ± 0.06	2.96 ± 0.09	4.1 ± 0.2	3.4 ± 0.1	2.53 ± 0.06	2.35 ± 0.10	2.91 ± 0.05	2.7 ± 0.1	3.5 ± 0.1	E Africa F	E Europe M
33	4.4 ± 0.2	2.94 ± 0.06	2.74 ± 0.09	3.65 ± 0.07	2.96 ± 0.09	4.1 ± 0.2	3.7 ± 0.2	2.64 ± 0.07	2.40 ± 0.09	2.89 ± 0.06	2.7 ± 0.1	3.5 ± 0.1	E Africa F	E Europe M
34	4.3 ± 0.2	3.14 ± 0.06	2.82 ± 0.10	3.77 ± 0.07	2.92 ± 0.09	4.1 ± 0.2	3.6 ± 0.2	2.72 ± 0.07	2.33 ± 0.10	3.04 ± 0.06	2.6 ± 0.1	3.5 ± 0.1	E Africa F	E Europe M
35	4.4 ± 0.2	3.30 ± 0.07	2.90 ± 0.10	3.89 ± 0.08	3.0 ± 0.1	4.1 ± 0.2	3.7 ± 0.2	2.78 ± 0.07	2.3 ± 0.1	3.08 ± 0.06	2.9 ± 0.1	3.7 ± 0.1	E Africa F	E Europe M
36	4.4 ± 0.2	3.39 ± 0.07	2.8 ± 0.1	4.01 ± 0.08	3.1 ± 0.1	4.1 ± 0.2	3.8 ± 0.2	2.82 ± 0.08	2.4 ± 0.1	3.05 ± 0.06	2.8 ± 0.1	3.6 ± 0.1	E Africa F	E Europe M
37	4.4 ± 0.2	3.43 ± 0.07	2.9 ± 0.1	4.05 ± 0.09	3.0 ± 0.1	4.4 ± 0.2	3.8 ± 0.2	2.78 ± 0.08	2.5 ± 0.1	3.24 ± 0.07	2.8 ± 0.1	3.5 ± 0.1	E Africa F	E Europe M
38	4.4 ± 0.2	3.62 ± 0.07	2.9 ± 0.1	4.16 ± 0.09	3.2 ± 0.1	4.3 ± 0.2	3.7 ± 0.2	2.94 ± 0.08	2.3 ± 0.1	3.19 ± 0.07	2.8 ± 0.1	3.7 ± 0.2	E Africa F	E Europe M
39	4.4 ± 0.2	3.67 ± 0.07	2.9 ± 0.1	4.3 ± 0.1	3.2 ± 0.1	4.3 ± 0.2	3.8 ± 0.2	2.98 ± 0.08	2.5 ± 0.1	3.17 ± 0.07	2.9 ± 0.1	3.7 ± 0.2	E Africa F	E Europe M
40	4.6 ± 0.2	3.80 ± 0.08	3.1 ± 0.1	4.2 ± 0.1	3.4 ± 0.1	4.3 ± 0.2	3.8 ± 0.2	2.96 ± 0.08	2.5 ± 0.1	3.40 ± 0.08	2.8 ± 0.1	3.8 ± 0.2	E Africa F	E Europe M
41	4.6 ± 0.3	3.89 ± 0.08	3.2 ± 0.1	4.4 ± 0.1	3.4 ± 0.1	4.4 ± 0.2	3.8 ± 0.2	3.05 ± 0.08	2.7 ± 0.1	3.46 ± 0.08	3.1 ± 0.1	4.0 ± 0.2	E Africa F	E Europe M
42	4.5 ± 0.3	3.91 ± 0.08	3.3 ± 0.1	4.3 ± 0.1	3.4 ± 0.1	4.3 ± 0.2	3.8 ± 0.2	3.17 ± 0.08	2.8 ± 0.1	3.46 ± 0.09	3.1 ± 0.1	3.9 ± 0.2	E Africa F	E Europe M
43	4.6 ± 0.3	4.11 ± 0.08	3.4 ± 0.1	4.4 ± 0.1	3.8 ± 0.1	4.4 ± 0.2	3.9 ± 0.2	3.24 ± 0.08	2.8 ± 0.1	3.54 ± 0.09	3.4 ± 0.2	4.2 ± 0.2	E Africa F	E Europe M
44	4.8 ± 0.3	4.25 ± 0.08	3.4 ± 0.1	4.4 ± 0.1	3.8 ± 0.1	4.8 ± 0.3	3.9 ± 0.2	3.28 ± 0.09	2.8 ± 0.1	3.59 ± 0.10	3.3 ± 0.2	4.0 ± 0.2	E Africa F	E Europe M
45	4.6 ± 0.3	4.25 ± 0.09	3.3 ± 0.2	4.5 ± 0.1	3.7 ± 0.1	4.4 ± 0.2	3.9 ± 0.2	3.45 ± 0.09	2.9 ± 0.1	3.6 ± 0.1	3.3 ± 0.2	4.2 ± 0.2	E Africa F	E Europe M
46	4.9 ± 0.3	4.41 ± 0.09	3.3 ± 0.1	4.2 ± 0.1	3.8 ± 0.1	4.2 ± 0.2	4.2 ± 0.3	3.45 ± 0.09	3.2 ± 0.2	3.5 ± 0.1	3.6 ± 0.2	4.2 ± 0.2	E Africa F	E Europe M
47	4.7 ± 0.3	4.24 ± 0.09	3.6 ± 0.2	4.2 ± 0.2	3.8 ± 0.2	4.4 ± 0.3	4.1 ± 0.3	3.39 ± 0.10	2.9 ± 0.2	3.7 ± 0.1	3.5 ± 0.2	4.4 ± 0.2	E Africa F	E Europe M
48	4.6 ± 0.3	4.20 ± 0.10	3.4 ± 0.2	4.4 ± 0.2	3.8 ± 0.2	4.4 ± 0.3	4.3 ± 0.3	3.45 ± 0.09	3.2 ± 0.2	3.5 ± 0.1	3.4 ± 0.2	4.4 ± 0.2	E Africa F	E Europe M
49	4.5 ± 0.3	4.3 ± 0.1	3.3 ± 0.2	3.9 ± 0.2	3.9 ± 0.2	4.6 ± 0.3	4.1 ± 0.3	3.48 ± 0.10	3.2 ± 0.2	3.5 ± 0.1	3.5 ± 0.2	4.3 ± 0.2	W Africa F	E Europe M
50	4.7 ± 0.4	4.2 ± 0.1	3.3 ± 0.2	4.0 ± 0.2	3.8 ± 0.2	4.5 ± 0.3	3.8 ± 0.3	3.35 ± 0.10	3.2 ± 0.2	3.5 ± 0.1	3.4 ± 0.2	4.1 ± 0.2	E Africa F	E Europe M
51	4.5 ± 0.3	4.2 ± 0.1	3.4 ± 0.2	3.9 ± 0.2	3.7 ± 0.2	4.6 ± 0.3	4.0 ± 0.4	3.37 ± 0.10	3.1 ± 0.2	3.6 ± 0.1	3.4 ± 0.2	4.5 ± 0.3	W Africa F	E Europe M
52	4.5 ± 0.4	4.1 ± 0.1	3.3 ± 0.2	4.0 ± 0.2	3.7 ± 0.2	4.5 ± 0.3	4.0 ± 0.3	3.4 ± 0.1	3.1 ± 0.2	3.4 ± 0.1	3.3 ± 0.2	4.3 ± 0.3	W Africa F	E Europe M

Table 98. *Mean absolute error for Application-type images for algorithm privately-000. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	3.2 ± 0.2	4.0 ± 0.1	1.9 ± 0.2	2.8 ± 0.1	3.9 ± 0.3	3.2 ± 0.3	2.9 ± 0.2	3.6 ± 0.1	1.5 ± 0.1	2.5 ± 0.1	3.0 ± 0.2	2.6 ± 0.2	E Asia F	E Europe M
15	3.6 ± 0.3	4.3 ± 0.2	2.6 ± 0.2	3.3 ± 0.2	4.3 ± 0.3	3.3 ± 0.4	2.7 ± 0.2	3.6 ± 0.1	1.7 ± 0.1	2.5 ± 0.1	3.0 ± 0.2	2.7 ± 0.2	S E Asia F	E Europe M
16	3.7 ± 0.3	4.5 ± 0.2	3.1 ± 0.2	3.4 ± 0.2	4.4 ± 0.3	3.8 ± 0.4	2.6 ± 0.2	3.4 ± 0.1	2.0 ± 0.2	2.4 ± 0.1	3.1 ± 0.2	2.3 ± 0.2	E Asia F	E Europe M
17	3.9 ± 0.3	4.3 ± 0.1	3.7 ± 0.2	3.6 ± 0.2	4.3 ± 0.3	3.6 ± 0.3	2.4 ± 0.2	3.2 ± 0.1	2.2 ± 0.1	2.3 ± 0.1	2.7 ± 0.2	2.1 ± 0.3	E Asia F	W Africa M
18	3.7 ± 0.2	4.2 ± 0.1	3.6 ± 0.2	3.4 ± 0.1	4.1 ± 0.2	3.6 ± 0.2	2.4 ± 0.2	2.72 ± 0.08	2.5 ± 0.2	2.20 ± 0.09	2.4 ± 0.2	2.2 ± 0.2	E Asia F	W Africa M
19	3.7 ± 0.2	3.8 ± 0.1	3.5 ± 0.2	3.4 ± 0.1	3.8 ± 0.2	3.6 ± 0.2	2.5 ± 0.2	2.46 ± 0.09	2.5 ± 0.2	2.19 ± 0.09	2.1 ± 0.1	2.1 ± 0.2	E Asia F	W Africa M
20	3.8 ± 0.2	3.7 ± 0.1	3.4 ± 0.2	3.4 ± 0.1	3.6 ± 0.2	3.7 ± 0.2	2.7 ± 0.2	2.20 ± 0.09	2.5 ± 0.2	2.08 ± 0.09	2.0 ± 0.1	2.3 ± 0.2	E Africa F	S E Asia M
21	3.5 ± 0.2	3.4 ± 0.1	3.2 ± 0.2	3.3 ± 0.1	3.5 ± 0.1	3.9 ± 0.2	2.7 ± 0.2	1.91 ± 0.08	2.3 ± 0.2	1.99 ± 0.08	1.9 ± 0.1	2.6 ± 0.2	W Africa F	S E Asia M
22	3.6 ± 0.2	3.24 ± 0.10	3.0 ± 0.1	3.18 ± 0.10	3.3 ± 0.1	3.8 ± 0.2	3.0 ± 0.2	1.89 ± 0.08	2.1 ± 0.1	2.03 ± 0.08	1.9 ± 0.1	2.7 ± 0.2	W Africa F	E Asia M
23	3.5 ± 0.2	3.01 ± 0.08	2.9 ± 0.1	3.29 ± 0.09	3.1 ± 0.1	3.7 ± 0.2	3.1 ± 0.2	2.03 ± 0.07	2.2 ± 0.1	2.21 ± 0.08	2.2 ± 0.1	2.9 ± 0.1	W Africa F	E Asia M
24	3.7 ± 0.2	2.90 ± 0.07	2.9 ± 0.1	3.34 ± 0.08	2.98 ± 0.09	3.8 ± 0.2	3.1 ± 0.2	2.32 ± 0.07	2.4 ± 0.1	2.37 ± 0.07	2.39 ± 0.09	3.1 ± 0.2	W Africa F	E Asia M
25	3.6 ± 0.2	2.84 ± 0.07	3.1 ± 0.1	3.46 ± 0.08	2.92 ± 0.09	3.8 ± 0.2	3.3 ± 0.2	2.63 ± 0.07	2.6 ± 0.1	2.62 ± 0.07	2.83 ± 0.10	3.4 ± 0.1	W Africa F	E Europe M
26	3.7 ± 0.2	2.73 ± 0.06	3.2 ± 0.1	3.70 ± 0.08	3.03 ± 0.09	4.0 ± 0.2	3.3 ± 0.1	2.90 ± 0.07	3.1 ± 0.1	2.89 ± 0.07	3.1 ± 0.1	3.5 ± 0.1	W Africa F	E Asia F
27	3.9 ± 0.2	2.73 ± 0.06	3.31 ± 0.10	3.88 ± 0.08	3.02 ± 0.09	4.1 ± 0.2	3.5 ± 0.1	3.14 ± 0.08	3.1 ± 0.1	3.15 ± 0.07	3.3 ± 0.1	3.7 ± 0.1	W Africa F	E Asia F
28	4.2 ± 0.2	2.77 ± 0.06	3.46 ± 0.10	4.25 ± 0.08	3.06 ± 0.09	4.3 ± 0.2	3.6 ± 0.1	3.36 ± 0.09	3.2 ± 0.1	3.46 ± 0.07	3.5 ± 0.1	4.1 ± 0.1	W Africa F	E Asia F
29	4.2 ± 0.2	2.80 ± 0.06	3.6 ± 0.1	4.36 ± 0.08	3.15 ± 0.09	4.7 ± 0.2	3.7 ± 0.1	3.46 ± 0.08	3.6 ± 0.1	3.78 ± 0.07	3.7 ± 0.1	4.3 ± 0.1	W Africa F	E Asia F
30	4.5 ± 0.2	2.94 ± 0.06	3.8 ± 0.1	4.69 ± 0.09	3.22 ± 0.09	5.1 ± 0.2	4.1 ± 0.2	3.68 ± 0.09	3.6 ± 0.1	4.12 ± 0.07	3.8 ± 0.1	4.6 ± 0.1	W Africa F	E Asia F
31	4.8 ± 0.2	3.12 ± 0.06	4.0 ± 0.1	5.04 ± 0.09	3.34 ± 0.10	5.2 ± 0.2	4.3 ± 0.2	3.83 ± 0.09	3.9 ± 0.1	4.43 ± 0.07	4.2 ± 0.2	5.0 ± 0.2	W Africa F	E Asia F
32	5.1 ± 0.2	3.23 ± 0.07	4.3 ± 0.1	5.31 ± 0.10	3.6 ± 0.1	5.7 ± 0.2	4.4 ± 0.2	3.87 ± 0.10	3.9 ± 0.1	4.64 ± 0.07	4.1 ± 0.2	5.4 ± 0.2	W Africa F	E Asia F
33	5.4 ± 0.2	3.45 ± 0.07	4.5 ± 0.1	5.7 ± 0.1	3.6 ± 0.1	6.1 ± 0.2	4.8 ± 0.2	4.1 ± 0.1	3.9 ± 0.1	5.02 ± 0.08	4.3 ± 0.2	5.5 ± 0.2	W Africa F	E Asia F
34	5.6 ± 0.2	3.66 ± 0.07	4.8 ± 0.1	5.9 ± 0.1	3.8 ± 0.1	6.3 ± 0.2	5.2 ± 0.2	4.3 ± 0.1	4.1 ± 0.1	5.31 ± 0.09	4.5 ± 0.2	5.9 ± 0.2	W Africa F	E Asia F
35	5.7 ± 0.2	4.04 ± 0.08	5.2 ± 0.1	6.3 ± 0.1	4.1 ± 0.1	6.8 ± 0.2	5.2 ± 0.2	4.4 ± 0.1	4.4 ± 0.2	5.71 ± 0.09	4.8 ± 0.2	6.2 ± 0.2	W Africa F	E Asia F
36	6.3 ± 0.2	4.25 ± 0.08	5.3 ± 0.1	6.7 ± 0.1	4.4 ± 0.1	7.0 ± 0.2	5.8 ± 0.2	4.7 ± 0.1	4.4 ± 0.2	5.95 ± 0.10	5.0 ± 0.2	6.6 ± 0.2	W Africa F	E Asia F
37	6.8 ± 0.3	4.63 ± 0.08	5.7 ± 0.2	6.8 ± 0.1	4.8 ± 0.1	7.5 ± 0.3	5.7 ± 0.2	4.8 ± 0.1	4.7 ± 0.2	6.3 ± 0.1	5.2 ± 0.2	6.9 ± 0.2	W Africa F	E Asia F
38	6.7 ± 0.3	4.93 ± 0.08	5.8 ± 0.2	7.2 ± 0.1	4.9 ± 0.1	8.1 ± 0.3	5.9 ± 0.2	5.2 ± 0.1	4.9 ± 0.2	6.6 ± 0.1	5.1 ± 0.2	7.1 ± 0.2	W Africa F	E Europe M
39	7.0 ± 0.3	5.24 ± 0.08	6.1 ± 0.2	7.5 ± 0.1	5.2 ± 0.1	8.1 ± 0.3	6.1 ± 0.2	5.5 ± 0.1	5.1 ± 0.2	6.7 ± 0.1	5.2 ± 0.2	7.4 ± 0.2	W Africa F	E Europe M
40	7.4 ± 0.3	5.56 ± 0.09	6.1 ± 0.2	7.6 ± 0.1	5.8 ± 0.2	8.6 ± 0.3	6.2 ± 0.3	5.7 ± 0.1	5.4 ± 0.2	7.0 ± 0.1	5.7 ± 0.2	7.8 ± 0.2	W Africa F	E Europe M
41	7.7 ± 0.3	5.82 ± 0.09	6.5 ± 0.2	8.0 ± 0.2	5.9 ± 0.2	9.4 ± 0.3	6.4 ± 0.3	5.8 ± 0.1	5.3 ± 0.2	7.2 ± 0.1	5.8 ± 0.2	8.2 ± 0.3	W Africa F	E Europe M
42	7.5 ± 0.4	5.93 ± 0.09	6.5 ± 0.2	7.9 ± 0.2	6.1 ± 0.2	9.1 ± 0.3	6.3 ± 0.3	6.0 ± 0.1	5.2 ± 0.2	7.2 ± 0.1	5.6 ± 0.2	8.1 ± 0.3	W Africa F	E Europe M
43	7.9 ± 0.4	6.13 ± 0.10	6.8 ± 0.2	8.3 ± 0.2	6.5 ± 0.2	9.6 ± 0.3	6.2 ± 0.3	6.0 ± 0.1	5.4 ± 0.2	7.2 ± 0.1	5.7 ± 0.2	8.5 ± 0.3	W Africa F	E Europe M
44	7.9 ± 0.4	6.4 ± 0.1	6.7 ± 0.2	8.2 ± 0.2	6.3 ± 0.2	9.7 ± 0.4	6.4 ± 0.3	6.0 ± 0.1	5.4 ± 0.2	7.3 ± 0.2	5.6 ± 0.2	8.0 ± 0.3	W Africa F	E Europe M
45	8.2 ± 0.4	6.4 ± 0.1	6.8 ± 0.2	8.3 ± 0.2	6.5 ± 0.2	9.8 ± 0.4	6.5 ± 0.4	6.2 ± 0.1	5.5 ± 0.2	7.1 ± 0.2	5.6 ± 0.2	8.3 ± 0.3	W Africa F	E Europe M
46	7.9 ± 0.5	6.5 ± 0.1	6.8 ± 0.3	8.0 ± 0.2	6.6 ± 0.2	10.0 ± 0.4	6.2 ± 0.4	6.0 ± 0.1	5.4 ± 0.3	6.9 ± 0.2	5.4 ± 0.2	8.5 ± 0.3	W Africa F	E Europe M
47	7.5 ± 0.5	6.2 ± 0.1	6.8 ± 0.3	8.0 ± 0.2	6.4 ± 0.2	10.0 ± 0.4	6.1 ± 0.4	5.9 ± 0.2	5.3 ± 0.3	6.9 ± 0.2	5.1 ± 0.3	8.2 ± 0.4	W Africa F	S E Asia M
48	8.0 ± 0.6	6.2 ± 0.1	6.4 ± 0.3	8.1 ± 0.3	6.5 ± 0.3	9.9 ± 0.5	6.2 ± 0.4	5.8 ± 0.2	5.0 ± 0.3	6.7 ± 0.2	5.0 ± 0.3	8.4 ± 0.4	W Africa F	E Europe M
49	8.1 ± 0.6	6.3 ± 0.2	6.7 ± 0.3	7.7 ± 0.3	6.2 ± 0.3	10.2 ± 0.5	6.2 ± 0.5	5.6 ± 0.2	5.4 ± 0.3	6.6 ± 0.2	4.8 ± 0.3	8.4 ± 0.4	W Africa F	S E Asia M
50	8.0 ± 0.6	6.3 ± 0.2	6.4 ± 0.3	7.6 ± 0.3	6.4 ± 0.3	10.0 ± 0.5	5.8 ± 0.5	5.6 ± 0.2	5.3 ± 0.3	6.7 ± 0.2	4.6 ± 0.3	8.1 ± 0.4	W Africa F	S E Asia M
51	7.6 ± 0.6	6.3 ± 0.2	6.4 ± 0.3	7.8 ± 0.3	6.6 ± 0.3	10.5 ± 0.5	6.6 ± 0.5	5.6 ± 0.2	5.1 ± 0.3	6.6 ± 0.3	4.6 ± 0.3	8.6 ± 0.5	W Africa F	S E Asia M
52	7.6 ± 0.6	6.4 ± 0.2	6.4 ± 0.3	7.7 ± 0.3	6.2 ± 0.3	10.9 ± 0.6	6.2 ± 0.5	5.5 ± 0.2	5.3 ± 0.3	6.4 ± 0.2	5.0 ± 0.3	8.4 ± 0.5	W Africa F	S E Asia M

Table 99. *Mean absolute error for Application-type images for algorithm regula-000. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	2.8 ± 0.2	2.26 ± 0.07	1.8 ± 0.1	2.7 ± 0.1	2.4 ± 0.2	2.8 ± 0.3	1.8 ± 0.1	1.76 ± 0.07	1.17 ± 0.09	1.69 ± 0.07	1.6 ± 0.1	1.4 ± 0.2	E Africa F	E Europe M
15	3.1 ± 0.2	1.97 ± 0.07	1.8 ± 0.1	2.8 ± 0.1	2.5 ± 0.2	2.9 ± 0.3	1.6 ± 0.1	1.53 ± 0.05	1.01 ± 0.08	1.53 ± 0.07	1.50 ± 0.10	1.7 ± 0.2	E Africa F	E Europe M
16	2.9 ± 0.2	1.78 ± 0.08	1.9 ± 0.2	2.6 ± 0.1	2.4 ± 0.2	3.5 ± 0.4	1.7 ± 0.2	1.31 ± 0.05	1.2 ± 0.1	1.46 ± 0.08	1.3 ± 0.1	1.7 ± 0.2	W Africa F	E Europe M
17	3.2 ± 0.3	1.65 ± 0.09	2.0 ± 0.2	2.5 ± 0.1	2.3 ± 0.2	3.5 ± 0.3	1.7 ± 0.2	1.19 ± 0.07	1.09 ± 0.10	1.38 ± 0.09	1.3 ± 0.1	2.2 ± 0.3	W Africa F	E Europe M
18	3.0 ± 0.2	1.67 ± 0.07	2.0 ± 0.2	2.37 ± 0.10	2.2 ± 0.1	3.6 ± 0.3	1.9 ± 0.2	1.21 ± 0.06	1.3 ± 0.1	1.54 ± 0.08	1.4 ± 0.2	2.3 ± 0.2	W Africa F	E Asia M
19	3.3 ± 0.2	1.76 ± 0.07	2.1 ± 0.2	2.3 ± 0.1	2.3 ± 0.1	3.7 ± 0.3	2.2 ± 0.2	1.37 ± 0.06	1.4 ± 0.1	1.60 ± 0.08	1.6 ± 0.1	2.5 ± 0.2	W Africa F	E Asia M
20	3.3 ± 0.2	1.98 ± 0.09	2.1 ± 0.1	2.4 ± 0.1	2.4 ± 0.1	3.6 ± 0.2	2.4 ± 0.2	1.49 ± 0.06	1.6 ± 0.1	1.85 ± 0.08	1.7 ± 0.1	2.8 ± 0.2	W Africa F	E Asia M
21	3.1 ± 0.2	2.16 ± 0.07	2.2 ± 0.1	2.29 ± 0.08	2.5 ± 0.1	3.7 ± 0.2	2.5 ± 0.2	1.61 ± 0.05	1.7 ± 0.1	1.98 ± 0.08	1.9 ± 0.1	2.9 ± 0.2	W Africa F	E Asia M
22	3.3 ± 0.2	2.22 ± 0.07	2.28 ± 0.09	2.29 ± 0.07	2.5 ± 0.1	3.4 ± 0.2	3.0 ± 0.2	1.80 ± 0.06	1.9 ± 0.1	2.08 ± 0.08	1.96 ± 0.09	2.8 ± 0.2	W Africa F	E Asia M
23	3.2 ± 0.2	2.37 ± 0.06	2.36 ± 0.09	2.31 ± 0.07	2.46 ± 0.09	3.5 ± 0.2	3.0 ± 0.2	2.00 ± 0.06	1.82 ± 0.10	2.09 ± 0.08	2.14 ± 0.10	3.0 ± 0.2	W Africa F	E Europe M
24	3.3 ± 0.2	2.44 ± 0.06	2.24 ± 0.07	2.35 ± 0.06	2.42 ± 0.07	3.4 ± 0.2	2.9 ± 0.2	2.06 ± 0.07	1.88 ± 0.09	2.18 ± 0.07	2.14 ± 0.10	3.0 ± 0.2	W Africa F	E Europe M
25	3.3 ± 0.2	2.58 ± 0.06	2.21 ± 0.07	2.39 ± 0.06	2.51 ± 0.08	3.3 ± 0.2	3.0 ± 0.2	2.22 ± 0.07	1.82 ± 0.09	2.13 ± 0.07	2.19 ± 0.09	3.0 ± 0.2	W Africa F	E Europe M
26	3.2 ± 0.1	2.63 ± 0.06	2.25 ± 0.07	2.50 ± 0.05	2.58 ± 0.07	3.1 ± 0.2	3.0 ± 0.1	2.22 ± 0.06	1.88 ± 0.09	2.25 ± 0.06	2.19 ± 0.10	2.9 ± 0.1	E Africa F	E Europe M
27	3.3 ± 0.2	2.60 ± 0.05	2.26 ± 0.07	2.66 ± 0.05	2.54 ± 0.07	3.3 ± 0.1	3.1 ± 0.1	2.37 ± 0.07	1.82 ± 0.08	2.30 ± 0.06	2.28 ± 0.10	2.9 ± 0.1	E Africa F	E Europe M
28	3.3 ± 0.1	2.64 ± 0.05	2.24 ± 0.07	2.83 ± 0.05	2.57 ± 0.07	3.1 ± 0.1	2.9 ± 0.1	2.39 ± 0.07	1.92 ± 0.08	2.39 ± 0.06	2.23 ± 0.10	2.9 ± 0.1	E Africa F	E Europe M
29	3.5 ± 0.1	2.65 ± 0.05	2.27 ± 0.07	2.98 ± 0.05	2.65 ± 0.08	3.1 ± 0.1	3.0 ± 0.1	2.44 ± 0.07	2.03 ± 0.08	2.50 ± 0.05	2.4 ± 0.1	3.0 ± 0.1	E Africa F	E Europe M
30	3.4 ± 0.1	2.76 ± 0.05	2.36 ± 0.07	3.14 ± 0.06	2.68 ± 0.08	3.2 ± 0.1	3.1 ± 0.1	2.53 ± 0.07	2.09 ± 0.08	2.64 ± 0.05	2.4 ± 0.1	2.9 ± 0.1	E Africa F	E Europe M
31	3.5 ± 0.1	2.84 ± 0.06	2.47 ± 0.07	3.26 ± 0.06	2.77 ± 0.08	3.1 ± 0.1	3.1 ± 0.1	2.61 ± 0.07	2.22 ± 0.08	2.77 ± 0.05	2.6 ± 0.1	3.0 ± 0.1	E Africa F	E Europe M
32	3.5 ± 0.2	2.88 ± 0.05	2.49 ± 0.07	3.44 ± 0.06	2.85 ± 0.09	3.4 ± 0.1	3.2 ± 0.1	2.62 ± 0.07	2.32 ± 0.09	2.86 ± 0.05	2.6 ± 0.1	3.0 ± 0.1	E Africa F	E Europe M
33	3.7 ± 0.2	2.90 ± 0.06	2.54 ± 0.08	3.46 ± 0.07	2.90 ± 0.09	3.3 ± 0.1	3.4 ± 0.1	2.68 ± 0.07	2.28 ± 0.09	2.90 ± 0.06	2.6 ± 0.1	3.0 ± 0.1	E Africa F	E Europe M
34	3.7 ± 0.2	2.93 ± 0.06	2.60 ± 0.09	3.55 ± 0.07	2.85 ± 0.09	3.2 ± 0.1	3.3 ± 0.1	2.75 ± 0.07	2.39 ± 0.10	3.04 ± 0.06	2.7 ± 0.1	3.1 ± 0.1	E Africa F	E Europe M
35	3.9 ± 0.2	2.95 ± 0.06	2.66 ± 0.09	3.58 ± 0.07	2.94 ± 0.10	3.4 ± 0.1	3.4 ± 0.2	2.74 ± 0.07	2.4 ± 0.1	2.97 ± 0.06	2.8 ± 0.1	3.3 ± 0.1	E Africa F	E Europe M
36	3.9 ± 0.2	2.90 ± 0.06	2.58 ± 0.09	3.57 ± 0.08	2.94 ± 0.10	3.3 ± 0.2	3.6 ± 0.2	2.78 ± 0.08	2.4 ± 0.1	2.98 ± 0.06	2.8 ± 0.1	3.2 ± 0.1	E Africa F	E Europe M
37	4.0 ± 0.2	2.85 ± 0.06	2.63 ± 0.10	3.63 ± 0.08	2.9 ± 0.1	3.7 ± 0.2	3.5 ± 0.2	2.79 ± 0.07	2.5 ± 0.1	3.04 ± 0.07	2.8 ± 0.1	3.1 ± 0.1	E Africa F	E Europe M
38	3.9 ± 0.2	2.92 ± 0.06	2.63 ± 0.10	3.59 ± 0.09	2.9 ± 0.1	3.6 ± 0.2	3.5 ± 0.2	2.83 ± 0.08	2.5 ± 0.1	2.96 ± 0.06	2.9 ± 0.1	3.2 ± 0.1	E Africa F	E Europe M
39	4.0 ± 0.2	2.86 ± 0.06	2.5 ± 0.1	3.56 ± 0.09	2.9 ± 0.1	3.4 ± 0.2	3.6 ± 0.2	2.86 ± 0.08	2.5 ± 0.1	2.92 ± 0.07	2.9 ± 0.1	3.2 ± 0.1	E Africa F	E Europe M
40	3.9 ± 0.2	2.86 ± 0.06	2.6 ± 0.1	3.48 ± 0.10	3.1 ± 0.1	3.6 ± 0.2	3.6 ± 0.2	2.85 ± 0.07	2.7 ± 0.1	3.04 ± 0.07	2.8 ± 0.1	3.4 ± 0.2	E Africa F	E Europe F
41	4.1 ± 0.2	2.90 ± 0.06	2.7 ± 0.1	3.5 ± 0.1	3.0 ± 0.1	3.8 ± 0.2	3.6 ± 0.2	2.83 ± 0.07	2.6 ± 0.1	2.99 ± 0.07	3.0 ± 0.1	3.6 ± 0.2	E Africa F	E Europe M
42	4.2 ± 0.2	2.88 ± 0.06	2.8 ± 0.1	3.4 ± 0.1	2.9 ± 0.1	3.8 ± 0.2	3.6 ± 0.2	2.86 ± 0.08	2.5 ± 0.1	2.94 ± 0.08	2.9 ± 0.1	3.5 ± 0.2	E Africa F	E Europe M
43	4.2 ± 0.3	2.93 ± 0.06	2.7 ± 0.1	3.4 ± 0.1	3.1 ± 0.1	4.0 ± 0.2	3.6 ± 0.2	2.99 ± 0.08	2.6 ± 0.1	2.99 ± 0.08	3.1 ± 0.2	3.8 ± 0.2	E Africa F	E Europe M
44	4.4 ± 0.3	3.04 ± 0.06	2.7 ± 0.1	3.6 ± 0.1	3.2 ± 0.1	4.1 ± 0.2	3.6 ± 0.2	2.95 ± 0.08	2.5 ± 0.1	3.06 ± 0.09	3.2 ± 0.2	3.5 ± 0.2	E Africa F	E Europe M
45	4.2 ± 0.3	2.99 ± 0.07	2.6 ± 0.1	3.5 ± 0.1	3.0 ± 0.1	3.9 ± 0.2	3.8 ± 0.2	3.02 ± 0.08	2.6 ± 0.1	3.03 ± 0.09	3.2 ± 0.2	3.8 ± 0.2	E Africa F	E Europe F
46	4.4 ± 0.3	3.06 ± 0.07	2.7 ± 0.1	3.2 ± 0.1	3.1 ± 0.1	4.0 ± 0.2	3.7 ± 0.3	2.93 ± 0.08	2.6 ± 0.1	3.0 ± 0.1	3.2 ± 0.2	3.9 ± 0.2	E Africa F	E Europe M
47	4.4 ± 0.3	3.01 ± 0.07	2.8 ± 0.1	3.4 ± 0.1	2.9 ± 0.1	4.0 ± 0.2	4.0 ± 0.3	2.98 ± 0.09	2.7 ± 0.1	3.2 ± 0.1	3.2 ± 0.2	3.9 ± 0.2	E Africa F	E Europe M
48	4.3 ± 0.3	2.96 ± 0.07	2.7 ± 0.1	3.5 ± 0.1	2.9 ± 0.1	4.0 ± 0.2	4.2 ± 0.3	2.90 ± 0.08	2.8 ± 0.2	3.2 ± 0.1	3.3 ± 0.2	4.0 ± 0.2	E Africa F	E Europe F
49	4.3 ± 0.3	3.08 ± 0.08	2.8 ± 0.1	3.2 ± 0.1	3.1 ± 0.1	4.3 ± 0.3	4.2 ± 0.3	2.92 ± 0.09	2.8 ± 0.2	3.2 ± 0.1	3.2 ± 0.2	3.7 ± 0.2	E Africa F	E Europe F
50	4.3 ± 0.3	3.03 ± 0.08	2.7 ± 0.1	3.3 ± 0.1	3.1 ± 0.1	4.0 ± 0.3	3.8 ± 0.3	2.89 ± 0.08	2.8 ± 0.2	3.2 ± 0.1	3.3 ± 0.2	3.8 ± 0.2	E Africa F	E Europe F
51	4.3 ± 0.3	2.95 ± 0.08	2.8 ± 0.1	3.3 ± 0.1	2.9 ± 0.1	4.0 ± 0.3	4.3 ± 0.4	2.87 ± 0.09	2.7 ± 0.2	3.4 ± 0.1	3.3 ± 0.2	4.1 ± 0.2	E Africa F	E Europe M
52	4.3 ± 0.4	2.94 ± 0.08	2.8 ± 0.1	3.3 ± 0.1	2.9 ± 0.1	3.9 ± 0.3	4.0 ± 0.3	2.92 ± 0.08	2.9 ± 0.2	3.3 ± 0.1	3.3 ± 0.2	4.2 ± 0.3	E Africa F	E Europe F

Table 100. *Mean absolute error for Application-type images for algorithm roc-000. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	5.3 ± 0.2	5.5 ± 0.1	3.8 ± 0.1	4.0 ± 0.1	4.8 ± 0.3	5.7 ± 0.3	4.4 ± 0.2	5.5 ± 0.1	3.0 ± 0.1	3.62 ± 0.09	4.8 ± 0.2	4.7 ± 0.2	W Africa F	E Europe M
15	4.9 ± 0.3	5.5 ± 0.1	3.3 ± 0.1	3.9 ± 0.2	5.0 ± 0.3	5.5 ± 0.3	4.3 ± 0.2	5.4 ± 0.1	2.74 ± 0.10	3.4 ± 0.1	4.7 ± 0.2	4.7 ± 0.3	E Asia F	E Europe M
16	4.8 ± 0.3	5.4 ± 0.1	2.8 ± 0.1	3.5 ± 0.1	4.9 ± 0.3	5.7 ± 0.4	4.2 ± 0.2	4.9 ± 0.1	2.4 ± 0.1	3.1 ± 0.1	4.4 ± 0.2	4.3 ± 0.3	W Africa F	E Europe M
17	5.0 ± 0.3	5.1 ± 0.1	2.3 ± 0.2	3.2 ± 0.2	4.6 ± 0.3	5.2 ± 0.3	3.7 ± 0.2	4.7 ± 0.1	1.59 ± 0.09	2.9 ± 0.1	4.2 ± 0.2	4.5 ± 0.4	W Africa F	E Europe M
18	4.2 ± 0.2	4.6 ± 0.1	1.9 ± 0.2	2.5 ± 0.1	4.4 ± 0.2	4.8 ± 0.3	3.6 ± 0.2	4.30 ± 0.10	1.3 ± 0.1	2.4 ± 0.1	4.0 ± 0.2	4.0 ± 0.3	W Africa F	E Europe M
19	4.2 ± 0.3	4.3 ± 0.1	1.8 ± 0.2	2.4 ± 0.1	4.2 ± 0.2	4.8 ± 0.3	3.8 ± 0.2	4.2 ± 0.1	1.1 ± 0.1	2.4 ± 0.1	3.8 ± 0.2	4.2 ± 0.3	W Africa F	E Europe M
20	4.1 ± 0.3	4.1 ± 0.1	1.9 ± 0.1	2.5 ± 0.1	4.0 ± 0.2	4.5 ± 0.3	3.8 ± 0.3	4.0 ± 0.1	1.4 ± 0.1	2.7 ± 0.1	3.8 ± 0.2	4.2 ± 0.3	W Africa F	E Europe M
21	3.9 ± 0.2	4.0 ± 0.1	2.3 ± 0.1	2.6 ± 0.1	3.8 ± 0.1	4.5 ± 0.3	4.0 ± 0.3	3.88 ± 0.10	1.7 ± 0.1	2.9 ± 0.1	3.9 ± 0.2	4.3 ± 0.3	W Africa F	E Europe M
22	4.2 ± 0.3	3.7 ± 0.1	2.6 ± 0.1	2.79 ± 0.09	3.9 ± 0.1	4.2 ± 0.3	4.6 ± 0.3	3.7 ± 0.1	2.2 ± 0.1	3.1 ± 0.1	3.5 ± 0.2	4.1 ± 0.3	E Africa M	E Europe M
23	4.2 ± 0.2	3.67 ± 0.09	3.1 ± 0.1	3.08 ± 0.08	3.8 ± 0.1	4.4 ± 0.2	4.5 ± 0.3	3.56 ± 0.10	2.4 ± 0.1	3.2 ± 0.1	3.6 ± 0.1	4.3 ± 0.2	E Africa M	E Europe M
24	4.3 ± 0.2	3.48 ± 0.08	3.12 ± 0.09	3.21 ± 0.07	3.7 ± 0.1	4.3 ± 0.2	4.4 ± 0.2	3.41 ± 0.10	2.7 ± 0.1	3.3 ± 0.1	3.4 ± 0.1	4.2 ± 0.2	E Africa M	E Europe M
25	4.4 ± 0.2	3.46 ± 0.08	3.41 ± 0.09	3.35 ± 0.07	3.6 ± 0.1	4.2 ± 0.2	4.5 ± 0.2	3.34 ± 0.09	2.8 ± 0.1	3.25 ± 0.09	3.4 ± 0.1	4.2 ± 0.2	E Africa M	E Europe M
26	4.4 ± 0.2	3.33 ± 0.07	3.56 ± 0.09	3.49 ± 0.06	3.57 ± 0.10	4.2 ± 0.2	4.6 ± 0.2	3.15 ± 0.09	2.9 ± 0.1	3.29 ± 0.08	3.3 ± 0.1	3.9 ± 0.2	E Africa M	E Europe M
27	4.8 ± 0.2	3.13 ± 0.06	3.53 ± 0.09	3.66 ± 0.07	3.42 ± 0.10	4.3 ± 0.2	4.3 ± 0.2	3.09 ± 0.09	2.9 ± 0.1	3.21 ± 0.08	3.3 ± 0.1	3.8 ± 0.2	E Africa F	E Europe M
28	4.5 ± 0.2	3.07 ± 0.06	3.61 ± 0.10	3.87 ± 0.07	3.38 ± 0.09	4.1 ± 0.2	4.3 ± 0.2	2.96 ± 0.09	2.8 ± 0.1	3.13 ± 0.07	3.1 ± 0.1	3.5 ± 0.2	E Africa F	E Europe M
29	4.7 ± 0.2	2.99 ± 0.06	3.6 ± 0.1	3.94 ± 0.07	3.34 ± 0.10	4.1 ± 0.2	4.2 ± 0.2	2.87 ± 0.08	2.9 ± 0.1	3.09 ± 0.07	3.0 ± 0.1	3.8 ± 0.1	E Africa F	E Asia M
30	4.5 ± 0.2	2.96 ± 0.06	3.7 ± 0.1	4.04 ± 0.07	3.26 ± 0.10	4.1 ± 0.2	4.3 ± 0.2	2.74 ± 0.08	2.8 ± 0.1	3.09 ± 0.06	3.0 ± 0.1	3.5 ± 0.1	E Africa F	E Asia M
31	4.6 ± 0.2	2.96 ± 0.06	3.7 ± 0.1	4.15 ± 0.08	3.21 ± 0.09	4.1 ± 0.2	4.3 ± 0.2	2.65 ± 0.08	2.9 ± 0.1	3.03 ± 0.06	2.9 ± 0.1	3.6 ± 0.1	E Africa F	E Asia M
32	4.8 ± 0.2	2.97 ± 0.06	3.7 ± 0.1	4.29 ± 0.08	3.3 ± 0.1	4.3 ± 0.2	4.1 ± 0.2	2.69 ± 0.07	2.9 ± 0.1	3.07 ± 0.06	2.9 ± 0.1	3.5 ± 0.1	E Africa F	E Asia M
33	4.8 ± 0.2	2.93 ± 0.06	3.8 ± 0.1	4.31 ± 0.08	3.2 ± 0.1	4.1 ± 0.2	4.3 ± 0.2	2.59 ± 0.07	2.9 ± 0.1	3.05 ± 0.06	2.7 ± 0.1	3.5 ± 0.1	E Africa F	E Asia M
34	4.8 ± 0.2	2.98 ± 0.06	3.8 ± 0.1	4.34 ± 0.09	3.2 ± 0.1	4.0 ± 0.2	4.0 ± 0.2	2.60 ± 0.07	2.9 ± 0.1	3.08 ± 0.06	3.0 ± 0.1	3.5 ± 0.1	E Africa F	E Asia M
35	5.1 ± 0.2	3.01 ± 0.06	4.0 ± 0.1	4.41 ± 0.09	3.2 ± 0.1	4.2 ± 0.2	4.1 ± 0.2	2.66 ± 0.07	2.8 ± 0.1	3.07 ± 0.06	2.9 ± 0.1	3.6 ± 0.1	E Africa F	E Asia M
36	5.0 ± 0.2	3.10 ± 0.06	3.9 ± 0.1	4.36 ± 0.09	3.3 ± 0.1	4.1 ± 0.2	4.2 ± 0.2	2.66 ± 0.07	3.0 ± 0.1	3.10 ± 0.07	3.1 ± 0.2	3.5 ± 0.1	E Africa F	E Asia M
37	5.0 ± 0.2	3.08 ± 0.07	4.0 ± 0.1	4.5 ± 0.1	3.3 ± 0.1	4.4 ± 0.2	4.0 ± 0.2	2.70 ± 0.07	2.9 ± 0.1	3.13 ± 0.07	2.9 ± 0.1	3.5 ± 0.1	E Africa F	E Asia M
38	4.9 ± 0.3	3.20 ± 0.07	4.1 ± 0.2	4.4 ± 0.1	3.4 ± 0.1	4.4 ± 0.2	3.9 ± 0.2	2.71 ± 0.08	2.7 ± 0.1	3.08 ± 0.07	3.2 ± 0.2	3.4 ± 0.1	E Africa F	E Asia M
39	4.8 ± 0.3	3.22 ± 0.07	3.9 ± 0.2	4.5 ± 0.1	3.4 ± 0.1	4.1 ± 0.2	3.8 ± 0.2	2.76 ± 0.08	2.9 ± 0.1	3.10 ± 0.07	3.3 ± 0.1	3.5 ± 0.1	E Africa F	E Asia M
40	4.9 ± 0.3	3.30 ± 0.07	4.1 ± 0.2	4.4 ± 0.1	3.5 ± 0.1	4.3 ± 0.2	3.9 ± 0.2	2.74 ± 0.08	2.9 ± 0.1	3.20 ± 0.07	3.1 ± 0.1	3.5 ± 0.2	E Africa F	E Asia M
41	4.8 ± 0.3	3.34 ± 0.07	4.2 ± 0.2	4.4 ± 0.1	3.5 ± 0.1	4.3 ± 0.2	4.0 ± 0.2	2.89 ± 0.08	2.9 ± 0.1	3.20 ± 0.08	3.2 ± 0.2	3.6 ± 0.2	E Africa F	E Asia M
42	5.2 ± 0.3	3.44 ± 0.07	4.3 ± 0.2	4.3 ± 0.1	3.5 ± 0.1	4.6 ± 0.2	3.8 ± 0.2	2.96 ± 0.08	2.9 ± 0.2	3.20 ± 0.09	3.1 ± 0.2	3.6 ± 0.2	E Africa F	E Europe M
43	5.1 ± 0.3	3.55 ± 0.07	4.4 ± 0.2	4.3 ± 0.1	3.7 ± 0.1	4.4 ± 0.2	4.0 ± 0.2	3.00 ± 0.08	2.9 ± 0.2	3.21 ± 0.09	3.4 ± 0.2	3.8 ± 0.2	E Africa F	E Europe M
44	5.3 ± 0.4	3.58 ± 0.08	4.4 ± 0.2	4.5 ± 0.2	3.8 ± 0.1	4.5 ± 0.2	3.7 ± 0.2	3.11 ± 0.09	3.0 ± 0.2	3.30 ± 0.10	3.4 ± 0.2	3.5 ± 0.2	E Africa F	E Europe M
45	5.0 ± 0.3	3.62 ± 0.08	4.3 ± 0.2	4.4 ± 0.2	3.6 ± 0.1	4.4 ± 0.2	3.8 ± 0.2	3.10 ± 0.08	3.0 ± 0.2	3.29 ± 0.10	3.4 ± 0.2	3.8 ± 0.2	E Africa F	E Europe M
46	5.5 ± 0.4	3.61 ± 0.08	4.6 ± 0.2	4.1 ± 0.2	3.7 ± 0.2	4.4 ± 0.3	3.8 ± 0.2	3.11 ± 0.09	3.4 ± 0.2	3.2 ± 0.1	3.5 ± 0.2	3.7 ± 0.2	E Africa F	E Asia M
47	5.2 ± 0.4	3.76 ± 0.09	4.7 ± 0.2	4.2 ± 0.2	3.7 ± 0.2	4.4 ± 0.3	4.0 ± 0.3	3.21 ± 0.09	3.2 ± 0.2	3.5 ± 0.1	3.5 ± 0.2	3.9 ± 0.2	E Africa F	E Europe M
48	5.1 ± 0.4	3.80 ± 0.09	4.7 ± 0.2	4.3 ± 0.2	3.7 ± 0.2	4.5 ± 0.3	3.9 ± 0.3	3.26 ± 0.09	3.5 ± 0.2	3.5 ± 0.1	3.7 ± 0.2	4.0 ± 0.2	E Africa F	E Asia M
49	5.2 ± 0.4	3.82 ± 0.09	4.7 ± 0.2	4.1 ± 0.2	3.8 ± 0.2	4.8 ± 0.3	3.8 ± 0.3	3.34 ± 0.10	3.3 ± 0.2	3.4 ± 0.1	3.6 ± 0.2	3.7 ± 0.2	E Africa F	E Europe M
50	4.9 ± 0.4	3.91 ± 0.09	5.0 ± 0.2	4.1 ± 0.2	3.7 ± 0.2	4.4 ± 0.3	3.6 ± 0.3	3.32 ± 0.09	3.6 ± 0.2	3.6 ± 0.1	3.7 ± 0.2	3.9 ± 0.2	E Europe F	E Asia M
51	5.1 ± 0.4	3.9 ± 0.1	5.0 ± 0.2	4.2 ± 0.2	3.8 ± 0.2	4.4 ± 0.3	3.8 ± 0.3	3.5 ± 0.1	3.5 ± 0.2	3.7 ± 0.1	3.8 ± 0.2	4.0 ± 0.2	E Africa F	E Asia M
52	5.1 ± 0.4	4.0 ± 0.1	5.0 ± 0.2	4.1 ± 0.2	3.9 ± 0.2	4.5 ± 0.3	3.6 ± 0.3	3.5 ± 0.1	3.5 ± 0.2	3.6 ± 0.1	3.7 ± 0.2	4.1 ± 0.3	E Africa F	E Asia M

Table 101. *Mean absolute error for Application-type images for algorithm roc-001. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	4.8 ± 0.2	4.99 ± 0.09	3.4 ± 0.1	4.27 ± 0.10	4.8 ± 0.2	4.9 ± 0.2	3.7 ± 0.1	4.73 ± 0.08	2.82 ± 0.08	3.60 ± 0.07	4.3 ± 0.1	3.7 ± 0.2	E Asia F	E Europe M
15	4.8 ± 0.2	4.9 ± 0.1	2.8 ± 0.1	4.1 ± 0.1	4.7 ± 0.2	4.9 ± 0.3	3.4 ± 0.2	4.44 ± 0.07	2.33 ± 0.09	3.24 ± 0.08	4.0 ± 0.1	3.4 ± 0.2	W Africa F	E Europe M
16	4.6 ± 0.3	4.8 ± 0.1	2.4 ± 0.1	3.8 ± 0.1	4.5 ± 0.3	4.7 ± 0.4	3.4 ± 0.2	4.05 ± 0.08	1.9 ± 0.1	2.84 ± 0.09	3.7 ± 0.2	3.1 ± 0.2	E Asia F	E Europe M
17	4.9 ± 0.3	4.5 ± 0.1	2.0 ± 0.1	3.8 ± 0.2	4.4 ± 0.2	4.6 ± 0.3	3.2 ± 0.2	3.9 ± 0.1	1.3 ± 0.1	2.5 ± 0.1	3.5 ± 0.2	3.6 ± 0.4	E Africa F	E Europe M
18	4.1 ± 0.2	4.16 ± 0.10	1.8 ± 0.2	3.3 ± 0.1	4.1 ± 0.1	4.3 ± 0.3	3.0 ± 0.2	3.66 ± 0.08	1.13 ± 0.10	2.23 ± 0.09	3.3 ± 0.2	3.3 ± 0.3	W Africa F	E Europe M
19	4.4 ± 0.3	3.95 ± 0.10	1.7 ± 0.2	3.2 ± 0.1	3.9 ± 0.1	4.5 ± 0.3	3.4 ± 0.2	3.65 ± 0.09	1.1 ± 0.1	2.3 ± 0.1	3.1 ± 0.1	3.5 ± 0.3	W Africa F	E Europe M
20	4.6 ± 0.3	3.8 ± 0.1	1.9 ± 0.1	3.2 ± 0.1	3.8 ± 0.1	4.6 ± 0.3	3.5 ± 0.2	3.59 ± 0.09	1.5 ± 0.1	2.6 ± 0.1	3.2 ± 0.1	3.8 ± 0.3	W Africa F	E Europe M
21	4.5 ± 0.2	3.65 ± 0.10	2.1 ± 0.1	3.1 ± 0.1	3.6 ± 0.1	4.3 ± 0.3	3.7 ± 0.2	3.49 ± 0.08	1.8 ± 0.1	2.7 ± 0.1	3.2 ± 0.1	3.9 ± 0.3	E Africa F	E Europe M
22	4.6 ± 0.2	3.43 ± 0.09	2.24 ± 0.09	3.10 ± 0.09	3.5 ± 0.1	4.1 ± 0.2	4.4 ± 0.2	3.38 ± 0.09	1.8 ± 0.1	2.8 ± 0.1	3.0 ± 0.1	3.7 ± 0.2	E Africa F	E Europe M
23	4.6 ± 0.2	3.19 ± 0.08	2.39 ± 0.09	3.09 ± 0.08	3.3 ± 0.1	4.1 ± 0.2	4.2 ± 0.2	3.20 ± 0.08	2.0 ± 0.1	2.85 ± 0.10	3.0 ± 0.1	3.9 ± 0.2	E Africa F	E Europe M
24	4.7 ± 0.2	3.02 ± 0.07	2.44 ± 0.08	2.95 ± 0.07	3.08 ± 0.09	4.0 ± 0.2	4.2 ± 0.2	3.02 ± 0.08	2.01 ± 0.09	2.80 ± 0.09	2.8 ± 0.1	3.8 ± 0.2	E Africa F	E Europe M
25	4.5 ± 0.2	2.86 ± 0.06	2.48 ± 0.07	2.88 ± 0.07	2.92 ± 0.09	4.0 ± 0.2	4.2 ± 0.2	2.86 ± 0.08	2.22 ± 0.10	2.73 ± 0.08	2.7 ± 0.1	3.7 ± 0.2	E Africa F	E Europe M
26	4.2 ± 0.2	2.73 ± 0.06	2.58 ± 0.07	2.82 ± 0.06	2.80 ± 0.08	3.7 ± 0.2	4.2 ± 0.2	2.63 ± 0.08	2.2 ± 0.1	2.78 ± 0.08	2.6 ± 0.1	3.5 ± 0.2	E Africa M	E Europe M
27	4.6 ± 0.2	2.62 ± 0.05	2.61 ± 0.08	2.82 ± 0.06	2.67 ± 0.08	3.7 ± 0.2	4.1 ± 0.2	2.54 ± 0.07	2.21 ± 0.09	2.63 ± 0.07	2.5 ± 0.1	3.4 ± 0.2	E Africa F	E Europe M
28	4.4 ± 0.2	2.53 ± 0.05	2.63 ± 0.08	2.90 ± 0.06	2.68 ± 0.08	3.6 ± 0.2	3.9 ± 0.2	2.42 ± 0.08	2.34 ± 0.09	2.63 ± 0.06	2.5 ± 0.1	3.2 ± 0.1	E Africa F	E Europe M
29	4.6 ± 0.2	2.47 ± 0.05	2.63 ± 0.07	2.87 ± 0.06	2.63 ± 0.08	3.6 ± 0.1	3.9 ± 0.2	2.34 ± 0.07	2.35 ± 0.09	2.61 ± 0.06	2.4 ± 0.1	3.3 ± 0.1	E Africa F	E Asia M
30	4.3 ± 0.2	2.47 ± 0.05	2.68 ± 0.08	2.88 ± 0.06	2.63 ± 0.08	3.6 ± 0.1	3.9 ± 0.2	2.25 ± 0.06	2.24 ± 0.09	2.57 ± 0.05	2.4 ± 0.1	3.2 ± 0.1	E Africa F	E Europe M
31	4.3 ± 0.2	2.46 ± 0.05	2.62 ± 0.08	2.93 ± 0.06	2.66 ± 0.08	3.5 ± 0.1	3.9 ± 0.2	2.24 ± 0.06	2.42 ± 0.09	2.56 ± 0.05	2.4 ± 0.1	3.1 ± 0.1	E Africa F	E Asia M
32	4.5 ± 0.2	2.47 ± 0.05	2.75 ± 0.08	2.97 ± 0.06	2.72 ± 0.09	3.7 ± 0.2	3.9 ± 0.2	2.31 ± 0.06	2.40 ± 0.10	2.59 ± 0.05	2.4 ± 0.1	3.1 ± 0.1	E Africa F	E Asia M
33	4.3 ± 0.2	2.54 ± 0.05	2.73 ± 0.09	2.99 ± 0.06	2.67 ± 0.08	3.7 ± 0.2	4.0 ± 0.2	2.28 ± 0.06	2.4 ± 0.1	2.64 ± 0.05	2.4 ± 0.1	3.0 ± 0.1	E Africa F	E Asia M
34	4.4 ± 0.2	2.58 ± 0.05	2.78 ± 0.09	3.01 ± 0.06	2.78 ± 0.09	3.7 ± 0.2	3.8 ± 0.2	2.35 ± 0.06	2.5 ± 0.1	2.72 ± 0.06	2.5 ± 0.1	3.0 ± 0.1	E Africa F	E Asia M
35	4.7 ± 0.2	2.54 ± 0.05	2.85 ± 0.10	3.04 ± 0.06	2.65 ± 0.09	3.6 ± 0.2	3.9 ± 0.2	2.36 ± 0.07	2.4 ± 0.1	2.76 ± 0.06	2.7 ± 0.1	3.1 ± 0.1	E Africa F	E Asia M
36	4.5 ± 0.2	2.58 ± 0.05	2.82 ± 0.10	3.04 ± 0.07	2.77 ± 0.09	3.6 ± 0.2	4.0 ± 0.2	2.37 ± 0.07	2.6 ± 0.1	2.73 ± 0.06	2.7 ± 0.1	3.1 ± 0.1	E Africa F	E Asia M
37	4.6 ± 0.2	2.55 ± 0.05	2.9 ± 0.1	3.25 ± 0.07	2.76 ± 0.10	3.8 ± 0.2	4.0 ± 0.2	2.44 ± 0.07	2.5 ± 0.1	2.83 ± 0.06	2.7 ± 0.1	3.0 ± 0.1	E Africa F	E Asia M
38	4.8 ± 0.2	2.62 ± 0.06	3.1 ± 0.1	3.23 ± 0.08	2.85 ± 0.10	3.7 ± 0.2	3.9 ± 0.2	2.44 ± 0.07	2.8 ± 0.1	2.87 ± 0.06	2.9 ± 0.1	3.1 ± 0.1	E Africa F	E Asia M
39	4.6 ± 0.2	2.67 ± 0.06	3.0 ± 0.1	3.21 ± 0.08	2.9 ± 0.1	3.6 ± 0.2	3.9 ± 0.2	2.55 ± 0.07	2.8 ± 0.1	2.93 ± 0.07	2.9 ± 0.1	3.1 ± 0.1	E Africa F	E Asia M
40	4.6 ± 0.3	2.66 ± 0.06	3.2 ± 0.1	3.24 ± 0.09	3.0 ± 0.1	3.6 ± 0.2	3.9 ± 0.2	2.53 ± 0.07	2.9 ± 0.1	3.03 ± 0.07	2.9 ± 0.1	3.2 ± 0.1	E Africa F	E Asia M
41	4.6 ± 0.3	2.72 ± 0.06	3.3 ± 0.1	3.40 ± 0.10	3.0 ± 0.1	3.6 ± 0.2	4.0 ± 0.2	2.60 ± 0.07	2.9 ± 0.1	3.03 ± 0.07	2.9 ± 0.1	3.4 ± 0.1	E Africa F	E Asia M
42	4.8 ± 0.3	2.77 ± 0.06	3.5 ± 0.1	3.4 ± 0.1	2.9 ± 0.1	3.7 ± 0.2	4.0 ± 0.2	2.68 ± 0.08	3.2 ± 0.2	3.07 ± 0.08	3.1 ± 0.1	3.3 ± 0.1	E Africa F	E Asia M
43	4.9 ± 0.3	2.80 ± 0.06	3.4 ± 0.1	3.4 ± 0.1	3.1 ± 0.1	3.6 ± 0.2	4.2 ± 0.3	2.79 ± 0.08	3.2 ± 0.2	3.16 ± 0.08	3.3 ± 0.2	3.4 ± 0.2	E Africa F	E Asia M
44	5.2 ± 0.3	2.88 ± 0.06	3.5 ± 0.2	3.7 ± 0.1	3.3 ± 0.1	3.7 ± 0.2	4.0 ± 0.2	2.90 ± 0.08	3.4 ± 0.2	3.26 ± 0.09	3.4 ± 0.2	3.3 ± 0.2	E Africa F	E Asia F
45	4.9 ± 0.3	2.91 ± 0.06	3.4 ± 0.2	3.7 ± 0.1	3.1 ± 0.1	3.6 ± 0.2	4.0 ± 0.2	2.98 ± 0.08	3.4 ± 0.2	3.20 ± 0.10	3.4 ± 0.2	3.6 ± 0.2	E Africa F	E Asia F
46	5.5 ± 0.4	2.93 ± 0.06	3.7 ± 0.2	3.5 ± 0.1	3.3 ± 0.1	3.6 ± 0.2	4.0 ± 0.3	2.95 ± 0.08	3.7 ± 0.2	3.2 ± 0.1	3.4 ± 0.2	3.5 ± 0.2	E Africa F	E Asia F
47	5.2 ± 0.4	3.02 ± 0.07	3.8 ± 0.2	3.6 ± 0.1	3.1 ± 0.1	3.8 ± 0.2	4.2 ± 0.3	3.05 ± 0.09	3.6 ± 0.2	3.4 ± 0.1	3.6 ± 0.2	3.6 ± 0.2	E Africa F	E Asia F
48	5.1 ± 0.4	2.98 ± 0.07	3.7 ± 0.2	3.7 ± 0.1	3.1 ± 0.1	3.8 ± 0.2	3.8 ± 0.3	3.03 ± 0.09	4.1 ± 0.2	3.3 ± 0.1	3.5 ± 0.2	3.8 ± 0.2	E Africa F	E Asia F
49	5.3 ± 0.4	3.03 ± 0.07	3.6 ± 0.2	3.7 ± 0.1	3.3 ± 0.1	3.9 ± 0.3	4.2 ± 0.3	3.17 ± 0.09	3.8 ± 0.2	3.3 ± 0.1	3.5 ± 0.2	3.5 ± 0.2	E Africa F	E Asia F
50	5.0 ± 0.4	3.10 ± 0.08	3.7 ± 0.2	3.7 ± 0.1	3.2 ± 0.1	3.7 ± 0.2	3.8 ± 0.3	3.12 ± 0.09	3.8 ± 0.2	3.3 ± 0.1	3.7 ± 0.2	3.7 ± 0.2	E Africa F	E Asia F
51	5.4 ± 0.4	3.16 ± 0.08	3.7 ± 0.2	3.8 ± 0.1	3.2 ± 0.1	3.8 ± 0.3	4.0 ± 0.3	3.14 ± 0.09	3.8 ± 0.2	3.5 ± 0.1	3.6 ± 0.2	3.9 ± 0.2	E Africa F	E Asia M
52	5.4 ± 0.4	3.08 ± 0.08	3.7 ± 0.2	3.7 ± 0.1	3.3 ± 0.1	3.4 ± 0.2	4.2 ± 0.3	3.11 ± 0.09	3.7 ± 0.2	3.5 ± 0.1	3.6 ± 0.2	3.9 ± 0.2	E Africa F	E Asia F

Table 102. *Mean absolute error for Application-type images for algorithm roc-002. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	2.8 ± 0.2	3.49 ± 0.09	2.6 ± 0.1	2.60 ± 0.09	3.0 ± 0.2	3.0 ± 0.2	1.9 ± 0.1	2.86 ± 0.09	1.8 ± 0.1	2.13 ± 0.07	2.1 ± 0.1	1.9 ± 0.2	E Asia F	E Europe M
15	2.9 ± 0.2	3.50 ± 0.10	2.1 ± 0.1	2.5 ± 0.1	2.9 ± 0.2	2.8 ± 0.2	1.8 ± 0.1	2.91 ± 0.09	1.6 ± 0.1	1.96 ± 0.08	2.3 ± 0.1	1.9 ± 0.2	E Asia F	E Europe M
16	2.6 ± 0.2	3.4 ± 0.1	1.78 ± 0.10	2.0 ± 0.1	3.0 ± 0.2	2.8 ± 0.4	1.8 ± 0.2	2.82 ± 0.08	1.5 ± 0.1	1.77 ± 0.08	2.1 ± 0.2	1.8 ± 0.2	E Asia F	E Europe M
17	2.7 ± 0.3	3.1 ± 0.1	1.4 ± 0.1	1.9 ± 0.1	2.9 ± 0.2	2.5 ± 0.2	1.7 ± 0.2	2.70 ± 0.10	1.09 ± 0.09	1.52 ± 0.10	2.0 ± 0.2	2.1 ± 0.3	E Asia F	E Europe M
18	2.4 ± 0.2	2.91 ± 0.10	1.3 ± 0.2	1.72 ± 0.09	2.6 ± 0.1	2.6 ± 0.2	1.8 ± 0.1	2.57 ± 0.08	1.1 ± 0.1	1.48 ± 0.08	2.0 ± 0.2	2.2 ± 0.2	E Asia F	E Europe M
19	2.9 ± 0.2	2.80 ± 0.09	1.4 ± 0.1	1.84 ± 0.10	2.6 ± 0.1	2.7 ± 0.2	2.3 ± 0.2	2.50 ± 0.09	1.3 ± 0.1	1.59 ± 0.08	1.9 ± 0.1	2.4 ± 0.3	E Africa F	E Europe M
20	3.2 ± 0.2	2.9 ± 0.1	1.6 ± 0.1	2.0 ± 0.1	2.7 ± 0.1	2.9 ± 0.2	2.6 ± 0.2	2.48 ± 0.09	1.4 ± 0.1	1.93 ± 0.09	2.1 ± 0.1	2.6 ± 0.2	E Africa F	E Europe M
21	3.1 ± 0.2	2.86 ± 0.09	2.03 ± 0.09	2.31 ± 0.08	2.7 ± 0.1	3.0 ± 0.2	2.9 ± 0.2	2.45 ± 0.08	1.8 ± 0.1	2.16 ± 0.09	2.2 ± 0.1	2.8 ± 0.2	E Africa F	E Europe M
22	3.4 ± 0.2	2.85 ± 0.08	2.30 ± 0.08	2.48 ± 0.07	2.8 ± 0.1	3.0 ± 0.2	3.4 ± 0.2	2.44 ± 0.08	1.9 ± 0.1	2.37 ± 0.09	2.2 ± 0.1	2.7 ± 0.2	E Africa M	E Europe M
23	3.5 ± 0.2	2.71 ± 0.07	2.52 ± 0.09	2.68 ± 0.07	2.72 ± 0.09	3.0 ± 0.2	3.4 ± 0.2	2.39 ± 0.08	2.1 ± 0.1	2.59 ± 0.09	2.3 ± 0.1	3.0 ± 0.2	E Africa F	E Europe M
24	3.5 ± 0.2	2.69 ± 0.06	2.48 ± 0.07	2.70 ± 0.06	2.65 ± 0.08	3.0 ± 0.2	3.3 ± 0.2	2.29 ± 0.08	2.11 ± 0.09	2.59 ± 0.08	2.3 ± 0.1	3.0 ± 0.2	E Africa F	E Europe M
25	3.5 ± 0.2	2.59 ± 0.06	2.55 ± 0.07	2.80 ± 0.06	2.67 ± 0.08	3.1 ± 0.2	3.4 ± 0.2	2.35 ± 0.07	2.15 ± 0.10	2.55 ± 0.07	2.30 ± 0.10	2.9 ± 0.2	E Africa F	E Europe M
26	3.5 ± 0.2	2.49 ± 0.05	2.59 ± 0.07	2.84 ± 0.06	2.61 ± 0.07	3.0 ± 0.1	3.4 ± 0.2	2.23 ± 0.07	2.09 ± 0.09	2.53 ± 0.07	2.4 ± 0.1	2.7 ± 0.1	E Africa F	E Europe M
27	3.7 ± 0.2	2.40 ± 0.05	2.54 ± 0.07	2.91 ± 0.06	2.52 ± 0.07	3.2 ± 0.1	3.3 ± 0.2	2.21 ± 0.07	2.11 ± 0.09	2.40 ± 0.06	2.4 ± 0.1	2.8 ± 0.1	E Africa F	E Europe M
28	3.6 ± 0.2	2.37 ± 0.05	2.55 ± 0.07	3.03 ± 0.06	2.59 ± 0.07	3.1 ± 0.1	3.2 ± 0.1	2.20 ± 0.07	2.05 ± 0.09	2.36 ± 0.06	2.4 ± 0.1	2.7 ± 0.1	E Africa F	E Europe M
29	3.8 ± 0.2	2.29 ± 0.05	2.48 ± 0.07	3.08 ± 0.06	2.56 ± 0.08	3.1 ± 0.1	3.1 ± 0.1	2.08 ± 0.06	2.04 ± 0.08	2.31 ± 0.05	2.3 ± 0.1	2.8 ± 0.1	E Africa F	E Europe M
30	3.7 ± 0.2	2.34 ± 0.05	2.55 ± 0.07	3.13 ± 0.06	2.57 ± 0.08	3.3 ± 0.1	3.2 ± 0.1	2.19 ± 0.06	2.05 ± 0.08	2.35 ± 0.05	2.3 ± 0.1	2.8 ± 0.1	E Africa F	E Europe M
31	3.9 ± 0.2	2.40 ± 0.05	2.61 ± 0.08	3.25 ± 0.06	2.57 ± 0.07	3.4 ± 0.1	3.3 ± 0.1	2.17 ± 0.06	2.21 ± 0.09	2.40 ± 0.05	2.5 ± 0.1	2.9 ± 0.1	E Africa F	E Asia M
32	4.0 ± 0.2	2.44 ± 0.05	2.67 ± 0.08	3.30 ± 0.06	2.62 ± 0.08	3.5 ± 0.1	3.3 ± 0.1	2.22 ± 0.06	2.24 ± 0.09	2.50 ± 0.05	2.4 ± 0.1	3.0 ± 0.1	E Africa F	E Asia M
33	4.0 ± 0.2	2.51 ± 0.05	2.67 ± 0.08	3.33 ± 0.07	2.69 ± 0.09	3.5 ± 0.1	3.4 ± 0.1	2.22 ± 0.06	2.22 ± 0.09	2.56 ± 0.05	2.4 ± 0.1	3.0 ± 0.1	E Africa F	E Asia M
34	4.0 ± 0.2	2.54 ± 0.05	2.68 ± 0.08	3.29 ± 0.07	2.61 ± 0.08	3.5 ± 0.1	3.3 ± 0.1	2.25 ± 0.06	2.29 ± 0.09	2.64 ± 0.05	2.5 ± 0.1	3.0 ± 0.1	E Africa F	E Asia M
35	4.3 ± 0.2	2.54 ± 0.05	2.74 ± 0.09	3.35 ± 0.07	2.65 ± 0.09	3.7 ± 0.2	3.3 ± 0.2	2.29 ± 0.06	2.34 ± 0.10	2.73 ± 0.06	2.5 ± 0.1	3.1 ± 0.1	E Africa F	E Asia M
36	4.4 ± 0.2	2.60 ± 0.05	2.76 ± 0.09	3.36 ± 0.07	2.68 ± 0.09	3.5 ± 0.2	3.4 ± 0.2	2.32 ± 0.06	2.3 ± 0.1	2.78 ± 0.06	2.4 ± 0.1	3.2 ± 0.1	E Africa F	E Europe M
37	4.3 ± 0.2	2.61 ± 0.05	2.66 ± 0.10	3.47 ± 0.08	2.62 ± 0.09	3.9 ± 0.2	3.4 ± 0.2	2.34 ± 0.06	2.39 ± 0.10	2.89 ± 0.06	2.4 ± 0.1	3.1 ± 0.1	E Africa F	E Asia M
38	4.3 ± 0.2	2.64 ± 0.05	2.7 ± 0.1	3.40 ± 0.08	2.68 ± 0.10	3.8 ± 0.2	3.2 ± 0.2	2.38 ± 0.07	2.31 ± 0.10	2.91 ± 0.06	2.7 ± 0.1	3.2 ± 0.1	E Africa F	E Europe M
39	4.3 ± 0.2	2.67 ± 0.06	2.6 ± 0.1	3.45 ± 0.09	2.64 ± 0.09	3.6 ± 0.2	3.4 ± 0.2	2.41 ± 0.07	2.3 ± 0.1	2.92 ± 0.06	2.6 ± 0.1	3.1 ± 0.1	E Africa F	E Europe M
40	4.3 ± 0.2	2.68 ± 0.06	2.7 ± 0.1	3.35 ± 0.09	2.8 ± 0.1	3.9 ± 0.2	3.3 ± 0.2	2.38 ± 0.07	2.4 ± 0.1	3.03 ± 0.07	2.4 ± 0.1	3.4 ± 0.1	E Africa F	E Asia M
41	4.4 ± 0.2	2.72 ± 0.06	2.8 ± 0.1	3.44 ± 0.10	2.8 ± 0.1	4.0 ± 0.2	3.4 ± 0.2	2.48 ± 0.06	2.4 ± 0.1	2.99 ± 0.07	2.7 ± 0.1	3.6 ± 0.2	E Africa F	E Europe M
42	4.4 ± 0.3	2.77 ± 0.06	2.8 ± 0.1	3.4 ± 0.1	2.7 ± 0.1	3.8 ± 0.2	3.4 ± 0.2	2.50 ± 0.07	2.6 ± 0.1	3.02 ± 0.08	2.7 ± 0.1	3.4 ± 0.2	E Africa F	E Asia M
43	4.4 ± 0.3	2.81 ± 0.06	3.0 ± 0.1	3.3 ± 0.1	2.9 ± 0.1	3.8 ± 0.2	3.4 ± 0.2	2.58 ± 0.07	2.6 ± 0.1	3.15 ± 0.08	2.8 ± 0.1	3.7 ± 0.2	E Africa F	E Asia M
44	4.6 ± 0.3	2.82 ± 0.06	2.9 ± 0.1	3.6 ± 0.1	2.9 ± 0.1	4.0 ± 0.2	3.5 ± 0.2	2.66 ± 0.07	2.6 ± 0.1	3.22 ± 0.09	2.8 ± 0.1	3.6 ± 0.2	E Africa F	E Europe M
45	4.6 ± 0.3	2.87 ± 0.06	2.7 ± 0.1	3.5 ± 0.1	2.9 ± 0.1	3.9 ± 0.2	3.5 ± 0.2	2.75 ± 0.07	2.6 ± 0.1	3.19 ± 0.10	2.9 ± 0.1	3.9 ± 0.2	E Africa F	E Europe M
46	4.8 ± 0.3	2.94 ± 0.06	3.0 ± 0.1	3.4 ± 0.1	3.0 ± 0.1	4.0 ± 0.2	3.5 ± 0.2	2.78 ± 0.07	2.8 ± 0.1	3.15 ± 0.10	3.0 ± 0.1	4.0 ± 0.2	E Africa F	E Asia M
47	4.6 ± 0.4	2.93 ± 0.07	3.2 ± 0.2	3.5 ± 0.1	2.9 ± 0.1	4.3 ± 0.2	3.8 ± 0.2	2.76 ± 0.08	2.8 ± 0.1	3.4 ± 0.1	2.9 ± 0.2	4.0 ± 0.2	E Africa F	E Europe M
48	4.7 ± 0.4	2.88 ± 0.07	3.2 ± 0.2	3.5 ± 0.1	2.9 ± 0.1	4.1 ± 0.3	3.7 ± 0.3	2.77 ± 0.07	2.9 ± 0.2	3.3 ± 0.1	3.0 ± 0.2	4.2 ± 0.2	E Africa F	E Asia M
49	4.6 ± 0.4	2.94 ± 0.08	3.3 ± 0.1	3.4 ± 0.1	3.0 ± 0.1	4.4 ± 0.3	3.6 ± 0.3	2.94 ± 0.08	3.0 ± 0.2	3.3 ± 0.1	2.9 ± 0.2	4.1 ± 0.2	E Africa F	S E Asia M
50	4.3 ± 0.4	3.02 ± 0.07	3.3 ± 0.1	3.3 ± 0.1	3.0 ± 0.1	4.2 ± 0.3	3.4 ± 0.3	2.93 ± 0.08	2.9 ± 0.2	3.3 ± 0.1	3.1 ± 0.2	4.2 ± 0.2	E Africa F	E Europe M
51	4.7 ± 0.3	3.08 ± 0.08	3.2 ± 0.2	3.4 ± 0.1	2.9 ± 0.1	4.1 ± 0.3	3.9 ± 0.3	3.00 ± 0.09	2.7 ± 0.1	3.4 ± 0.1	3.1 ± 0.2	4.6 ± 0.3	E Africa F	E Europe M
52	4.6 ± 0.4	3.06 ± 0.08	3.3 ± 0.1	3.4 ± 0.1	3.0 ± 0.1	4.1 ± 0.3	3.6 ± 0.3	2.97 ± 0.08	2.9 ± 0.2	3.3 ± 0.1	3.0 ± 0.2	4.5 ± 0.3	E Africa F	E Europe M

Table 103. *Mean absolute error for Application-type images for algorithm shufti-000. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	5.2 ± 0.3	3.9 ± 0.1	3.6 ± 0.3	4.2 ± 0.1	3.8 ± 0.2	4.8 ± 0.3	3.7 ± 0.2	3.0 ± 0.1	2.5 ± 0.1	2.8 ± 0.1	2.7 ± 0.2	3.6 ± 0.3	E Africa F	E Europe M
15	5.1 ± 0.3	3.9 ± 0.1	4.0 ± 0.3	4.4 ± 0.2	3.9 ± 0.3	4.7 ± 0.4	3.5 ± 0.3	3.0 ± 0.1	2.5 ± 0.2	2.9 ± 0.1	2.8 ± 0.2	3.5 ± 0.3	E Africa F	E Europe M
16	4.9 ± 0.3	3.6 ± 0.1	4.2 ± 0.3	4.1 ± 0.2	3.9 ± 0.3	4.7 ± 0.4	3.9 ± 0.3	2.9 ± 0.1	2.7 ± 0.2	3.1 ± 0.1	2.8 ± 0.2	3.5 ± 0.3	E Africa F	E Europe M
17	5.1 ± 0.4	3.4 ± 0.2	4.2 ± 0.3	4.2 ± 0.2	3.4 ± 0.3	4.6 ± 0.3	3.6 ± 0.3	2.9 ± 0.1	2.2 ± 0.2	3.0 ± 0.2	2.8 ± 0.2	3.6 ± 0.4	E Africa F	E Europe M
18	4.7 ± 0.3	3.3 ± 0.1	3.9 ± 0.3	3.9 ± 0.1	3.4 ± 0.2	4.3 ± 0.3	3.7 ± 0.3	3.0 ± 0.1	2.4 ± 0.2	3.4 ± 0.1	3.0 ± 0.2	3.1 ± 0.3	E Africa F	E Europe M
19	5.2 ± 0.3	3.3 ± 0.1	4.2 ± 0.3	4.0 ± 0.2	3.6 ± 0.2	4.4 ± 0.3	3.9 ± 0.3	3.3 ± 0.1	2.9 ± 0.3	3.7 ± 0.2	3.3 ± 0.2	3.9 ± 0.4	E Africa F	E Europe M
20	5.1 ± 0.3	3.4 ± 0.1	4.4 ± 0.2	3.9 ± 0.2	3.8 ± 0.2	4.2 ± 0.3	4.1 ± 0.3	3.5 ± 0.1	3.2 ± 0.3	4.0 ± 0.2	3.5 ± 0.2	3.9 ± 0.3	E Africa F	E Europe M
21	5.0 ± 0.3	3.5 ± 0.1	4.4 ± 0.2	4.1 ± 0.1	3.8 ± 0.2	4.6 ± 0.3	4.8 ± 0.3	3.7 ± 0.1	3.6 ± 0.3	4.3 ± 0.2	3.9 ± 0.2	4.2 ± 0.3	E Africa F	E Asia F
22	5.2 ± 0.3	3.6 ± 0.1	4.4 ± 0.2	4.1 ± 0.1	3.8 ± 0.2	4.2 ± 0.3	5.6 ± 0.3	4.0 ± 0.1	3.9 ± 0.3	4.5 ± 0.2	3.8 ± 0.2	4.0 ± 0.3	E Africa M	E Asia F
23	5.3 ± 0.3	3.6 ± 0.1	4.5 ± 0.2	4.2 ± 0.1	3.9 ± 0.1	4.7 ± 0.3	5.5 ± 0.3	4.0 ± 0.1	4.3 ± 0.3	4.7 ± 0.1	3.9 ± 0.2	4.8 ± 0.3	E Africa M	E Asia F
24	5.4 ± 0.3	3.78 ± 0.09	4.4 ± 0.1	4.2 ± 0.1	3.9 ± 0.1	4.6 ± 0.2	5.6 ± 0.3	4.1 ± 0.1	4.3 ± 0.2	4.8 ± 0.1	3.9 ± 0.2	4.8 ± 0.3	E Africa M	E Asia F
25	5.3 ± 0.2	3.64 ± 0.08	4.3 ± 0.1	4.17 ± 0.09	4.0 ± 0.1	4.4 ± 0.2	5.6 ± 0.2	4.0 ± 0.1	4.3 ± 0.2	5.0 ± 0.1	4.0 ± 0.2	4.7 ± 0.2	E Africa M	E Asia F
26	5.3 ± 0.2	3.75 ± 0.08	4.4 ± 0.1	4.13 ± 0.08	4.1 ± 0.1	4.4 ± 0.2	5.4 ± 0.2	3.9 ± 0.1	4.3 ± 0.2	5.0 ± 0.1	3.9 ± 0.2	4.9 ± 0.2	E Africa M	E Asia F
27	5.5 ± 0.2	3.80 ± 0.08	4.5 ± 0.1	4.13 ± 0.08	3.9 ± 0.1	4.6 ± 0.2	5.4 ± 0.2	4.0 ± 0.1	4.3 ± 0.2	5.0 ± 0.1	3.9 ± 0.2	4.7 ± 0.2	E Africa F	E Asia F
28	5.1 ± 0.2	3.63 ± 0.07	4.3 ± 0.1	4.14 ± 0.08	4.0 ± 0.1	4.3 ± 0.2	5.2 ± 0.2	3.9 ± 0.1	4.6 ± 0.2	4.98 ± 0.10	3.9 ± 0.2	4.6 ± 0.2	E Africa M	E Asia F
29	5.3 ± 0.2	3.60 ± 0.07	4.1 ± 0.1	4.07 ± 0.08	4.0 ± 0.1	4.3 ± 0.2	5.2 ± 0.2	3.8 ± 0.1	4.3 ± 0.2	4.96 ± 0.09	3.8 ± 0.2	4.8 ± 0.2	E Africa F	E Asia F
30	5.3 ± 0.2	3.70 ± 0.07	4.0 ± 0.1	4.09 ± 0.08	4.0 ± 0.1	4.5 ± 0.2	5.1 ± 0.2	3.8 ± 0.1	4.2 ± 0.2	4.98 ± 0.08	3.9 ± 0.2	4.5 ± 0.2	E Africa F	E Asia F
31	5.1 ± 0.2	3.64 ± 0.07	4.0 ± 0.1	3.99 ± 0.08	3.9 ± 0.1	4.4 ± 0.2	4.9 ± 0.2	3.65 ± 0.10	4.1 ± 0.2	4.90 ± 0.08	3.9 ± 0.2	4.4 ± 0.2	E Africa F	E Asia F
32	5.4 ± 0.2	3.60 ± 0.07	3.9 ± 0.1	3.99 ± 0.08	4.0 ± 0.1	4.4 ± 0.2	4.9 ± 0.2	3.67 ± 0.09	4.0 ± 0.1	4.78 ± 0.08	3.9 ± 0.2	4.4 ± 0.2	E Africa F	E Asia F
33	5.2 ± 0.2	3.53 ± 0.07	3.9 ± 0.1	3.96 ± 0.08	3.9 ± 0.1	4.2 ± 0.2	5.0 ± 0.2	3.70 ± 0.10	3.9 ± 0.1	4.66 ± 0.08	3.6 ± 0.2	4.3 ± 0.2	E Africa F	E Asia F
34	4.9 ± 0.2	3.59 ± 0.07	3.7 ± 0.1	3.89 ± 0.08	3.7 ± 0.1	4.2 ± 0.2	4.6 ± 0.2	3.59 ± 0.09	3.9 ± 0.1	4.57 ± 0.08	3.8 ± 0.2	4.1 ± 0.2	E Africa F	E Asia M
35	5.1 ± 0.2	3.57 ± 0.08	3.8 ± 0.1	3.80 ± 0.08	3.7 ± 0.1	4.3 ± 0.2	4.7 ± 0.2	3.59 ± 0.09	3.7 ± 0.2	4.45 ± 0.08	3.6 ± 0.2	4.0 ± 0.2	E Africa F	E Asia F
36	5.0 ± 0.2	3.46 ± 0.07	3.7 ± 0.1	3.84 ± 0.08	3.8 ± 0.1	4.4 ± 0.2	4.7 ± 0.2	3.42 ± 0.09	3.9 ± 0.1	4.28 ± 0.08	3.7 ± 0.2	4.0 ± 0.2	E Africa F	E Asia M
37	5.0 ± 0.2	3.49 ± 0.07	3.7 ± 0.1	3.89 ± 0.09	3.5 ± 0.1	4.6 ± 0.2	4.6 ± 0.2	3.42 ± 0.09	3.6 ± 0.1	4.14 ± 0.08	3.5 ± 0.2	3.9 ± 0.2	E Africa F	E Asia M
38	5.0 ± 0.3	3.47 ± 0.07	3.6 ± 0.1	3.81 ± 0.09	3.5 ± 0.1	4.4 ± 0.2	4.3 ± 0.2	3.43 ± 0.09	3.6 ± 0.2	4.05 ± 0.08	3.7 ± 0.2	3.8 ± 0.2	E Africa F	E Asia M
39	4.7 ± 0.2	3.46 ± 0.08	3.7 ± 0.2	3.79 ± 0.10	3.5 ± 0.1	4.4 ± 0.2	4.4 ± 0.2	3.32 ± 0.09	3.6 ± 0.2	3.97 ± 0.08	3.6 ± 0.2	3.8 ± 0.2	E Africa F	E Asia M
40	4.8 ± 0.3	3.44 ± 0.08	3.7 ± 0.2	3.7 ± 0.1	3.6 ± 0.1	4.2 ± 0.2	4.6 ± 0.3	3.24 ± 0.09	3.5 ± 0.2	3.87 ± 0.08	3.4 ± 0.2	3.8 ± 0.2	E Africa F	E Asia M
41	4.7 ± 0.3	3.41 ± 0.08	3.8 ± 0.2	3.7 ± 0.1	3.3 ± 0.1	4.3 ± 0.2	4.5 ± 0.3	3.22 ± 0.09	3.6 ± 0.2	3.78 ± 0.08	3.4 ± 0.2	3.9 ± 0.2	E Africa F	E Asia M
42	4.8 ± 0.3	3.37 ± 0.08	3.7 ± 0.2	3.7 ± 0.1	3.3 ± 0.1	4.4 ± 0.2	4.6 ± 0.3	3.13 ± 0.08	3.6 ± 0.2	3.72 ± 0.09	3.3 ± 0.2	3.7 ± 0.2	E Africa F	E Asia M
43	4.8 ± 0.3	3.33 ± 0.08	3.8 ± 0.2	3.6 ± 0.1	3.3 ± 0.1	4.5 ± 0.3	4.7 ± 0.3	3.11 ± 0.08	3.4 ± 0.2	3.71 ± 0.10	3.4 ± 0.2	3.9 ± 0.2	E Africa F	E Asia M
44	5.0 ± 0.3	3.27 ± 0.07	3.7 ± 0.2	3.7 ± 0.1	3.4 ± 0.1	4.5 ± 0.3	4.4 ± 0.3	3.11 ± 0.09	3.7 ± 0.2	3.5 ± 0.1	3.4 ± 0.2	3.8 ± 0.2	E Africa F	E Asia M
45	4.9 ± 0.3	3.24 ± 0.08	3.5 ± 0.2	3.7 ± 0.1	3.4 ± 0.1	4.2 ± 0.3	4.5 ± 0.3	3.03 ± 0.09	3.6 ± 0.2	3.6 ± 0.1	3.3 ± 0.2	3.9 ± 0.2	E Africa F	E Asia M
46	5.1 ± 0.4	3.24 ± 0.08	3.9 ± 0.2	3.6 ± 0.1	3.3 ± 0.1	4.5 ± 0.3	4.8 ± 0.3	2.88 ± 0.09	3.7 ± 0.2	3.5 ± 0.1	3.4 ± 0.2	4.1 ± 0.2	E Africa F	E Asia M
47	4.9 ± 0.4	3.29 ± 0.08	4.0 ± 0.3	3.6 ± 0.1	3.5 ± 0.2	4.4 ± 0.3	4.7 ± 0.3	2.97 ± 0.09	3.6 ± 0.2	3.8 ± 0.1	3.5 ± 0.2	4.2 ± 0.2	E Africa F	E Asia M
48	5.0 ± 0.4	3.26 ± 0.09	3.9 ± 0.2	3.8 ± 0.1	3.4 ± 0.1	4.2 ± 0.3	4.5 ± 0.3	2.87 ± 0.09	3.6 ± 0.2	3.7 ± 0.1	3.4 ± 0.2	4.2 ± 0.2	E Africa F	E Asia M
49	5.4 ± 0.4	3.24 ± 0.09	3.9 ± 0.2	3.8 ± 0.2	3.5 ± 0.2	4.4 ± 0.3	4.4 ± 0.3	2.95 ± 0.09	3.7 ± 0.2	3.6 ± 0.1	3.3 ± 0.2	4.0 ± 0.2	E Africa F	E Asia M
50	5.0 ± 0.4	3.28 ± 0.09	3.9 ± 0.2	3.8 ± 0.1	3.5 ± 0.2	4.3 ± 0.3	4.4 ± 0.3	2.90 ± 0.09	3.6 ± 0.2	3.7 ± 0.1	3.5 ± 0.2	4.1 ± 0.3	E Africa F	E Asia M
51	4.9 ± 0.3	3.25 ± 0.09	3.8 ± 0.2	3.7 ± 0.1	3.4 ± 0.1	4.5 ± 0.3	4.6 ± 0.4	2.99 ± 0.09	3.5 ± 0.2	3.7 ± 0.1	3.6 ± 0.2	4.4 ± 0.2	E Africa F	E Asia M
52	4.6 ± 0.4	3.14 ± 0.09	4.1 ± 0.2	3.6 ± 0.1	3.7 ± 0.2	4.4 ± 0.3	4.5 ± 0.4	2.88 ± 0.08	3.6 ± 0.2	3.5 ± 0.1	3.4 ± 0.2	4.3 ± 0.3	E Africa F	E Asia M

Table 104. *Mean absolute error for Application-type images for algorithm unissey-001. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	3.1 ± 0.3	4.1 ± 0.2	2.8 ± 0.2	2.8 ± 0.1	3.4 ± 0.3	4.4 ± 0.5	3.0 ± 0.2	3.7 ± 0.2	2.1 ± 0.2	2.6 ± 0.1	3.2 ± 0.3	3.1 ± 0.3	W Africa F	E Europe M
15	3.2 ± 0.3	4.3 ± 0.2	3.0 ± 0.3	3.1 ± 0.2	3.6 ± 0.4	4.3 ± 0.5	3.0 ± 0.3	3.9 ± 0.2	2.2 ± 0.2	3.0 ± 0.2	3.6 ± 0.3	3.1 ± 0.3	E Asia F	E Europe M
16	3.3 ± 0.3	4.4 ± 0.2	3.1 ± 0.3	3.2 ± 0.2	4.0 ± 0.3	4.5 ± 0.5	3.6 ± 0.3	4.2 ± 0.2	2.7 ± 0.3	3.3 ± 0.2	4.1 ± 0.3	3.0 ± 0.3	W Africa F	E Europe M
17	3.6 ± 0.4	4.3 ± 0.2	3.7 ± 0.4	3.3 ± 0.2	3.7 ± 0.3	4.9 ± 0.5	3.7 ± 0.3	4.3 ± 0.2	2.2 ± 0.2	3.5 ± 0.2	3.8 ± 0.3	3.5 ± 0.4	W Africa F	E Europe M
18	3.7 ± 0.3	4.2 ± 0.1	3.5 ± 0.3	3.2 ± 0.1	3.6 ± 0.2	4.8 ± 0.4	4.1 ± 0.3	4.3 ± 0.1	2.7 ± 0.2	3.8 ± 0.1	3.9 ± 0.3	3.6 ± 0.3	W Africa F	E Europe M
19	4.0 ± 0.3	4.2 ± 0.1	3.4 ± 0.3	3.5 ± 0.1	3.7 ± 0.2	4.9 ± 0.4	4.4 ± 0.3	4.3 ± 0.1	3.0 ± 0.2	3.9 ± 0.2	3.9 ± 0.2	3.5 ± 0.3	W Africa F	E Europe M
20	4.4 ± 0.3	4.2 ± 0.1	4.0 ± 0.2	3.6 ± 0.1	3.8 ± 0.2	5.4 ± 0.4	4.7 ± 0.3	4.3 ± 0.1	3.1 ± 0.2	4.1 ± 0.1	4.2 ± 0.2	3.9 ± 0.3	W Africa F	E Europe M
21	4.4 ± 0.3	4.1 ± 0.1	4.0 ± 0.2	3.8 ± 0.1	3.8 ± 0.1	5.5 ± 0.3	4.7 ± 0.3	4.3 ± 0.1	3.5 ± 0.2	4.0 ± 0.1	4.4 ± 0.2	4.0 ± 0.3	W Africa F	E Europe M
22	4.7 ± 0.2	3.83 ± 0.09	4.5 ± 0.2	3.82 ± 0.10	3.7 ± 0.1	5.7 ± 0.3	4.9 ± 0.2	4.2 ± 0.1	3.9 ± 0.2	4.0 ± 0.1	4.1 ± 0.2	3.8 ± 0.2	W Africa F	S E Asia F
23	4.6 ± 0.2	3.72 ± 0.08	4.5 ± 0.2	3.93 ± 0.09	3.7 ± 0.1	5.4 ± 0.3	4.7 ± 0.2	4.1 ± 0.1	3.7 ± 0.2	4.0 ± 0.1	4.1 ± 0.2	3.7 ± 0.2	W Africa F	S E Asia F
24	4.7 ± 0.2	3.48 ± 0.08	4.5 ± 0.1	3.86 ± 0.09	3.54 ± 0.09	5.5 ± 0.3	4.7 ± 0.2	3.9 ± 0.1	3.8 ± 0.2	3.7 ± 0.1	3.8 ± 0.1	3.6 ± 0.2	W Africa F	E Asia F
25	4.8 ± 0.2	3.23 ± 0.07	4.7 ± 0.1	3.97 ± 0.08	3.36 ± 0.09	5.5 ± 0.2	4.6 ± 0.2	3.8 ± 0.1	3.7 ± 0.2	3.57 ± 0.10	3.8 ± 0.1	3.7 ± 0.2	W Africa F	E Asia F
26	4.7 ± 0.2	3.08 ± 0.07	4.6 ± 0.1	3.92 ± 0.08	3.33 ± 0.09	5.4 ± 0.2	4.6 ± 0.2	3.48 ± 0.09	3.8 ± 0.2	3.55 ± 0.09	3.6 ± 0.2	3.4 ± 0.2	W Africa F	E Asia F
27	4.9 ± 0.2	2.86 ± 0.06	4.6 ± 0.1	3.99 ± 0.08	3.17 ± 0.09	5.3 ± 0.2	4.3 ± 0.2	3.28 ± 0.09	3.8 ± 0.2	3.35 ± 0.09	3.6 ± 0.2	3.5 ± 0.2	W Africa F	E Asia F
28	4.8 ± 0.2	2.72 ± 0.06	4.6 ± 0.1	4.13 ± 0.08	3.1 ± 0.1	5.3 ± 0.2	4.1 ± 0.2	3.2 ± 0.1	3.7 ± 0.2	3.17 ± 0.08	3.4 ± 0.2	3.4 ± 0.1	W Africa F	E Asia F
29	4.7 ± 0.2	2.68 ± 0.06	4.6 ± 0.1	4.18 ± 0.09	3.2 ± 0.1	5.0 ± 0.2	4.1 ± 0.2	2.97 ± 0.09	3.7 ± 0.2	3.19 ± 0.07	3.2 ± 0.2	3.5 ± 0.1	W Africa F	E Asia F
30	4.8 ± 0.2	2.83 ± 0.06	4.8 ± 0.1	4.40 ± 0.09	3.2 ± 0.1	5.2 ± 0.2	4.2 ± 0.2	2.89 ± 0.09	3.6 ± 0.2	3.26 ± 0.07	3.2 ± 0.2	3.7 ± 0.1	W Africa F	E Asia F
31	4.9 ± 0.2	3.06 ± 0.07	4.9 ± 0.1	4.56 ± 0.09	3.5 ± 0.1	5.4 ± 0.2	4.2 ± 0.2	2.99 ± 0.09	3.7 ± 0.1	3.43 ± 0.07	3.3 ± 0.2	3.9 ± 0.1	W Africa F	E Asia M
32	5.2 ± 0.2	3.31 ± 0.07	5.0 ± 0.1	4.80 ± 0.09	3.8 ± 0.1	5.3 ± 0.2	4.2 ± 0.2	3.14 ± 0.08	3.8 ± 0.1	3.58 ± 0.06	3.4 ± 0.1	4.2 ± 0.1	W Africa F	E Asia M
33	5.3 ± 0.2	3.66 ± 0.06	5.3 ± 0.2	5.01 ± 0.09	4.0 ± 0.1	5.4 ± 0.2	4.5 ± 0.2	3.26 ± 0.08	4.0 ± 0.1	3.79 ± 0.06	3.5 ± 0.1	4.4 ± 0.1	W Africa F	E Asia M
34	5.3 ± 0.2	3.93 ± 0.06	5.3 ± 0.2	5.22 ± 0.09	4.2 ± 0.1	5.4 ± 0.2	4.3 ± 0.2	3.44 ± 0.08	3.9 ± 0.1	3.99 ± 0.07	3.8 ± 0.2	4.8 ± 0.1	W Africa F	E Asia M
35	5.5 ± 0.2	4.25 ± 0.07	5.2 ± 0.2	5.31 ± 0.10	4.5 ± 0.1	5.4 ± 0.2	4.4 ± 0.2	3.43 ± 0.08	3.8 ± 0.1	4.10 ± 0.07	3.8 ± 0.2	5.0 ± 0.2	E Africa F	E Asia M
36	5.6 ± 0.2	4.34 ± 0.08	5.1 ± 0.2	5.5 ± 0.1	4.5 ± 0.1	5.5 ± 0.2	4.5 ± 0.2	3.40 ± 0.08	3.8 ± 0.1	4.14 ± 0.07	3.8 ± 0.2	5.2 ± 0.2	E Africa F	E Asia M
37	5.2 ± 0.3	4.35 ± 0.08	5.0 ± 0.2	5.4 ± 0.1	4.5 ± 0.1	5.4 ± 0.2	4.1 ± 0.2	3.32 ± 0.09	3.3 ± 0.1	4.03 ± 0.09	3.6 ± 0.2	5.2 ± 0.2	S Asia F	E Europe M
38	5.0 ± 0.3	4.51 ± 0.09	5.0 ± 0.2	5.5 ± 0.1	4.5 ± 0.2	5.6 ± 0.3	4.3 ± 0.2	3.3 ± 0.1	3.1 ± 0.2	4.07 ± 0.09	3.5 ± 0.2	5.5 ± 0.2	W Africa F	E Europe M
39	5.3 ± 0.3	4.68 ± 0.10	4.8 ± 0.2	5.6 ± 0.1	4.6 ± 0.2	5.3 ± 0.3	4.1 ± 0.2	3.4 ± 0.1	3.1 ± 0.2	4.09 ± 0.10	3.6 ± 0.2	5.9 ± 0.2	W Africa M	E Europe M
40	5.2 ± 0.3	4.88 ± 0.10	5.0 ± 0.2	5.5 ± 0.1	4.9 ± 0.2	5.5 ± 0.3	4.4 ± 0.2	3.5 ± 0.1	3.3 ± 0.2	4.3 ± 0.1	3.5 ± 0.2	6.2 ± 0.2	W Africa M	E Europe M
41	5.9 ± 0.3	5.03 ± 0.10	5.0 ± 0.2	5.8 ± 0.2	5.2 ± 0.2	5.6 ± 0.3	4.6 ± 0.3	3.65 ± 0.10	3.3 ± 0.2	4.4 ± 0.1	3.9 ± 0.2	6.4 ± 0.3	W Africa M	E Europe M
42	5.5 ± 0.3	5.17 ± 0.10	5.1 ± 0.2	5.7 ± 0.2	5.1 ± 0.2	5.4 ± 0.3	4.7 ± 0.3	3.92 ± 0.10	3.3 ± 0.2	4.6 ± 0.1	3.9 ± 0.2	6.6 ± 0.3	W Africa M	E Europe M
43	5.7 ± 0.3	5.4 ± 0.1	4.9 ± 0.2	5.8 ± 0.2	5.4 ± 0.2	5.9 ± 0.3	4.8 ± 0.3	4.0 ± 0.1	3.5 ± 0.2	4.7 ± 0.1	4.1 ± 0.2	6.9 ± 0.3	W Africa M	E Europe M
44	5.9 ± 0.4	5.7 ± 0.1	4.9 ± 0.2	5.9 ± 0.2	5.4 ± 0.2	6.1 ± 0.3	4.8 ± 0.3	4.3 ± 0.1	3.5 ± 0.2	4.8 ± 0.1	4.4 ± 0.2	7.0 ± 0.3	W Africa M	E Europe M
45	5.9 ± 0.4	5.7 ± 0.1	4.6 ± 0.2	6.0 ± 0.2	5.4 ± 0.2	6.1 ± 0.3	5.0 ± 0.3	4.6 ± 0.1	3.4 ± 0.2	4.7 ± 0.1	4.4 ± 0.2	7.3 ± 0.3	W Africa M	E Europe M
46	6.0 ± 0.4	5.9 ± 0.1	4.6 ± 0.2	5.6 ± 0.2	5.8 ± 0.2	5.9 ± 0.3	5.0 ± 0.3	4.6 ± 0.1	3.5 ± 0.2	4.7 ± 0.1	4.3 ± 0.2	7.7 ± 0.3	W Africa M	E Europe M
47	5.8 ± 0.4	5.8 ± 0.1	4.6 ± 0.2	5.6 ± 0.2	5.5 ± 0.2	5.9 ± 0.4	5.0 ± 0.3	4.6 ± 0.1	3.4 ± 0.2	4.8 ± 0.2	4.2 ± 0.2	7.3 ± 0.3	W Africa M	E Europe M
48	5.9 ± 0.5	5.9 ± 0.1	4.4 ± 0.2	5.7 ± 0.2	5.5 ± 0.2	5.6 ± 0.4	5.6 ± 0.4	4.6 ± 0.1	3.3 ± 0.2	4.7 ± 0.2	4.4 ± 0.2	7.7 ± 0.4	W Africa M	E Europe M
49	5.8 ± 0.4	6.0 ± 0.1	4.2 ± 0.2	5.6 ± 0.2	5.3 ± 0.2	6.1 ± 0.4	5.3 ± 0.4	4.8 ± 0.1	3.4 ± 0.2	4.7 ± 0.2	4.2 ± 0.2	7.8 ± 0.4	W Africa M	E Europe M
50	6.1 ± 0.6	6.0 ± 0.1	4.3 ± 0.2	5.3 ± 0.2	5.6 ± 0.2	5.8 ± 0.4	5.4 ± 0.4	4.8 ± 0.1	3.3 ± 0.2	4.8 ± 0.2	4.2 ± 0.2	8.0 ± 0.4	W Africa M	E Europe M
51	5.4 ± 0.5	6.0 ± 0.1	4.1 ± 0.2	5.4 ± 0.2	5.6 ± 0.2	6.2 ± 0.4	5.6 ± 0.4	4.9 ± 0.1	3.3 ± 0.2	4.7 ± 0.2	4.4 ± 0.2	8.2 ± 0.4	W Africa M	E Europe M
52	6.2 ± 0.5	6.0 ± 0.2	4.1 ± 0.2	5.5 ± 0.2	5.2 ± 0.2	6.4 ± 0.4	5.1 ± 0.4	5.0 ± 0.1	3.6 ± 0.2	4.8 ± 0.2	4.3 ± 0.2	8.2 ± 0.4	W Africa M	E Europe M

Table 105. *Mean absolute error for Application-type images for algorithm viante-000. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	6.5 ± 0.4	5.4 ± 0.1	2.7 ± 0.3	6.2 ± 0.2	5.9 ± 0.3	7.3 ± 0.4	4.8 ± 0.3	4.0 ± 0.1	1.1 ± 0.1	3.9 ± 0.2	4.3 ± 0.3	5.4 ± 0.4	W Africa F	E Europe M
15	7.6 ± 0.4	6.0 ± 0.1	3.4 ± 0.3	7.1 ± 0.2	6.8 ± 0.3	7.6 ± 0.4	5.2 ± 0.3	4.9 ± 0.1	1.4 ± 0.2	5.1 ± 0.2	5.4 ± 0.3	6.5 ± 0.4	W Africa F	E Europe M
16	7.5 ± 0.4	6.1 ± 0.1	4.2 ± 0.3	7.3 ± 0.2	7.2 ± 0.3	7.6 ± 0.4	6.5 ± 0.3	5.4 ± 0.1	2.3 ± 0.2	5.9 ± 0.2	6.0 ± 0.3	6.7 ± 0.3	W Africa F	E Europe M
17	7.8 ± 0.3	6.0 ± 0.1	4.5 ± 0.2	7.2 ± 0.2	6.8 ± 0.3	7.4 ± 0.3	6.7 ± 0.3	5.5 ± 0.1	2.8 ± 0.2	6.3 ± 0.2	6.2 ± 0.3	7.2 ± 0.4	E Africa F	E Europe M
18	7.3 ± 0.2	5.54 ± 0.09	4.5 ± 0.2	6.7 ± 0.1	6.3 ± 0.1	7.1 ± 0.3	6.6 ± 0.2	5.36 ± 0.09	3.2 ± 0.2	6.2 ± 0.1	6.0 ± 0.2	6.8 ± 0.3	E Africa F	E Europe M
19	7.2 ± 0.2	5.13 ± 0.08	4.1 ± 0.2	6.5 ± 0.1	6.0 ± 0.1	7.0 ± 0.3	6.8 ± 0.2	5.30 ± 0.09	3.2 ± 0.1	6.4 ± 0.1	5.9 ± 0.2	6.7 ± 0.3	E Africa F	E Europe M
20	6.8 ± 0.2	4.83 ± 0.09	3.8 ± 0.1	6.1 ± 0.1	5.6 ± 0.1	6.5 ± 0.2	6.7 ± 0.2	5.02 ± 0.09	3.0 ± 0.1	6.3 ± 0.1	5.8 ± 0.2	6.6 ± 0.2	E Africa F	E Europe M
21	6.4 ± 0.2	4.35 ± 0.08	3.1 ± 0.1	5.8 ± 0.1	5.1 ± 0.1	6.0 ± 0.2	6.6 ± 0.2	4.73 ± 0.08	2.8 ± 0.1	6.1 ± 0.1	5.5 ± 0.2	6.3 ± 0.2	E Africa M	E Europe M
22	6.1 ± 0.2	3.77 ± 0.07	2.70 ± 0.09	5.4 ± 0.1	4.7 ± 0.1	5.5 ± 0.2	6.9 ± 0.2	4.41 ± 0.09	2.6 ± 0.1	5.9 ± 0.1	5.0 ± 0.1	5.9 ± 0.2	E Africa M	E Europe M
23	5.6 ± 0.2	3.36 ± 0.06	2.24 ± 0.08	5.2 ± 0.1	4.26 ± 0.09	5.2 ± 0.2	6.5 ± 0.2	4.02 ± 0.09	2.1 ± 0.1	5.7 ± 0.1	4.9 ± 0.1	5.8 ± 0.2	E Africa M	E Europe M
24	5.3 ± 0.2	2.83 ± 0.06	1.80 ± 0.06	4.78 ± 0.09	3.74 ± 0.08	4.8 ± 0.2	6.2 ± 0.2	3.65 ± 0.09	1.89 ± 0.09	5.6 ± 0.1	4.5 ± 0.1	5.4 ± 0.2	E Africa M	E Europe F
25	4.7 ± 0.2	2.37 ± 0.05	1.45 ± 0.05	4.35 ± 0.08	3.29 ± 0.08	4.4 ± 0.2	5.9 ± 0.2	3.38 ± 0.08	1.75 ± 0.10	5.23 ± 0.10	4.3 ± 0.1	5.1 ± 0.2	E Africa M	E Europe F
26	4.3 ± 0.2	2.08 ± 0.05	1.37 ± 0.06	3.93 ± 0.07	3.00 ± 0.08	4.0 ± 0.2	5.6 ± 0.2	3.04 ± 0.07	1.65 ± 0.10	5.03 ± 0.09	4.0 ± 0.1	4.5 ± 0.1	E Africa M	E Europe F
27	4.2 ± 0.2	1.85 ± 0.04	1.52 ± 0.06	3.60 ± 0.07	2.65 ± 0.07	3.7 ± 0.2	5.2 ± 0.2	2.77 ± 0.07	1.82 ± 0.10	4.76 ± 0.09	3.9 ± 0.1	4.1 ± 0.1	E Africa M	E Europe F
28	3.8 ± 0.2	1.79 ± 0.04	1.84 ± 0.06	3.37 ± 0.07	2.47 ± 0.07	3.4 ± 0.2	4.8 ± 0.2	2.57 ± 0.08	2.11 ± 0.09	4.45 ± 0.08	3.5 ± 0.1	3.6 ± 0.1	E Africa M	E Asia F
29	3.7 ± 0.2	1.79 ± 0.04	2.29 ± 0.06	3.11 ± 0.06	2.31 ± 0.07	3.2 ± 0.1	4.6 ± 0.2	2.41 ± 0.07	2.40 ± 0.09	4.22 ± 0.08	3.3 ± 0.1	3.5 ± 0.1	E Africa M	E Asia F
30	3.4 ± 0.2	1.88 ± 0.04	2.59 ± 0.06	2.94 ± 0.06	2.28 ± 0.07	3.0 ± 0.2	4.5 ± 0.2	2.19 ± 0.07	2.57 ± 0.09	4.04 ± 0.08	3.3 ± 0.1	3.1 ± 0.1	E Africa M	E Asia F
31	3.5 ± 0.2	2.05 ± 0.04	2.79 ± 0.06	2.84 ± 0.07	2.24 ± 0.07	2.9 ± 0.1	4.5 ± 0.2	2.23 ± 0.07	2.73 ± 0.09	3.89 ± 0.08	3.1 ± 0.2	3.0 ± 0.1	E Africa M	E Asia F
32	3.7 ± 0.2	2.27 ± 0.04	2.80 ± 0.07	2.82 ± 0.07	2.40 ± 0.08	3.3 ± 0.2	4.3 ± 0.2	2.32 ± 0.07	2.72 ± 0.09	3.86 ± 0.08	3.2 ± 0.2	3.0 ± 0.1	E Africa M	E Asia F
33	4.0 ± 0.2	2.46 ± 0.05	2.67 ± 0.08	2.89 ± 0.07	2.41 ± 0.08	3.4 ± 0.2	4.5 ± 0.2	2.39 ± 0.07	2.54 ± 0.09	3.76 ± 0.08	3.2 ± 0.2	3.1 ± 0.1	E Africa M	E Asia M
34	4.0 ± 0.2	2.65 ± 0.05	2.47 ± 0.09	2.95 ± 0.07	2.52 ± 0.08	3.5 ± 0.2	4.3 ± 0.2	2.45 ± 0.07	2.4 ± 0.1	3.88 ± 0.09	3.4 ± 0.2	3.3 ± 0.1	E Africa M	E Europe M
35	4.4 ± 0.2	2.92 ± 0.05	2.43 ± 0.10	3.16 ± 0.07	2.70 ± 0.09	3.8 ± 0.2	4.6 ± 0.2	2.56 ± 0.07	2.1 ± 0.1	3.89 ± 0.09	3.5 ± 0.2	3.6 ± 0.1	E Africa M	E Europe M
36	4.6 ± 0.2	3.05 ± 0.06	2.3 ± 0.1	3.38 ± 0.07	2.88 ± 0.09	4.0 ± 0.2	4.6 ± 0.2	2.61 ± 0.07	2.1 ± 0.1	3.90 ± 0.08	3.6 ± 0.2	3.7 ± 0.1	E Africa F	E Europe M
37	4.7 ± 0.2	3.22 ± 0.06	2.4 ± 0.1	3.68 ± 0.07	3.1 ± 0.1	4.3 ± 0.2	4.6 ± 0.2	2.67 ± 0.08	2.1 ± 0.1	3.99 ± 0.08	3.5 ± 0.2	3.6 ± 0.1	E Africa F	E Europe M
38	4.9 ± 0.2	3.46 ± 0.06	2.7 ± 0.1	3.87 ± 0.08	3.3 ± 0.1	4.6 ± 0.2	4.4 ± 0.2	2.71 ± 0.08	2.3 ± 0.1	4.00 ± 0.08	3.8 ± 0.2	3.7 ± 0.1	E Africa F	E Europe M
39	4.8 ± 0.2	3.63 ± 0.07	2.9 ± 0.1	3.94 ± 0.08	3.4 ± 0.1	4.3 ± 0.2	4.4 ± 0.2	2.85 ± 0.08	2.8 ± 0.1	3.99 ± 0.08	4.0 ± 0.2	3.6 ± 0.1	E Africa F	E Europe M
40	4.7 ± 0.2	3.85 ± 0.07	3.3 ± 0.1	3.93 ± 0.09	3.6 ± 0.1	4.3 ± 0.2	4.4 ± 0.2	2.91 ± 0.08	3.1 ± 0.1	4.01 ± 0.07	3.8 ± 0.2	3.8 ± 0.2	E Africa F	E Asia M
41	4.7 ± 0.2	3.96 ± 0.07	3.6 ± 0.1	3.81 ± 0.09	3.6 ± 0.1	4.4 ± 0.2	4.3 ± 0.2	3.02 ± 0.08	3.2 ± 0.1	3.84 ± 0.08	3.9 ± 0.2	4.0 ± 0.2	E Africa F	E Asia M
42	4.7 ± 0.3	4.00 ± 0.07	3.6 ± 0.1	3.6 ± 0.1	3.6 ± 0.1	4.4 ± 0.2	4.0 ± 0.2	3.10 ± 0.08	3.3 ± 0.1	3.68 ± 0.08	3.9 ± 0.2	3.8 ± 0.2	E Africa F	E Asia M
43	4.6 ± 0.3	4.07 ± 0.08	3.6 ± 0.1	3.5 ± 0.1	3.6 ± 0.1	4.3 ± 0.2	4.2 ± 0.2	3.08 ± 0.08	3.1 ± 0.1	3.47 ± 0.08	3.9 ± 0.2	3.9 ± 0.2	E Africa F	E Europe M
44	4.8 ± 0.3	4.07 ± 0.08	3.3 ± 0.1	3.3 ± 0.1	3.6 ± 0.1	4.5 ± 0.3	3.7 ± 0.2	3.06 ± 0.09	2.9 ± 0.1	3.21 ± 0.09	3.9 ± 0.2	3.7 ± 0.2	E Africa F	E Europe M
45	4.3 ± 0.3	3.93 ± 0.08	2.9 ± 0.1	3.2 ± 0.1	3.5 ± 0.1	4.1 ± 0.2	3.6 ± 0.2	3.07 ± 0.08	2.6 ± 0.1	2.97 ± 0.09	3.9 ± 0.2	3.9 ± 0.2	E Africa F	E Europe M
46	4.9 ± 0.4	3.91 ± 0.08	2.8 ± 0.1	3.0 ± 0.1	3.5 ± 0.1	3.9 ± 0.2	3.6 ± 0.2	3.00 ± 0.08	2.5 ± 0.1	2.89 ± 0.09	3.9 ± 0.2	3.7 ± 0.2	E Africa F	E Europe M
47	4.5 ± 0.4	3.71 ± 0.08	2.8 ± 0.2	2.9 ± 0.1	3.3 ± 0.1	4.1 ± 0.2	3.5 ± 0.2	3.01 ± 0.08	2.3 ± 0.1	2.9 ± 0.1	3.8 ± 0.2	3.9 ± 0.2	E Africa F	E Europe M
48	4.3 ± 0.4	3.51 ± 0.09	2.4 ± 0.1	3.1 ± 0.1	3.2 ± 0.1	4.0 ± 0.3	3.5 ± 0.3	2.98 ± 0.08	2.2 ± 0.1	2.63 ± 0.10	3.6 ± 0.2	3.8 ± 0.2	E Africa F	E Europe M
49	4.4 ± 0.4	3.36 ± 0.09	2.4 ± 0.1	3.0 ± 0.1	3.0 ± 0.1	4.1 ± 0.3	3.2 ± 0.3	2.94 ± 0.08	2.2 ± 0.1	2.7 ± 0.1	3.4 ± 0.2	3.3 ± 0.2	E Africa F	E Europe M
50	4.3 ± 0.4	3.24 ± 0.09	2.3 ± 0.1	3.1 ± 0.1	3.1 ± 0.1	3.9 ± 0.3	3.0 ± 0.3	2.74 ± 0.08	2.2 ± 0.1	2.6 ± 0.1	3.4 ± 0.2	3.4 ± 0.2	E Africa F	E Europe M
51	4.4 ± 0.3	3.17 ± 0.09	2.4 ± 0.1	3.4 ± 0.1	2.9 ± 0.1	4.1 ± 0.3	3.3 ± 0.3	2.73 ± 0.08	2.2 ± 0.1	2.7 ± 0.1	3.3 ± 0.2	3.7 ± 0.2	E Africa F	E Europe M
52	4.6 ± 0.4	3.08 ± 0.08	2.8 ± 0.1	3.7 ± 0.1	3.0 ± 0.1	4.0 ± 0.3	3.2 ± 0.3	2.64 ± 0.07	2.6 ± 0.2	2.7 ± 0.1	3.1 ± 0.2	3.7 ± 0.3	E Africa F	E Europe M

Table 106. *Mean absolute error for Application-type images for algorithm yoti-001. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	4.0 ± 0.2	2.4 ± 0.1	2.6 ± 0.2	2.9 ± 0.1	2.5 ± 0.3	4.4 ± 0.4	2.4 ± 0.2	1.22 ± 0.08	1.47 ± 0.10	1.56 ± 0.07	1.0 ± 0.1	2.3 ± 0.2	W Africa F	S E Asia M
15	4.1 ± 0.3	2.7 ± 0.2	3.2 ± 0.3	3.4 ± 0.2	3.0 ± 0.3	4.6 ± 0.4	2.4 ± 0.2	1.40 ± 0.08	1.4 ± 0.1	1.7 ± 0.1	1.3 ± 0.1	2.4 ± 0.3	W Africa F	S E Asia M
16	4.3 ± 0.3	3.1 ± 0.2	3.4 ± 0.3	3.9 ± 0.2	3.9 ± 0.4	5.1 ± 0.5	2.5 ± 0.2	1.65 ± 0.08	1.5 ± 0.2	1.8 ± 0.1	1.6 ± 0.2	2.6 ± 0.3	W Africa F	E Europe M
17	4.5 ± 0.4	3.6 ± 0.2	4.1 ± 0.4	4.2 ± 0.2	4.2 ± 0.4	4.9 ± 0.4	2.4 ± 0.2	2.2 ± 0.1	1.4 ± 0.1	2.0 ± 0.1	2.0 ± 0.2	2.9 ± 0.3	W Africa F	E Europe M
18	4.3 ± 0.3	3.8 ± 0.1	4.3 ± 0.3	4.4 ± 0.2	4.6 ± 0.3	5.5 ± 0.4	2.7 ± 0.2	2.50 ± 0.09	2.0 ± 0.2	2.4 ± 0.1	2.6 ± 0.2	2.9 ± 0.2	W Africa F	E Europe M
19	4.7 ± 0.3	4.3 ± 0.1	4.7 ± 0.3	4.7 ± 0.2	5.0 ± 0.2	5.5 ± 0.4	2.8 ± 0.2	2.97 ± 0.10	2.3 ± 0.2	2.8 ± 0.1	2.9 ± 0.2	3.3 ± 0.3	W Africa F	E Europe M
20	4.9 ± 0.3	4.6 ± 0.1	4.7 ± 0.2	4.9 ± 0.2	5.2 ± 0.2	5.4 ± 0.3	3.2 ± 0.2	3.22 ± 0.10	2.6 ± 0.2	3.1 ± 0.1	3.3 ± 0.2	3.6 ± 0.3	W Africa F	E Europe M
21	5.1 ± 0.3	4.7 ± 0.1	4.6 ± 0.2	5.1 ± 0.1	5.4 ± 0.2	5.8 ± 0.3	3.2 ± 0.2	3.34 ± 0.09	2.7 ± 0.2	3.3 ± 0.1	3.5 ± 0.2	3.7 ± 0.3	W Africa F	E Europe M
22	5.2 ± 0.3	4.8 ± 0.1	4.5 ± 0.2	5.0 ± 0.1	5.5 ± 0.2	5.5 ± 0.3	3.9 ± 0.2	3.44 ± 0.09	2.6 ± 0.1	3.3 ± 0.1	3.4 ± 0.1	3.7 ± 0.2	S E Asia F	E Europe M
23	5.2 ± 0.2	4.8 ± 0.1	4.2 ± 0.1	5.1 ± 0.1	5.4 ± 0.2	5.6 ± 0.3	3.9 ± 0.2	3.38 ± 0.10	2.4 ± 0.1	3.4 ± 0.1	3.5 ± 0.1	4.1 ± 0.2	W Africa F	E Europe M
24	5.5 ± 0.3	4.7 ± 0.1	4.0 ± 0.1	5.1 ± 0.1	5.4 ± 0.1	5.5 ± 0.3	3.7 ± 0.2	3.27 ± 0.09	2.28 ± 0.10	3.4 ± 0.1	3.5 ± 0.1	3.7 ± 0.2	W Africa F	E Europe M
25	5.3 ± 0.2	4.7 ± 0.1	3.8 ± 0.1	4.9 ± 0.1	5.4 ± 0.1	5.3 ± 0.3	3.8 ± 0.2	3.17 ± 0.09	2.1 ± 0.1	3.29 ± 0.10	3.5 ± 0.2	3.9 ± 0.2	S E Asia F	E Europe M
26	5.4 ± 0.2	4.68 ± 0.10	3.5 ± 0.1	4.78 ± 0.10	5.4 ± 0.1	5.3 ± 0.2	3.8 ± 0.2	2.93 ± 0.09	1.9 ± 0.1	3.29 ± 0.09	3.4 ± 0.1	3.8 ± 0.2	S E Asia F	E Europe M
27	5.7 ± 0.2	4.67 ± 0.09	3.4 ± 0.1	4.62 ± 0.09	5.1 ± 0.1	5.5 ± 0.2	3.7 ± 0.2	2.94 ± 0.09	1.93 ± 0.09	3.09 ± 0.08	3.5 ± 0.2	3.8 ± 0.2	E Africa F	E Europe M
28	5.4 ± 0.2	4.54 ± 0.09	3.2 ± 0.1	4.63 ± 0.09	5.2 ± 0.1	5.2 ± 0.2	3.5 ± 0.2	3.0 ± 0.1	1.99 ± 0.09	3.14 ± 0.08	3.4 ± 0.2	3.6 ± 0.2	E Africa F	E Europe M
29	5.7 ± 0.2	4.57 ± 0.09	3.2 ± 0.1	4.50 ± 0.09	5.2 ± 0.1	5.4 ± 0.2	3.7 ± 0.2	2.90 ± 0.10	2.00 ± 0.09	3.09 ± 0.07	3.3 ± 0.2	3.9 ± 0.2	E Africa F	E Europe M
30	5.5 ± 0.2	4.59 ± 0.08	3.2 ± 0.1	4.46 ± 0.09	5.2 ± 0.1	5.3 ± 0.2	3.8 ± 0.2	3.06 ± 0.09	2.03 ± 0.09	3.18 ± 0.07	3.5 ± 0.2	3.9 ± 0.2	E Africa F	E Europe M
31	5.5 ± 0.2	4.55 ± 0.08	3.2 ± 0.1	4.34 ± 0.09	5.2 ± 0.1	5.2 ± 0.2	3.8 ± 0.2	3.02 ± 0.09	2.20 ± 0.09	3.16 ± 0.07	3.5 ± 0.2	3.9 ± 0.2	E Africa F	E Europe M
32	5.7 ± 0.2	4.46 ± 0.08	3.2 ± 0.1	4.26 ± 0.08	4.9 ± 0.1	5.5 ± 0.2	3.9 ± 0.2	3.25 ± 0.09	2.32 ± 0.10	3.21 ± 0.06	3.7 ± 0.2	3.9 ± 0.2	E Africa F	E Europe M
33	5.5 ± 0.2	4.40 ± 0.08	3.2 ± 0.1	4.21 ± 0.08	4.9 ± 0.1	5.2 ± 0.2	4.0 ± 0.2	3.33 ± 0.09	2.41 ± 0.10	3.19 ± 0.07	3.4 ± 0.2	4.0 ± 0.2	E Africa F	E Europe M
34	5.5 ± 0.2	4.28 ± 0.08	3.2 ± 0.1	4.00 ± 0.08	4.8 ± 0.1	5.3 ± 0.2	3.9 ± 0.2	3.38 ± 0.09	2.40 ± 0.10	3.26 ± 0.07	3.6 ± 0.2	4.0 ± 0.2	E Africa F	E Europe M
35	5.7 ± 0.2	4.12 ± 0.08	3.2 ± 0.1	3.84 ± 0.08	4.5 ± 0.1	5.0 ± 0.2	4.1 ± 0.2	3.44 ± 0.09	2.4 ± 0.1	3.25 ± 0.07	3.7 ± 0.2	4.0 ± 0.2	E Africa F	E Europe M
36	5.3 ± 0.2	4.00 ± 0.08	3.1 ± 0.1	3.75 ± 0.08	4.4 ± 0.1	5.1 ± 0.2	4.1 ± 0.2	3.43 ± 0.09	2.5 ± 0.1	3.21 ± 0.07	3.8 ± 0.2	4.0 ± 0.2	E Africa F	E Europe M
37	5.3 ± 0.2	3.84 ± 0.07	3.2 ± 0.1	3.75 ± 0.08	4.2 ± 0.1	5.1 ± 0.2	4.1 ± 0.2	3.36 ± 0.09	2.5 ± 0.1	3.23 ± 0.07	3.5 ± 0.2	4.1 ± 0.2	E Africa F	E Europe M
38	5.0 ± 0.2	3.71 ± 0.07	3.0 ± 0.1	3.62 ± 0.09	4.1 ± 0.1	4.9 ± 0.2	3.9 ± 0.2	3.30 ± 0.09	2.5 ± 0.1	3.10 ± 0.07	3.6 ± 0.2	3.9 ± 0.2	E Africa F	E Europe M
39	4.7 ± 0.2	3.54 ± 0.07	3.0 ± 0.1	3.43 ± 0.09	3.9 ± 0.1	4.8 ± 0.2	3.9 ± 0.2	3.24 ± 0.08	2.6 ± 0.1	3.06 ± 0.07	3.6 ± 0.2	3.9 ± 0.2	W Africa F	E Europe M
40	4.5 ± 0.2	3.42 ± 0.07	3.0 ± 0.1	3.30 ± 0.09	3.8 ± 0.1	4.6 ± 0.2	3.8 ± 0.2	3.11 ± 0.08	2.6 ± 0.1	3.09 ± 0.07	3.4 ± 0.2	3.8 ± 0.2	W Africa F	E Europe M
41	4.5 ± 0.3	3.26 ± 0.07	3.0 ± 0.1	3.22 ± 0.10	3.6 ± 0.1	4.5 ± 0.2	3.8 ± 0.2	3.06 ± 0.08	2.5 ± 0.1	2.97 ± 0.07	3.4 ± 0.2	4.0 ± 0.2	W Africa F	E Europe M
42	4.8 ± 0.3	3.24 ± 0.07	3.1 ± 0.1	3.4 ± 0.1	3.3 ± 0.1	4.4 ± 0.2	3.7 ± 0.2	2.97 ± 0.08	2.7 ± 0.1	3.04 ± 0.08	3.3 ± 0.1	3.8 ± 0.2	E Africa F	E Europe M
43	4.5 ± 0.3	3.13 ± 0.07	3.0 ± 0.1	3.2 ± 0.1	3.4 ± 0.1	4.4 ± 0.2	3.8 ± 0.2	2.99 ± 0.08	2.7 ± 0.1	3.03 ± 0.08	3.4 ± 0.2	3.9 ± 0.2	E Africa F	E Europe M
44	4.6 ± 0.3	2.99 ± 0.06	3.0 ± 0.2	3.3 ± 0.1	3.3 ± 0.1	4.4 ± 0.3	3.6 ± 0.2	2.95 ± 0.08	2.9 ± 0.1	3.05 ± 0.09	3.4 ± 0.2	3.7 ± 0.2	E Africa F	E Europe M
45	4.2 ± 0.3	2.97 ± 0.06	2.9 ± 0.1	3.2 ± 0.1	3.2 ± 0.1	4.3 ± 0.2	3.7 ± 0.2	2.84 ± 0.08	2.9 ± 0.2	3.08 ± 0.09	3.2 ± 0.1	3.9 ± 0.2	W Africa F	E Asia M
46	4.3 ± 0.3	2.91 ± 0.07	3.2 ± 0.2	3.2 ± 0.1	3.2 ± 0.1	4.2 ± 0.3	3.6 ± 0.2	2.72 ± 0.08	3.0 ± 0.2	3.05 ± 0.10	3.3 ± 0.2	3.7 ± 0.2	E Africa F	E Asia M
47	4.1 ± 0.3	2.83 ± 0.07	3.3 ± 0.2	3.1 ± 0.1	3.1 ± 0.1	4.3 ± 0.3	3.6 ± 0.2	2.65 ± 0.08	2.9 ± 0.2	3.2 ± 0.1	3.3 ± 0.2	3.9 ± 0.2	W Africa F	E Asia M
48	4.3 ± 0.4	2.69 ± 0.07	3.1 ± 0.1	3.2 ± 0.1	3.0 ± 0.1	4.2 ± 0.3	3.9 ± 0.3	2.54 ± 0.07	3.1 ± 0.2	3.0 ± 0.1	3.0 ± 0.2	3.9 ± 0.2	E Africa F	E Asia M
49	4.1 ± 0.3	2.69 ± 0.07	3.1 ± 0.2	3.1 ± 0.1	3.0 ± 0.1	4.1 ± 0.3	3.7 ± 0.3	2.59 ± 0.08	3.0 ± 0.2	3.0 ± 0.1	3.0 ± 0.2	3.5 ± 0.2	W Africa F	E Asia M
50	4.4 ± 0.4	2.68 ± 0.07	3.1 ± 0.2	3.1 ± 0.1	3.0 ± 0.1	4.2 ± 0.3	3.3 ± 0.3	2.52 ± 0.08	3.0 ± 0.2	3.0 ± 0.1	3.1 ± 0.2	3.6 ± 0.2	E Africa F	E Asia M
51	4.2 ± 0.3	2.65 ± 0.08	3.2 ± 0.2	3.1 ± 0.1	3.0 ± 0.1	4.6 ± 0.3	3.7 ± 0.3	2.43 ± 0.08	3.0 ± 0.2	3.1 ± 0.1	3.0 ± 0.2	3.9 ± 0.2	W Africa F	E Asia M
52	4.4 ± 0.4	2.59 ± 0.07	3.2 ± 0.2	3.3 ± 0.1	3.1 ± 0.1	4.5 ± 0.3	3.5 ± 0.3	2.46 ± 0.08	3.2 ± 0.2	3.0 ± 0.1	3.0 ± 0.2	3.9 ± 0.2	W Africa F	E Asia M

Table 107. *Mean absolute error for Application-type images for algorithm yoti-002. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	3.2 ± 0.2	2.7 ± 0.1	1.7 ± 0.1	2.8 ± 0.1	2.8 ± 0.3	3.4 ± 0.3	2.3 ± 0.1	1.22 ± 0.08	1.14 ± 0.08	1.48 ± 0.07	1.1 ± 0.1	2.1 ± 0.2	W Africa F	S E Asia M
15	3.3 ± 0.2	3.0 ± 0.1	1.8 ± 0.2	3.3 ± 0.2	3.2 ± 0.3	3.3 ± 0.3	2.3 ± 0.1	1.45 ± 0.07	0.98 ± 0.09	1.55 ± 0.07	1.4 ± 0.1	2.2 ± 0.2	S Asia F	E Europe M
16	3.2 ± 0.3	3.5 ± 0.2	2.0 ± 0.2	3.5 ± 0.2	4.0 ± 0.4	3.9 ± 0.5	2.2 ± 0.2	1.65 ± 0.08	1.1 ± 0.2	1.74 ± 0.10	1.7 ± 0.2	1.9 ± 0.2	S E Asia F	E Europe M
17	3.4 ± 0.3	3.7 ± 0.2	2.3 ± 0.3	3.6 ± 0.2	4.0 ± 0.3	3.6 ± 0.4	2.2 ± 0.2	2.1 ± 0.1	1.3 ± 0.1	2.0 ± 0.1	2.1 ± 0.2	2.3 ± 0.3	S E Asia F	E Europe M
18	3.0 ± 0.2	3.7 ± 0.1	2.7 ± 0.2	3.7 ± 0.1	4.1 ± 0.2	3.9 ± 0.3	2.3 ± 0.2	2.48 ± 0.08	1.9 ± 0.1	2.31 ± 0.10	2.5 ± 0.2	2.3 ± 0.2	S E Asia F	E Europe M
19	3.7 ± 0.3	3.9 ± 0.1	3.0 ± 0.2	3.9 ± 0.1	4.4 ± 0.2	4.2 ± 0.3	2.7 ± 0.2	2.86 ± 0.09	2.2 ± 0.1	2.6 ± 0.1	2.9 ± 0.2	2.9 ± 0.3	S E Asia F	E Europe M
20	3.7 ± 0.3	4.0 ± 0.1	3.2 ± 0.2	4.1 ± 0.1	4.5 ± 0.2	4.2 ± 0.3	3.0 ± 0.2	3.02 ± 0.09	2.4 ± 0.2	2.9 ± 0.1	3.1 ± 0.1	3.1 ± 0.3	S E Asia F	E Europe M
21	3.9 ± 0.2	3.9 ± 0.1	3.3 ± 0.1	4.2 ± 0.1	4.4 ± 0.1	4.6 ± 0.3	3.3 ± 0.2	3.16 ± 0.09	2.5 ± 0.1	3.1 ± 0.1	3.3 ± 0.1	3.5 ± 0.3	W Africa F	E Europe M
22	4.3 ± 0.2	3.74 ± 0.10	3.2 ± 0.1	4.1 ± 0.1	4.3 ± 0.1	4.4 ± 0.2	4.0 ± 0.2	3.08 ± 0.09	2.5 ± 0.1	3.2 ± 0.1	3.2 ± 0.1	3.4 ± 0.2	W Africa F	E Europe M
23	4.4 ± 0.2	3.59 ± 0.09	3.0 ± 0.1	4.07 ± 0.09	4.2 ± 0.1	4.7 ± 0.2	3.9 ± 0.2	2.94 ± 0.08	2.3 ± 0.1	3.17 ± 0.09	3.0 ± 0.1	3.9 ± 0.2	W Africa F	E Europe M
24	4.6 ± 0.2	3.41 ± 0.08	2.65 ± 0.08	3.80 ± 0.08	4.0 ± 0.1	4.5 ± 0.2	3.7 ± 0.2	2.77 ± 0.08	2.08 ± 0.09	3.05 ± 0.09	2.9 ± 0.1	3.9 ± 0.2	E Africa F	E Europe M
25	4.6 ± 0.2	3.33 ± 0.08	2.40 ± 0.08	3.58 ± 0.08	3.9 ± 0.1	4.5 ± 0.2	3.9 ± 0.2	2.64 ± 0.09	1.84 ± 0.09	2.88 ± 0.08	2.8 ± 0.1	4.1 ± 0.2	E Africa F	E Europe M
26	4.4 ± 0.2	3.21 ± 0.08	2.14 ± 0.08	3.32 ± 0.07	3.8 ± 0.1	4.2 ± 0.2	3.7 ± 0.2	2.35 ± 0.08	1.68 ± 0.09	2.75 ± 0.07	2.6 ± 0.1	4.0 ± 0.2	E Africa F	E Europe M
27	4.4 ± 0.2	3.18 ± 0.07	2.09 ± 0.08	3.12 ± 0.07	3.6 ± 0.1	4.6 ± 0.2	3.7 ± 0.2	2.30 ± 0.08	1.61 ± 0.08	2.57 ± 0.07	2.7 ± 0.1	3.9 ± 0.2	W Africa F	E Europe M
28	4.5 ± 0.2	3.10 ± 0.07	2.03 ± 0.07	3.11 ± 0.07	3.6 ± 0.1	4.2 ± 0.2	3.6 ± 0.2	2.37 ± 0.09	1.67 ± 0.08	2.57 ± 0.07	2.6 ± 0.1	3.8 ± 0.2	E Africa F	E Europe M
29	4.5 ± 0.2	3.12 ± 0.07	2.11 ± 0.07	3.00 ± 0.07	3.8 ± 0.1	4.3 ± 0.2	3.6 ± 0.2	2.37 ± 0.08	1.79 ± 0.08	2.51 ± 0.06	2.6 ± 0.1	4.1 ± 0.2	E Africa F	E Europe M
30	4.6 ± 0.2	3.25 ± 0.06	2.29 ± 0.07	2.98 ± 0.06	3.7 ± 0.1	4.2 ± 0.2	3.8 ± 0.2	2.50 ± 0.08	1.87 ± 0.07	2.59 ± 0.06	2.8 ± 0.1	4.1 ± 0.1	E Africa F	E Europe M
31	4.4 ± 0.2	3.27 ± 0.06	2.49 ± 0.07	2.96 ± 0.06	3.69 ± 0.10	4.2 ± 0.2	3.7 ± 0.2	2.60 ± 0.08	2.11 ± 0.08	2.62 ± 0.06	2.9 ± 0.1	4.0 ± 0.1	E Africa F	E Europe M
32	4.5 ± 0.2	3.27 ± 0.06	2.58 ± 0.08	3.03 ± 0.07	3.7 ± 0.1	4.3 ± 0.2	3.8 ± 0.2	2.77 ± 0.08	2.28 ± 0.09	2.70 ± 0.05	3.0 ± 0.1	4.1 ± 0.1	E Africa F	E Europe M
33	4.4 ± 0.2	3.27 ± 0.06	2.69 ± 0.09	3.05 ± 0.07	3.6 ± 0.1	4.1 ± 0.2	3.9 ± 0.2	2.89 ± 0.08	2.30 ± 0.09	2.68 ± 0.05	2.9 ± 0.1	4.0 ± 0.1	E Africa F	E Europe M
34	4.3 ± 0.2	3.29 ± 0.06	2.78 ± 0.09	2.98 ± 0.07	3.45 ± 0.10	4.0 ± 0.2	3.7 ± 0.2	3.02 ± 0.08	2.33 ± 0.09	2.79 ± 0.06	3.1 ± 0.1	4.0 ± 0.1	E Africa F	E Europe M
35	4.5 ± 0.2	3.20 ± 0.06	2.86 ± 0.09	2.98 ± 0.06	3.4 ± 0.1	3.8 ± 0.2	3.8 ± 0.2	3.10 ± 0.08	2.4 ± 0.1	2.75 ± 0.06	3.1 ± 0.1	3.9 ± 0.1	E Africa F	E Europe M
36	4.3 ± 0.2	3.04 ± 0.06	2.74 ± 0.09	2.96 ± 0.07	3.3 ± 0.1	3.9 ± 0.2	3.7 ± 0.2	3.11 ± 0.08	2.5 ± 0.1	2.76 ± 0.06	3.3 ± 0.2	3.9 ± 0.1	E Africa F	E Europe M
37	4.3 ± 0.2	2.96 ± 0.06	2.8 ± 0.1	3.05 ± 0.07	3.2 ± 0.1	4.0 ± 0.2	3.7 ± 0.2	3.05 ± 0.08	2.4 ± 0.1	2.76 ± 0.06	3.0 ± 0.1	3.6 ± 0.1	E Africa F	E Europe M
38	4.1 ± 0.2	2.85 ± 0.06	2.7 ± 0.1	3.05 ± 0.07	3.06 ± 0.10	3.7 ± 0.2	3.5 ± 0.2	3.04 ± 0.08	2.4 ± 0.1	2.71 ± 0.06	3.2 ± 0.2	3.5 ± 0.1	E Africa F	E Europe M
39	4.0 ± 0.2	2.71 ± 0.06	2.7 ± 0.1	3.05 ± 0.08	2.9 ± 0.1	3.7 ± 0.2	3.5 ± 0.2	3.01 ± 0.08	2.4 ± 0.1	2.69 ± 0.06	3.1 ± 0.1	3.4 ± 0.1	E Africa F	E Europe M
40	4.0 ± 0.2	2.62 ± 0.06	2.6 ± 0.1	3.05 ± 0.09	3.0 ± 0.1	3.7 ± 0.2	3.4 ± 0.2	2.95 ± 0.08	2.4 ± 0.1	2.73 ± 0.06	2.9 ± 0.1	3.4 ± 0.2	E Africa F	E Europe M
41	4.1 ± 0.3	2.56 ± 0.06	2.7 ± 0.1	3.15 ± 0.09	2.8 ± 0.1	3.8 ± 0.2	3.3 ± 0.2	2.86 ± 0.08	2.4 ± 0.1	2.66 ± 0.07	2.9 ± 0.1	3.5 ± 0.2	E Africa F	E Europe M
42	4.4 ± 0.3	2.52 ± 0.06	2.7 ± 0.1	3.2 ± 0.1	2.7 ± 0.1	3.8 ± 0.2	3.3 ± 0.2	2.84 ± 0.08	2.4 ± 0.1	2.71 ± 0.07	3.0 ± 0.1	3.2 ± 0.2	E Africa F	E Europe M
43	4.1 ± 0.3	2.51 ± 0.06	2.8 ± 0.1	3.2 ± 0.1	2.9 ± 0.1	3.8 ± 0.2	3.4 ± 0.2	2.88 ± 0.08	2.5 ± 0.1	2.70 ± 0.08	3.0 ± 0.1	3.3 ± 0.2	E Africa F	E Europe M
44	4.4 ± 0.3	2.53 ± 0.06	2.7 ± 0.1	3.3 ± 0.1	2.9 ± 0.1	3.9 ± 0.2	3.2 ± 0.2	2.81 ± 0.08	2.6 ± 0.1	2.77 ± 0.09	3.2 ± 0.2	3.2 ± 0.2	E Africa F	E Asia F
45	4.4 ± 0.3	2.52 ± 0.06	2.7 ± 0.1	3.3 ± 0.1	2.8 ± 0.1	3.7 ± 0.2	3.4 ± 0.2	2.83 ± 0.07	2.7 ± 0.1	2.85 ± 0.09	3.2 ± 0.2	3.3 ± 0.2	E Africa F	E Asia F
46	4.5 ± 0.3	2.59 ± 0.06	2.8 ± 0.1	3.2 ± 0.1	2.9 ± 0.1	4.0 ± 0.3	3.4 ± 0.2	2.74 ± 0.07	2.8 ± 0.1	2.79 ± 0.09	3.1 ± 0.2	3.4 ± 0.2	E Africa F	E Asia F
47	4.0 ± 0.3	2.60 ± 0.06	2.9 ± 0.2	3.4 ± 0.1	2.9 ± 0.1	4.0 ± 0.2	3.5 ± 0.2	2.68 ± 0.08	2.7 ± 0.2	3.1 ± 0.1	3.3 ± 0.2	3.5 ± 0.2	E Africa F	E Asia F
48	4.6 ± 0.4	2.56 ± 0.06	2.8 ± 0.1	3.5 ± 0.1	2.8 ± 0.1	4.2 ± 0.3	3.9 ± 0.3	2.54 ± 0.07	2.8 ± 0.2	2.9 ± 0.1	3.1 ± 0.2	3.6 ± 0.2	E Africa F	E Asia M
49	4.5 ± 0.4	2.61 ± 0.07	2.8 ± 0.1	3.5 ± 0.1	2.9 ± 0.1	4.4 ± 0.3	3.6 ± 0.3	2.53 ± 0.07	2.7 ± 0.2	2.9 ± 0.1	3.0 ± 0.2	3.4 ± 0.2	E Africa F	E Asia M
50	4.5 ± 0.4	2.62 ± 0.07	2.7 ± 0.1	3.3 ± 0.1	2.9 ± 0.1	4.5 ± 0.3	3.3 ± 0.3	2.47 ± 0.07	2.8 ± 0.2	3.0 ± 0.1	3.2 ± 0.2	3.4 ± 0.2	E Africa F	E Asia M
51	4.6 ± 0.4	2.63 ± 0.07	2.9 ± 0.2	3.5 ± 0.1	2.9 ± 0.1	4.6 ± 0.3	3.9 ± 0.3	2.34 ± 0.07	2.8 ± 0.2	3.2 ± 0.1	3.0 ± 0.2	3.5 ± 0.2	W Africa F	E Asia M
52	4.7 ± 0.4	2.62 ± 0.07	3.0 ± 0.1	3.6 ± 0.2	2.9 ± 0.1	4.6 ± 0.3	3.7 ± 0.3	2.27 ± 0.07	2.9 ± 0.2	3.2 ± 0.1	2.8 ± 0.2	3.8 ± 0.2	E Africa F	E Asia M

Table 108. *Mean absolute error for Application-type images for algorithm yoti-003. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	3.3 ± 0.2	2.7 ± 0.1	1.6 ± 0.1	2.9 ± 0.1	3.2 ± 0.3	3.6 ± 0.3	2.3 ± 0.1	1.53 ± 0.09	0.96 ± 0.08	1.56 ± 0.07	1.4 ± 0.1	2.1 ± 0.2	W Africa F	E Europe M
15	3.3 ± 0.3	3.0 ± 0.2	1.5 ± 0.2	3.2 ± 0.2	3.4 ± 0.3	3.2 ± 0.3	1.9 ± 0.2	1.62 ± 0.09	0.84 ± 0.07	1.35 ± 0.08	1.5 ± 0.1	2.0 ± 0.2	S E Asia F	E Europe M
16	3.2 ± 0.3	3.3 ± 0.2	1.7 ± 0.2	3.1 ± 0.2	3.7 ± 0.3	3.7 ± 0.5	1.7 ± 0.2	1.66 ± 0.09	1.0 ± 0.2	1.42 ± 0.09	1.6 ± 0.2	1.6 ± 0.2	S E Asia F	E Europe M
17	3.4 ± 0.3	3.5 ± 0.2	1.9 ± 0.2	3.3 ± 0.2	3.9 ± 0.3	3.4 ± 0.3	1.5 ± 0.2	1.9 ± 0.1	1.1 ± 0.1	1.6 ± 0.1	2.0 ± 0.2	1.8 ± 0.3	S E Asia F	E Europe M
18	3.0 ± 0.2	3.5 ± 0.1	2.4 ± 0.2	3.3 ± 0.1	3.9 ± 0.2	3.4 ± 0.3	1.8 ± 0.2	2.11 ± 0.08	1.6 ± 0.1	1.93 ± 0.10	2.1 ± 0.2	2.0 ± 0.2	S E Asia F	E Europe M
19	3.9 ± 0.3	3.7 ± 0.1	2.8 ± 0.2	3.6 ± 0.1	4.1 ± 0.2	3.8 ± 0.3	2.3 ± 0.2	2.48 ± 0.09	1.9 ± 0.1	2.25 ± 0.10	2.4 ± 0.1	2.7 ± 0.3	S E Asia F	E Europe M
20	4.1 ± 0.3	3.9 ± 0.1	2.8 ± 0.2	3.7 ± 0.1	4.3 ± 0.2	4.0 ± 0.3	2.8 ± 0.2	2.66 ± 0.09	2.2 ± 0.1	2.6 ± 0.1	2.7 ± 0.1	2.9 ± 0.3	S E Asia F	E Europe M
21	4.3 ± 0.2	3.9 ± 0.1	3.0 ± 0.1	3.9 ± 0.1	4.3 ± 0.1	4.4 ± 0.3	3.0 ± 0.2	2.77 ± 0.09	2.3 ± 0.1	2.87 ± 0.10	2.9 ± 0.1	3.3 ± 0.3	W Africa F	E Europe M
22	4.5 ± 0.2	3.72 ± 0.10	3.0 ± 0.1	3.84 ± 0.10	4.1 ± 0.1	4.1 ± 0.2	3.8 ± 0.2	2.78 ± 0.09	2.3 ± 0.1	3.0 ± 0.1	2.8 ± 0.1	3.3 ± 0.2	E Africa F	E Europe M
23	4.7 ± 0.2	3.61 ± 0.09	2.8 ± 0.1	3.83 ± 0.09	4.1 ± 0.1	4.3 ± 0.2	3.8 ± 0.2	2.73 ± 0.08	2.1 ± 0.1	3.01 ± 0.09	2.9 ± 0.1	3.8 ± 0.2	E Africa F	E Europe M
24	4.8 ± 0.2	3.45 ± 0.08	2.53 ± 0.08	3.65 ± 0.08	3.83 ± 0.10	4.4 ± 0.2	3.7 ± 0.2	2.69 ± 0.08	1.99 ± 0.09	3.04 ± 0.09	2.9 ± 0.1	3.8 ± 0.2	E Africa F	E Europe M
25	4.6 ± 0.2	3.37 ± 0.07	2.27 ± 0.08	3.44 ± 0.07	3.7 ± 0.1	4.4 ± 0.2	3.9 ± 0.2	2.60 ± 0.08	1.80 ± 0.09	2.95 ± 0.08	2.8 ± 0.1	4.0 ± 0.2	E Africa F	E Europe M
26	4.5 ± 0.2	3.29 ± 0.07	2.04 ± 0.07	3.26 ± 0.07	3.7 ± 0.1	4.1 ± 0.2	3.8 ± 0.2	2.43 ± 0.08	1.63 ± 0.09	2.91 ± 0.07	2.7 ± 0.1	3.8 ± 0.2	E Africa F	E Europe M
27	4.4 ± 0.2	3.13 ± 0.07	2.08 ± 0.08	3.10 ± 0.06	3.5 ± 0.1	4.4 ± 0.2	3.7 ± 0.2	2.40 ± 0.08	1.56 ± 0.08	2.74 ± 0.07	2.8 ± 0.1	3.8 ± 0.2	W Africa F	E Europe M
28	4.3 ± 0.2	3.03 ± 0.06	2.02 ± 0.07	3.07 ± 0.07	3.42 ± 0.10	4.2 ± 0.2	3.5 ± 0.2	2.46 ± 0.08	1.70 ± 0.08	2.75 ± 0.07	2.8 ± 0.1	3.8 ± 0.2	E Africa F	E Europe M
29	4.4 ± 0.2	2.97 ± 0.06	2.15 ± 0.07	3.01 ± 0.06	3.46 ± 0.10	4.2 ± 0.2	3.6 ± 0.2	2.39 ± 0.07	1.77 ± 0.07	2.69 ± 0.06	2.6 ± 0.1	4.0 ± 0.2	E Africa F	E Europe M
30	4.3 ± 0.2	3.00 ± 0.06	2.32 ± 0.07	2.99 ± 0.06	3.37 ± 0.10	4.1 ± 0.2	3.8 ± 0.2	2.44 ± 0.07	1.91 ± 0.08	2.72 ± 0.06	2.9 ± 0.1	4.0 ± 0.1	E Africa F	E Europe M
31	4.2 ± 0.2	2.99 ± 0.06	2.51 ± 0.07	2.96 ± 0.06	3.36 ± 0.09	4.1 ± 0.2	3.7 ± 0.1	2.48 ± 0.07	2.06 ± 0.08	2.73 ± 0.06	2.8 ± 0.1	3.8 ± 0.1	E Africa F	E Europe M
32	4.4 ± 0.2	2.93 ± 0.06	2.60 ± 0.07	3.02 ± 0.06	3.39 ± 0.10	4.2 ± 0.2	3.7 ± 0.2	2.61 ± 0.07	2.23 ± 0.09	2.74 ± 0.05	2.9 ± 0.1	3.9 ± 0.1	E Africa F	E Europe M
33	4.2 ± 0.2	2.90 ± 0.06	2.71 ± 0.08	2.95 ± 0.06	3.31 ± 0.09	4.2 ± 0.2	3.8 ± 0.2	2.67 ± 0.07	2.23 ± 0.09	2.71 ± 0.06	2.8 ± 0.1	3.8 ± 0.1	E Africa F	E Europe M
34	4.2 ± 0.2	2.97 ± 0.06	2.71 ± 0.09	2.91 ± 0.06	3.20 ± 0.10	4.1 ± 0.2	3.6 ± 0.2	2.77 ± 0.07	2.29 ± 0.09	2.74 ± 0.06	3.0 ± 0.1	3.8 ± 0.1	E Africa F	E Europe M
35	4.3 ± 0.2	2.85 ± 0.06	2.75 ± 0.09	2.80 ± 0.06	3.20 ± 0.09	4.0 ± 0.2	3.6 ± 0.2	2.87 ± 0.08	2.3 ± 0.1	2.73 ± 0.06	3.1 ± 0.1	3.8 ± 0.1	E Africa F	E Europe M
36	4.1 ± 0.2	2.77 ± 0.06	2.67 ± 0.09	2.75 ± 0.06	3.09 ± 0.10	4.0 ± 0.2	3.6 ± 0.2	2.85 ± 0.08	2.4 ± 0.1	2.67 ± 0.06	3.2 ± 0.1	3.8 ± 0.1	E Africa F	E Europe M
37	4.0 ± 0.2	2.71 ± 0.06	2.71 ± 0.10	2.91 ± 0.07	2.9 ± 0.1	4.0 ± 0.2	3.6 ± 0.2	2.87 ± 0.08	2.3 ± 0.1	2.64 ± 0.06	3.0 ± 0.1	3.5 ± 0.1	W Africa F	E Europe M
38	4.0 ± 0.2	2.70 ± 0.06	2.60 ± 0.10	2.80 ± 0.07	2.9 ± 0.1	4.0 ± 0.2	3.4 ± 0.2	2.91 ± 0.08	2.3 ± 0.1	2.58 ± 0.06	3.2 ± 0.2	3.4 ± 0.1	W Africa F	E Europe M
39	3.9 ± 0.2	2.68 ± 0.06	2.5 ± 0.1	2.76 ± 0.08	2.83 ± 0.10	3.8 ± 0.2	3.5 ± 0.2	2.92 ± 0.08	2.3 ± 0.1	2.54 ± 0.06	3.2 ± 0.1	3.4 ± 0.1	E Africa F	E Europe M
40	3.9 ± 0.2	2.62 ± 0.06	2.5 ± 0.1	2.79 ± 0.08	2.9 ± 0.1	3.7 ± 0.2	3.3 ± 0.2	2.92 ± 0.08	2.3 ± 0.1	2.63 ± 0.06	3.1 ± 0.1	3.4 ± 0.2	E Africa F	E Europe M
41	3.9 ± 0.2	2.62 ± 0.06	2.5 ± 0.1	2.87 ± 0.09	2.8 ± 0.1	3.7 ± 0.2	3.4 ± 0.2	2.89 ± 0.07	2.3 ± 0.1	2.54 ± 0.06	3.0 ± 0.1	3.5 ± 0.2	E Africa F	E Europe M
42	4.1 ± 0.2	2.63 ± 0.06	2.6 ± 0.1	2.9 ± 0.1	2.6 ± 0.1	3.6 ± 0.2	3.3 ± 0.2	2.90 ± 0.07	2.3 ± 0.1	2.59 ± 0.07	3.1 ± 0.1	3.3 ± 0.2	E Africa F	E Europe M
43	3.9 ± 0.3	2.65 ± 0.06	2.6 ± 0.1	2.89 ± 0.10	2.9 ± 0.1	3.7 ± 0.2	3.3 ± 0.2	2.94 ± 0.07	2.5 ± 0.1	2.58 ± 0.07	3.2 ± 0.1	3.5 ± 0.2	E Africa F	E Europe M
44	4.1 ± 0.3	2.66 ± 0.06	2.7 ± 0.1	3.0 ± 0.1	2.9 ± 0.1	3.8 ± 0.2	3.4 ± 0.2	2.91 ± 0.08	2.5 ± 0.1	2.63 ± 0.08	3.3 ± 0.2	3.5 ± 0.2	E Africa F	E Europe M
45	4.0 ± 0.3	2.63 ± 0.06	2.6 ± 0.1	3.0 ± 0.1	2.8 ± 0.1	3.5 ± 0.2	3.6 ± 0.2	2.91 ± 0.08	2.5 ± 0.1	2.70 ± 0.09	3.1 ± 0.2	3.5 ± 0.2	E Africa F	E Europe M
46	4.1 ± 0.3	2.69 ± 0.06	2.7 ± 0.1	2.9 ± 0.1	2.8 ± 0.1	3.8 ± 0.2	3.5 ± 0.2	2.77 ± 0.07	2.7 ± 0.1	2.70 ± 0.09	3.2 ± 0.2	3.6 ± 0.2	E Africa F	E Europe M
47	4.1 ± 0.3	2.64 ± 0.06	2.9 ± 0.2	3.0 ± 0.1	2.8 ± 0.1	3.8 ± 0.2	3.5 ± 0.2	2.73 ± 0.08	2.6 ± 0.1	2.9 ± 0.1	3.3 ± 0.2	3.7 ± 0.2	E Africa F	E Europe M
48	4.3 ± 0.3	2.50 ± 0.06	2.8 ± 0.1	3.2 ± 0.1	2.7 ± 0.1	3.6 ± 0.2	3.7 ± 0.3	2.55 ± 0.07	2.7 ± 0.2	2.9 ± 0.1	3.1 ± 0.2	3.7 ± 0.2	E Africa F	E Asia F
49	4.2 ± 0.3	2.52 ± 0.06	2.8 ± 0.1	3.1 ± 0.1	2.8 ± 0.1	3.9 ± 0.2	3.5 ± 0.3	2.61 ± 0.08	2.7 ± 0.2	2.9 ± 0.1	3.0 ± 0.2	3.5 ± 0.2	E Africa F	E Asia F
50	4.4 ± 0.4	2.50 ± 0.07	2.7 ± 0.1	3.0 ± 0.1	2.8 ± 0.1	3.9 ± 0.2	3.4 ± 0.3	2.48 ± 0.07	2.8 ± 0.2	3.0 ± 0.1	3.2 ± 0.2	3.7 ± 0.2	E Africa F	E Asia M
51	4.2 ± 0.3	2.49 ± 0.07	2.7 ± 0.1	3.1 ± 0.1	2.7 ± 0.1	4.1 ± 0.3	3.8 ± 0.3	2.40 ± 0.07	2.8 ± 0.2	3.2 ± 0.1	3.0 ± 0.2	3.7 ± 0.2	E Africa F	E Asia M
52	4.2 ± 0.3	2.47 ± 0.07	3.0 ± 0.1	3.2 ± 0.1	2.8 ± 0.1	4.1 ± 0.3	3.5 ± 0.3	2.31 ± 0.07	2.9 ± 0.2	3.2 ± 0.1	2.9 ± 0.2	3.9 ± 0.2	E Africa F	E Asia M

Table 109. *Mean absolute error for Application-type images for algorithm yoti-004. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	3.5 ± 0.2	2.8 ± 0.1	1.8 ± 0.1	3.0 ± 0.1	3.0 ± 0.2	3.7 ± 0.3	2.3 ± 0.1	1.26 ± 0.07	1.05 ± 0.09	1.50 ± 0.07	1.3 ± 0.1	2.3 ± 0.2	W Africa F	E Europe M
15	3.5 ± 0.2	3.1 ± 0.1	1.8 ± 0.2	3.5 ± 0.2	3.5 ± 0.3	3.5 ± 0.3	2.2 ± 0.2	1.48 ± 0.07	0.93 ± 0.09	1.45 ± 0.08	1.6 ± 0.1	2.4 ± 0.2	W Africa F	E Europe M
16	3.4 ± 0.2	3.5 ± 0.1	2.0 ± 0.2	3.4 ± 0.2	3.8 ± 0.3	3.8 ± 0.4	2.2 ± 0.2	1.70 ± 0.07	1.1 ± 0.2	1.69 ± 0.09	1.8 ± 0.2	2.2 ± 0.2	W Africa F	E Europe M
17	3.5 ± 0.2	3.7 ± 0.1	2.0 ± 0.2	3.6 ± 0.2	3.9 ± 0.3	3.6 ± 0.3	2.0 ± 0.2	2.01 ± 0.09	1.16 ± 0.10	1.8 ± 0.1	2.1 ± 0.2	2.4 ± 0.3	S E Asia F	E Europe M
18	3.1 ± 0.2	3.55 ± 0.09	2.3 ± 0.2	3.4 ± 0.1	3.9 ± 0.2	3.5 ± 0.3	2.1 ± 0.2	2.14 ± 0.07	1.5 ± 0.1	2.04 ± 0.09	2.2 ± 0.2	2.2 ± 0.2	S E Asia F	E Europe M
19	3.4 ± 0.2	3.51 ± 0.09	2.4 ± 0.2	3.3 ± 0.1	3.8 ± 0.1	3.5 ± 0.2	2.1 ± 0.2	2.31 ± 0.08	1.8 ± 0.1	2.17 ± 0.08	2.3 ± 0.1	2.6 ± 0.3	S E Asia F	E Europe M
20	3.2 ± 0.2	3.4 ± 0.1	2.3 ± 0.1	3.2 ± 0.1	3.7 ± 0.1	3.5 ± 0.2	2.3 ± 0.2	2.27 ± 0.08	1.8 ± 0.1	2.24 ± 0.09	2.4 ± 0.1	2.5 ± 0.3	S E Asia F	E Europe M
21	3.1 ± 0.2	3.13 ± 0.09	2.23 ± 0.10	3.09 ± 0.09	3.4 ± 0.1	3.5 ± 0.2	2.5 ± 0.2	2.17 ± 0.07	1.8 ± 0.1	2.29 ± 0.08	2.3 ± 0.1	2.7 ± 0.2	W Africa F	E Europe M
22	3.4 ± 0.2	2.84 ± 0.08	2.14 ± 0.08	2.90 ± 0.08	3.2 ± 0.1	3.3 ± 0.2	2.9 ± 0.2	2.05 ± 0.07	1.7 ± 0.1	2.21 ± 0.09	2.14 ± 0.10	2.5 ± 0.2	E Africa F	E Europe M
23	3.3 ± 0.2	2.57 ± 0.07	1.96 ± 0.08	2.78 ± 0.08	2.98 ± 0.10	3.4 ± 0.2	2.9 ± 0.2	1.89 ± 0.07	1.51 ± 0.09	2.13 ± 0.08	2.1 ± 0.1	3.0 ± 0.2	W Africa F	E Europe M
24	3.4 ± 0.2	2.38 ± 0.06	1.76 ± 0.07	2.64 ± 0.07	2.74 ± 0.08	3.4 ± 0.2	2.8 ± 0.2	1.84 ± 0.07	1.38 ± 0.07	2.14 ± 0.07	2.0 ± 0.1	2.9 ± 0.2	E Africa F	E Europe M
25	3.3 ± 0.2	2.30 ± 0.06	1.63 ± 0.06	2.50 ± 0.06	2.74 ± 0.09	3.4 ± 0.2	3.0 ± 0.2	1.83 ± 0.07	1.36 ± 0.08	2.07 ± 0.07	1.94 ± 0.09	3.1 ± 0.2	W Africa F	E Europe M
26	3.4 ± 0.2	2.30 ± 0.06	1.65 ± 0.06	2.48 ± 0.06	2.63 ± 0.08	3.2 ± 0.2	3.1 ± 0.2	1.77 ± 0.06	1.39 ± 0.07	2.13 ± 0.06	1.95 ± 0.10	3.1 ± 0.2	E Africa F	E Europe M
27	3.5 ± 0.2	2.32 ± 0.06	1.85 ± 0.06	2.50 ± 0.05	2.61 ± 0.08	3.6 ± 0.2	3.2 ± 0.2	1.89 ± 0.06	1.51 ± 0.07	2.11 ± 0.06	2.1 ± 0.1	3.1 ± 0.2	W Africa F	E Europe M
28	3.5 ± 0.2	2.38 ± 0.05	2.01 ± 0.06	2.67 ± 0.06	2.62 ± 0.08	3.5 ± 0.2	3.0 ± 0.1	2.06 ± 0.07	1.71 ± 0.07	2.23 ± 0.06	2.2 ± 0.1	3.2 ± 0.1	E Africa F	E Europe M
29	3.6 ± 0.2	2.43 ± 0.05	2.25 ± 0.06	2.72 ± 0.06	2.78 ± 0.09	3.6 ± 0.2	3.2 ± 0.1	2.13 ± 0.06	1.96 ± 0.07	2.34 ± 0.05	2.2 ± 0.1	3.4 ± 0.1	E Africa F	E Europe M
30	3.7 ± 0.1	2.59 ± 0.05	2.48 ± 0.06	2.80 ± 0.06	2.80 ± 0.09	3.6 ± 0.1	3.3 ± 0.1	2.31 ± 0.07	2.11 ± 0.08	2.48 ± 0.05	2.5 ± 0.1	3.5 ± 0.1	E Africa F	E Europe M
31	3.6 ± 0.1	2.66 ± 0.05	2.71 ± 0.07	2.89 ± 0.06	2.86 ± 0.08	3.7 ± 0.1	3.3 ± 0.1	2.39 ± 0.07	2.34 ± 0.08	2.60 ± 0.05	2.6 ± 0.1	3.4 ± 0.1	W Africa F	E Europe M
32	3.9 ± 0.2	2.70 ± 0.05	2.86 ± 0.08	3.02 ± 0.06	3.04 ± 0.09	3.8 ± 0.1	3.4 ± 0.1	2.53 ± 0.06	2.52 ± 0.09	2.69 ± 0.05	2.7 ± 0.1	3.5 ± 0.1	E Africa F	E Europe M
33	3.8 ± 0.2	2.77 ± 0.05	3.02 ± 0.09	3.01 ± 0.06	3.04 ± 0.09	3.8 ± 0.2	3.6 ± 0.1	2.62 ± 0.07	2.50 ± 0.09	2.72 ± 0.05	2.7 ± 0.1	3.5 ± 0.1	E Africa F	E Europe M
34	3.9 ± 0.2	2.87 ± 0.06	3.03 ± 0.09	3.02 ± 0.06	2.92 ± 0.09	3.9 ± 0.2	3.4 ± 0.1	2.69 ± 0.07	2.55 ± 0.10	2.80 ± 0.06	2.9 ± 0.1	3.4 ± 0.1	E Africa F	E Europe M
35	4.1 ± 0.2	2.88 ± 0.06	3.13 ± 0.10	2.94 ± 0.06	3.03 ± 0.09	3.7 ± 0.2	3.5 ± 0.2	2.79 ± 0.07	2.5 ± 0.1	2.77 ± 0.06	2.9 ± 0.1	3.5 ± 0.1	E Africa F	E Europe M
36	4.0 ± 0.2	2.82 ± 0.06	2.95 ± 0.10	2.89 ± 0.07	3.04 ± 0.10	3.7 ± 0.2	3.4 ± 0.2	2.74 ± 0.07	2.5 ± 0.1	2.74 ± 0.06	3.0 ± 0.1	3.5 ± 0.1	E Africa F	E Europe M
37	3.9 ± 0.2	2.75 ± 0.06	2.9 ± 0.1	3.03 ± 0.07	2.87 ± 0.10	3.9 ± 0.2	3.5 ± 0.2	2.74 ± 0.07	2.4 ± 0.1	2.71 ± 0.06	2.9 ± 0.1	3.2 ± 0.1	W Africa F	E Europe M
38	4.0 ± 0.2	2.78 ± 0.06	2.8 ± 0.1	2.91 ± 0.07	2.8 ± 0.1	3.7 ± 0.2	3.2 ± 0.2	2.76 ± 0.08	2.4 ± 0.1	2.61 ± 0.06	3.0 ± 0.1	3.2 ± 0.1	E Africa F	E Europe M
39	4.0 ± 0.2	2.75 ± 0.06	2.7 ± 0.1	2.91 ± 0.08	2.81 ± 0.10	3.6 ± 0.2	3.3 ± 0.2	2.72 ± 0.08	2.4 ± 0.1	2.57 ± 0.06	2.9 ± 0.1	3.1 ± 0.1	E Africa F	E Europe M
40	4.0 ± 0.2	2.71 ± 0.06	2.6 ± 0.1	2.79 ± 0.08	2.9 ± 0.1	3.6 ± 0.2	3.3 ± 0.2	2.71 ± 0.07	2.3 ± 0.1	2.65 ± 0.06	2.8 ± 0.1	3.2 ± 0.1	E Africa F	E Europe M
41	4.0 ± 0.2	2.67 ± 0.06	2.6 ± 0.1	2.97 ± 0.09	2.7 ± 0.1	3.8 ± 0.2	3.3 ± 0.2	2.66 ± 0.07	2.3 ± 0.1	2.52 ± 0.06	2.9 ± 0.1	3.3 ± 0.2	E Africa F	E Europe M
42	4.3 ± 0.3	2.61 ± 0.05	2.5 ± 0.1	2.91 ± 0.10	2.6 ± 0.1	3.7 ± 0.2	3.3 ± 0.2	2.70 ± 0.07	2.3 ± 0.1	2.57 ± 0.07	2.8 ± 0.1	3.2 ± 0.2	E Africa F	E Europe M
43	4.2 ± 0.3	2.60 ± 0.06	2.6 ± 0.1	2.87 ± 0.10	2.7 ± 0.1	4.1 ± 0.2	3.1 ± 0.2	2.73 ± 0.07	2.3 ± 0.1	2.60 ± 0.07	3.0 ± 0.1	3.4 ± 0.2	E Africa F	E Europe M
44	4.4 ± 0.3	2.54 ± 0.06	2.6 ± 0.1	3.0 ± 0.1	2.8 ± 0.1	4.0 ± 0.2	3.3 ± 0.2	2.72 ± 0.07	2.4 ± 0.1	2.61 ± 0.08	3.1 ± 0.1	3.2 ± 0.2	E Africa F	E Europe M
45	4.2 ± 0.3	2.53 ± 0.06	2.5 ± 0.1	3.0 ± 0.1	2.7 ± 0.1	4.0 ± 0.2	3.3 ± 0.2	2.71 ± 0.07	2.5 ± 0.1	2.71 ± 0.09	3.0 ± 0.1	3.4 ± 0.2	E Africa F	E Europe M
46	4.5 ± 0.3	2.50 ± 0.06	2.5 ± 0.1	2.9 ± 0.1	2.6 ± 0.1	4.2 ± 0.3	3.4 ± 0.2	2.53 ± 0.07	2.5 ± 0.1	2.61 ± 0.09	3.0 ± 0.2	3.5 ± 0.2	E Africa F	E Asia F
47	4.5 ± 0.3	2.47 ± 0.06	2.6 ± 0.1	3.0 ± 0.1	2.6 ± 0.1	4.3 ± 0.2	3.4 ± 0.2	2.48 ± 0.07	2.5 ± 0.1	2.9 ± 0.1	3.1 ± 0.2	3.5 ± 0.2	E Africa F	E Europe M
48	4.7 ± 0.4	2.37 ± 0.06	2.6 ± 0.1	3.1 ± 0.1	2.6 ± 0.1	4.4 ± 0.3	3.6 ± 0.3	2.37 ± 0.07	2.5 ± 0.2	2.8 ± 0.1	2.9 ± 0.2	3.6 ± 0.2	E Africa F	E Asia F
49	4.6 ± 0.4	2.45 ± 0.06	2.6 ± 0.1	3.1 ± 0.1	2.6 ± 0.1	4.4 ± 0.3	3.5 ± 0.3	2.41 ± 0.07	2.5 ± 0.1	2.9 ± 0.1	2.8 ± 0.1	3.4 ± 0.2	E Africa F	E Asia M
50	4.7 ± 0.4	2.43 ± 0.06	2.5 ± 0.1	3.1 ± 0.1	2.7 ± 0.1	4.6 ± 0.3	3.3 ± 0.3	2.31 ± 0.07	2.5 ± 0.1	2.9 ± 0.1	3.0 ± 0.2	3.5 ± 0.2	E Africa F	E Asia M
51	4.6 ± 0.4	2.45 ± 0.07	2.6 ± 0.1	3.1 ± 0.1	2.7 ± 0.1	4.9 ± 0.3	3.7 ± 0.3	2.26 ± 0.07	2.5 ± 0.1	3.1 ± 0.1	2.8 ± 0.2	3.6 ± 0.2	W Africa F	E Asia M
52	4.8 ± 0.4	2.39 ± 0.07	2.8 ± 0.1	3.2 ± 0.1	2.7 ± 0.1	5.0 ± 0.3	3.4 ± 0.3	2.22 ± 0.07	2.7 ± 0.2	3.1 ± 0.1	2.7 ± 0.2	3.7 ± 0.2	W Africa F	E Asia M

Table 110. *Mean absolute error for Application-type images for algorithm youverse-000. Values closer to zero are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Group	min Group
14	4.0 ± 0.3	2.87 ± 0.10	4.1 ± 0.2	4.0 ± 0.1	2.7 ± 0.2	4.5 ± 0.5	3.2 ± 0.2	2.53 ± 0.07	2.6 ± 0.1	3.0 ± 0.1	2.5 ± 0.1	3.1 ± 0.3	W Africa F	S E Asia M
15	4.1 ± 0.3	2.7 ± 0.1	4.1 ± 0.3	4.0 ± 0.2	2.6 ± 0.3	4.8 ± 0.5	2.9 ± 0.3	2.13 ± 0.08	2.4 ± 0.2	2.8 ± 0.1	2.3 ± 0.2	3.6 ± 0.4	W Africa F	E Asia M
16	4.3 ± 0.4	2.4 ± 0.1	4.2 ± 0.3	3.6 ± 0.2	2.5 ± 0.3	4.4 ± 0.5	3.3 ± 0.3	1.88 ± 0.09	2.6 ± 0.2	2.8 ± 0.2	2.5 ± 0.2	3.6 ± 0.4	W Africa F	E Asia M
17	4.5 ± 0.4	2.3 ± 0.1	4.0 ± 0.3	3.2 ± 0.2	2.3 ± 0.2	4.8 ± 0.4	3.6 ± 0.3	1.83 ± 0.09	2.4 ± 0.2	3.1 ± 0.2	2.2 ± 0.2	3.9 ± 0.4	W Africa F	E Asia M
18	4.0 ± 0.3	2.38 ± 0.09	3.8 ± 0.3	3.3 ± 0.1	2.4 ± 0.1	4.5 ± 0.3	4.3 ± 0.3	1.90 ± 0.08	2.6 ± 0.2	3.1 ± 0.1	2.1 ± 0.2	4.4 ± 0.4	W Africa F	E Asia M
19	4.1 ± 0.3	2.39 ± 0.08	3.3 ± 0.2	3.1 ± 0.1	2.4 ± 0.1	4.5 ± 0.3	4.1 ± 0.3	2.05 ± 0.08	2.6 ± 0.2	3.4 ± 0.1	2.2 ± 0.1	4.2 ± 0.3	W Africa F	E Asia M
20	4.2 ± 0.3	2.49 ± 0.09	3.4 ± 0.2	3.0 ± 0.1	2.37 ± 0.10	4.3 ± 0.3	4.4 ± 0.3	2.28 ± 0.08	2.7 ± 0.2	3.5 ± 0.1	2.5 ± 0.1	4.6 ± 0.3	W Africa M	E Asia M
21	3.9 ± 0.2	2.65 ± 0.08	3.3 ± 0.2	3.01 ± 0.10	2.64 ± 0.10	4.4 ± 0.3	4.6 ± 0.3	2.48 ± 0.08	3.0 ± 0.2	3.3 ± 0.1	2.6 ± 0.1	4.9 ± 0.3	W Africa M	E Asia M
22	3.9 ± 0.2	2.81 ± 0.08	3.2 ± 0.1	3.02 ± 0.09	2.84 ± 0.10	4.0 ± 0.2	4.7 ± 0.3	2.71 ± 0.08	3.0 ± 0.2	3.4 ± 0.1	2.6 ± 0.1	4.4 ± 0.3	E Africa M	S E Asia M
23	3.8 ± 0.2	3.04 ± 0.07	3.0 ± 0.1	3.09 ± 0.08	3.07 ± 0.09	4.2 ± 0.2	4.7 ± 0.2	2.80 ± 0.08	3.1 ± 0.2	3.4 ± 0.1	2.8 ± 0.1	4.3 ± 0.2	E Africa M	S E Asia M
24	4.0 ± 0.2	3.37 ± 0.07	3.0 ± 0.1	3.14 ± 0.07	3.33 ± 0.09	3.9 ± 0.2	4.2 ± 0.2	3.04 ± 0.09	3.0 ± 0.1	3.2 ± 0.1	2.9 ± 0.1	4.2 ± 0.2	W Africa M	S E Asia M
25	3.9 ± 0.2	3.65 ± 0.08	2.87 ± 0.10	3.18 ± 0.07	3.68 ± 0.10	3.9 ± 0.2	4.2 ± 0.2	3.15 ± 0.09	3.0 ± 0.1	3.15 ± 0.09	3.1 ± 0.1	4.2 ± 0.2	W Africa M	E Europe F
26	4.0 ± 0.2	4.07 ± 0.08	2.78 ± 0.09	3.18 ± 0.07	4.0 ± 0.1	3.9 ± 0.2	4.1 ± 0.2	3.25 ± 0.09	3.1 ± 0.1	3.04 ± 0.08	3.2 ± 0.1	4.0 ± 0.2	E Africa M	E Europe F
27	4.0 ± 0.2	4.48 ± 0.08	2.92 ± 0.10	3.35 ± 0.07	4.3 ± 0.1	3.8 ± 0.2	3.9 ± 0.2	3.38 ± 0.10	3.1 ± 0.1	3.00 ± 0.08	3.4 ± 0.1	4.0 ± 0.2	E Asia F	E Europe F
28	4.2 ± 0.2	4.91 ± 0.08	3.03 ± 0.10	3.55 ± 0.07	4.7 ± 0.1	4.0 ± 0.2	3.7 ± 0.2	3.5 ± 0.1	3.0 ± 0.1	2.95 ± 0.07	3.4 ± 0.1	3.8 ± 0.2	E Asia F	S Asia M
29	4.3 ± 0.2	5.24 ± 0.08	3.20 ± 0.09	3.79 ± 0.07	5.2 ± 0.1	4.2 ± 0.2	3.6 ± 0.2	3.68 ± 0.10	3.1 ± 0.1	2.98 ± 0.06	3.6 ± 0.2	3.8 ± 0.1	E Asia F	S Asia M
30	4.4 ± 0.2	5.74 ± 0.08	3.28 ± 0.10	4.04 ± 0.07	5.4 ± 0.1	4.3 ± 0.2	3.7 ± 0.2	3.82 ± 0.10	3.1 ± 0.1	3.02 ± 0.06	3.6 ± 0.2	3.8 ± 0.1	E Asia F	S Asia M
31	4.7 ± 0.2	6.06 ± 0.09	3.6 ± 0.1	4.37 ± 0.08	6.0 ± 0.1	4.6 ± 0.2	3.5 ± 0.2	4.1 ± 0.1	3.2 ± 0.1	3.17 ± 0.06	4.0 ± 0.2	3.7 ± 0.1	E Asia F	E Europe M
32	4.9 ± 0.2	6.47 ± 0.09	3.7 ± 0.1	4.65 ± 0.08	6.3 ± 0.1	5.1 ± 0.2	3.6 ± 0.2	4.3 ± 0.1	3.3 ± 0.1	3.37 ± 0.06	4.0 ± 0.2	3.7 ± 0.1	E Asia F	E Europe M
33	5.3 ± 0.2	6.79 ± 0.10	4.0 ± 0.1	4.94 ± 0.08	6.7 ± 0.1	5.1 ± 0.2	3.8 ± 0.2	4.5 ± 0.1	3.2 ± 0.1	3.45 ± 0.06	4.4 ± 0.2	3.8 ± 0.1	E Asia F	E Europe M
34	5.3 ± 0.2	7.10 ± 0.10	4.1 ± 0.1	5.09 ± 0.09	7.1 ± 0.2	5.4 ± 0.2	3.7 ± 0.2	4.9 ± 0.1	3.3 ± 0.1	3.70 ± 0.07	4.5 ± 0.2	3.8 ± 0.1	E Asia F	E Europe M
35	5.6 ± 0.2	7.6 ± 0.1	4.1 ± 0.1	5.46 ± 0.09	7.5 ± 0.2	5.8 ± 0.2	3.8 ± 0.2	5.0 ± 0.1	3.5 ± 0.1	3.86 ± 0.07	4.6 ± 0.2	4.1 ± 0.2	E Asia F	E Europe M
36	5.9 ± 0.2	7.9 ± 0.1	4.3 ± 0.1	5.71 ± 0.10	7.6 ± 0.2	6.1 ± 0.2	4.1 ± 0.2	5.2 ± 0.1	3.4 ± 0.1	4.05 ± 0.08	4.8 ± 0.2	4.2 ± 0.2	E Asia F	E Europe M
37	6.1 ± 0.2	8.2 ± 0.1	4.3 ± 0.1	6.0 ± 0.1	8.1 ± 0.2	6.5 ± 0.2	3.9 ± 0.2	5.3 ± 0.1	3.5 ± 0.2	4.14 ± 0.08	4.9 ± 0.2	4.4 ± 0.2	E Asia F	E Europe M
38	6.2 ± 0.3	8.6 ± 0.1	4.5 ± 0.2	6.1 ± 0.1	8.2 ± 0.2	6.8 ± 0.3	4.2 ± 0.2	5.4 ± 0.1	3.6 ± 0.1	4.36 ± 0.08	5.0 ± 0.2	4.4 ± 0.2	E Asia F	E Europe M
39	6.5 ± 0.3	8.8 ± 0.1	4.4 ± 0.2	6.5 ± 0.1	8.5 ± 0.2	6.9 ± 0.3	4.2 ± 0.2	5.6 ± 0.1	3.5 ± 0.2	4.51 ± 0.09	5.1 ± 0.2	4.7 ± 0.2	E Asia F	E Europe M
40	6.7 ± 0.3	9.1 ± 0.1	4.5 ± 0.2	6.6 ± 0.1	8.5 ± 0.2	7.4 ± 0.3	4.0 ± 0.2	5.8 ± 0.1	3.7 ± 0.2	4.69 ± 0.10	5.0 ± 0.2	4.9 ± 0.2	E Asia F	E Europe M
41	7.2 ± 0.4	9.4 ± 0.1	4.6 ± 0.2	6.8 ± 0.2	8.9 ± 0.2	8.2 ± 0.3	4.5 ± 0.2	5.9 ± 0.1	3.8 ± 0.2	4.9 ± 0.1	5.3 ± 0.2	5.1 ± 0.2	E Asia F	E Europe M
42	7.0 ± 0.4	9.5 ± 0.1	4.7 ± 0.2	6.9 ± 0.2	8.9 ± 0.2	8.4 ± 0.3	4.7 ± 0.2	6.1 ± 0.1	3.8 ± 0.2	5.2 ± 0.1	5.1 ± 0.2	5.3 ± 0.2	E Asia F	E Europe M
43	7.4 ± 0.4	9.9 ± 0.1	4.8 ± 0.2	7.1 ± 0.2	9.4 ± 0.2	9.0 ± 0.4	4.7 ± 0.3	6.2 ± 0.1	4.0 ± 0.2	5.3 ± 0.1	5.3 ± 0.2	5.9 ± 0.2	E Asia F	E Europe M
44	7.6 ± 0.4	10.3 ± 0.1	5.1 ± 0.2	7.4 ± 0.2	9.5 ± 0.2	8.9 ± 0.4	5.3 ± 0.3	6.3 ± 0.1	3.9 ± 0.2	5.4 ± 0.1	5.3 ± 0.2	6.0 ± 0.3	E Asia F	E Europe M
45	7.7 ± 0.4	10.4 ± 0.1	5.1 ± 0.2	7.4 ± 0.2	9.8 ± 0.3	9.2 ± 0.4	5.7 ± 0.3	6.5 ± 0.1	4.2 ± 0.2	5.5 ± 0.1	5.5 ± 0.2	6.6 ± 0.3	E Asia F	E Europe M
46	7.7 ± 0.5	10.8 ± 0.2	5.2 ± 0.2	7.4 ± 0.2	10.0 ± 0.3	9.8 ± 0.4	5.5 ± 0.3	6.8 ± 0.2	4.2 ± 0.2	5.6 ± 0.2	5.6 ± 0.3	6.6 ± 0.3	E Asia F	E Europe M
47	8.1 ± 0.5	10.9 ± 0.2	5.6 ± 0.3	7.7 ± 0.2	10.3 ± 0.3	10.0 ± 0.4	5.8 ± 0.3	7.0 ± 0.2	4.5 ± 0.2	6.0 ± 0.2	5.4 ± 0.3	7.0 ± 0.3	E Asia F	E Europe M
48	8.6 ± 0.5	11.2 ± 0.2	5.6 ± 0.2	7.8 ± 0.2	10.3 ± 0.3	10.5 ± 0.4	6.3 ± 0.4	7.2 ± 0.2	4.6 ± 0.2	6.0 ± 0.2	5.8 ± 0.3	7.4 ± 0.3	E Asia F	E Europe M
49	8.4 ± 0.6	11.6 ± 0.2	5.8 ± 0.3	8.0 ± 0.2	10.5 ± 0.3	10.8 ± 0.4	6.7 ± 0.4	7.4 ± 0.2	4.7 ± 0.2	6.2 ± 0.2	5.8 ± 0.3	7.9 ± 0.3	E Asia F	E Europe M
50	9.0 ± 0.6	11.7 ± 0.2	5.9 ± 0.3	8.0 ± 0.2	10.8 ± 0.3	11.1 ± 0.5	7.0 ± 0.4	7.5 ± 0.2	4.8 ± 0.2	6.5 ± 0.2	5.9 ± 0.3	8.1 ± 0.3	E Asia F	E Europe M
51	9.5 ± 0.6	12.0 ± 0.2	6.0 ± 0.3	8.4 ± 0.2	11.1 ± 0.3	11.6 ± 0.5	7.4 ± 0.5	7.7 ± 0.2	4.7 ± 0.2	6.5 ± 0.2	5.8 ± 0.3	9.0 ± 0.3	E Asia F	E Europe M
52	9.3 ± 0.6	12.2 ± 0.2	6.2 ± 0.3	8.7 ± 0.3	11.0 ± 0.3	11.9 ± 0.5	7.0 ± 0.5	8.1 ± 0.2	4.9 ± 0.3	6.9 ± 0.2	6.0 ± 0.3	8.9 ± 0.4	E Asia F	E Europe M

Appendix A.3. Challenge Age

The following pages include two tables for each algorithm, one for *Visa* images and another for lower quality *Border* images. The values are Challenge-25 accept rates - the proportion of people of the given age who are judged to have age 25 or over. For an application with a legal age (LA) of 18, these rates would be properly termed false positive rates (FPR) for everyone below 18, and true positive rates for those 18 or over. The vocabulary would change depending on the LA. For this reason we use the generic term "accept rates".

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Table 111. *For algorithm cognitec-000 with Application images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.007 ± 0.007	0.002 ± 0.002	0.000 ± 0.000	0.002 ± 0.002	0.002 ± 0.002	0.008 ± 0.008	0.004 ± 0.004	0.002 ± 0.002	0.000 ± 0.000	0.003 ± 0.002	0.002 ± 0.002	0.004 ± 0.004	W Africa F	E Europe F	0.46
15	0.04 ± 0.02	0.005 ± 0.003	0.003 ± 0.003	0.006 ± 0.004	0.005 ± 0.005	0.03 ± 0.02	0.005 ± 0.005	0.001 ± 0.001	0.000 ± 0.000	0.002 ± 0.002	0.000 ± 0.000	0.009 ± 0.009	E Africa F	E Europe M	0.67
16	0.05 ± 0.02	0.008 ± 0.005	0.000 ± 0.000	0.005 ± 0.004	0.01 ± 0.01	0.06 ± 0.03	0.02 ± 0.01	0.002 ± 0.002	0.003 ± 0.003	0.003 ± 0.003	0.003 ± 0.003	0.01 ± 0.01	W Africa F	E Europe F	0.66
17	0.08 ± 0.03	0.015 ± 0.005	0.006 ± 0.006	0.025 ± 0.009	0.02 ± 0.01	0.09 ± 0.03	0.006 ± 0.006	0.010 ± 0.004	0.000 ± 0.000	0.014 ± 0.007	0.02 ± 0.01	0.04 ± 0.02	W Africa F	E Europe M	0.55
18	0.11 ± 0.02	0.027 ± 0.007	0.02 ± 0.01	0.030 ± 0.008	0.04 ± 0.01	0.14 ± 0.03	0.04 ± 0.01	0.018 ± 0.005	0.004 ± 0.004	0.029 ± 0.008	0.03 ± 0.01	0.05 ± 0.02	W Africa F	E Europe M	0.45
19	0.16 ± 0.03	0.045 ± 0.009	0.03 ± 0.01	0.07 ± 0.01	0.08 ± 0.02	0.21 ± 0.04	0.11 ± 0.02	0.040 ± 0.007	0.009 ± 0.008	0.06 ± 0.01	0.05 ± 0.02	0.08 ± 0.02	W Africa F	E Europe M	0.40
20	0.26 ± 0.03	0.10 ± 0.01	0.04 ± 0.01	0.09 ± 0.01	0.12 ± 0.02	0.24 ± 0.03	0.18 ± 0.03	0.07 ± 0.01	0.03 ± 0.01	0.12 ± 0.02	0.11 ± 0.02	0.12 ± 0.03	E Africa F	E Europe M	0.32
21	0.27 ± 0.03	0.17 ± 0.01	0.06 ± 0.01	0.16 ± 0.02	0.17 ± 0.02	0.36 ± 0.04	0.23 ± 0.03	0.13 ± 0.01	0.06 ± 0.02	0.19 ± 0.02	0.17 ± 0.03	0.19 ± 0.03	W Africa F	E Europe M	0.26
22	0.35 ± 0.03	0.24 ± 0.02	0.09 ± 0.01	0.22 ± 0.02	0.27 ± 0.02	0.37 ± 0.04	0.36 ± 0.03	0.22 ± 0.02	0.14 ± 0.03	0.29 ± 0.02	0.25 ± 0.03	0.23 ± 0.04	W Africa F	E Europe F	0.19
23	0.41 ± 0.03	0.33 ± 0.02	0.19 ± 0.02	0.31 ± 0.02	0.37 ± 0.02	0.44 ± 0.03	0.42 ± 0.04	0.31 ± 0.02	0.23 ± 0.03	0.39 ± 0.02	0.37 ± 0.03	0.37 ± 0.03	W Africa F	E Europe F	0.13
24	0.47 ± 0.03	0.42 ± 0.02	0.28 ± 0.02	0.39 ± 0.02	0.45 ± 0.02	0.50 ± 0.03	0.55 ± 0.03	0.41 ± 0.02	0.38 ± 0.03	0.54 ± 0.02	0.49 ± 0.03	0.44 ± 0.03	E Africa M	E Europe F	0.10
25	0.50 ± 0.03	0.53 ± 0.02	0.37 ± 0.02	0.45 ± 0.02	0.55 ± 0.02	0.58 ± 0.03	0.62 ± 0.03	0.53 ± 0.02	0.51 ± 0.03	0.66 ± 0.02	0.60 ± 0.03	0.49 ± 0.03	S Asia M	E Europe F	0.08
26	0.58 ± 0.03	0.62 ± 0.01	0.47 ± 0.02	0.54 ± 0.01	0.65 ± 0.02	0.64 ± 0.03	0.69 ± 0.02	0.67 ± 0.02	0.64 ± 0.03	0.75 ± 0.01	0.70 ± 0.03	0.60 ± 0.03	S Asia M	E Europe F	0.07
27	0.64 ± 0.02	0.70 ± 0.01	0.59 ± 0.02	0.61 ± 0.01	0.71 ± 0.02	0.71 ± 0.03	0.76 ± 0.02	0.75 ± 0.02	0.76 ± 0.02	0.82 ± 0.01	0.82 ± 0.02	0.69 ± 0.02	S Asia M	E Europe F	0.06
28	0.70 ± 0.02	0.79 ± 0.01	0.71 ± 0.02	0.69 ± 0.01	0.78 ± 0.01	0.77 ± 0.02	0.82 ± 0.02	0.83 ± 0.01	0.86 ± 0.02	0.880 ± 0.009	0.87 ± 0.02	0.77 ± 0.02	S Asia M	S Asia F	0.05
29	0.77 ± 0.02	0.842 ± 0.010	0.80 ± 0.01	0.76 ± 0.01	0.83 ± 0.01	0.80 ± 0.02	0.87 ± 0.02	0.90 ± 0.01	0.92 ± 0.02	0.925 ± 0.007	0.90 ± 0.02	0.83 ± 0.02	S Asia M	S Asia F	0.04
30	0.83 ± 0.02	0.896 ± 0.008	0.87 ± 0.01	0.81 ± 0.01	0.89 ± 0.01	0.84 ± 0.02	0.92 ± 0.01	0.933 ± 0.009	0.95 ± 0.01	0.948 ± 0.006	0.93 ± 0.01	0.88 ± 0.02	S Asia M	S Asia F	0.03
31	0.87 ± 0.02	0.933 ± 0.006	0.92 ± 0.01	0.848 ± 0.009	0.92 ± 0.01	0.89 ± 0.02	0.94 ± 0.01	0.960 ± 0.007	0.971 ± 0.008	0.968 ± 0.005	0.96 ± 0.01	0.90 ± 0.02	E Europe M	S Asia F	0.03
32	0.90 ± 0.02	0.952 ± 0.006	0.957 ± 0.008	0.892 ± 0.008	0.947 ± 0.009	0.92 ± 0.01	0.95 ± 0.01	0.973 ± 0.006	0.983 ± 0.007	0.983 ± 0.004	0.980 ± 0.008	0.93 ± 0.01	E Europe M	S Asia F	0.02
33	0.91 ± 0.02	0.972 ± 0.004	0.968 ± 0.007	0.932 ± 0.007	0.965 ± 0.008	0.94 ± 0.01	0.972 ± 0.010	0.987 ± 0.004	0.996 ± 0.004	0.989 ± 0.002	0.987 ± 0.007	0.958 ± 0.010	E Europe M	E Africa F	0.01
34	0.93 ± 0.01	0.982 ± 0.003	0.985 ± 0.005	0.949 ± 0.006	0.974 ± 0.006	0.96 ± 0.01	0.981 ± 0.008	0.993 ± 0.003	0.995 ± 0.004	0.995 ± 0.002	0.993 ± 0.005	0.971 ± 0.009	S Asia M	E Africa F	0.01

Table 112. *For algorithm cognitec-000 with Border images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.11 ± 0.05	0.012 ± 0.004	0.011 ± 0.009	0.04 ± 0.01	0.014 ± 0.009	0.08 ± 0.04	0.07 ± 0.04	0.011 ± 0.004	0.015 ± 0.010	0.022 ± 0.007	0.013 ± 0.008	0.11 ± 0.04	E Africa F	E Europe F	0.51
15	0.17 ± 0.05	0.017 ± 0.005	0.02 ± 0.01	0.05 ± 0.01	0.011 ± 0.007	0.18 ± 0.05	0.15 ± 0.05	0.021 ± 0.005	0.004 ± 0.004	0.05 ± 0.01	0.020 ± 0.009	0.13 ± 0.05	W Africa F	E Europe M	0.55
16	0.28 ± 0.06	0.020 ± 0.004	0.02 ± 0.01	0.08 ± 0.01	0.03 ± 0.01	0.22 ± 0.05	0.16 ± 0.05	0.032 ± 0.006	0.02 ± 0.01	0.07 ± 0.01	0.06 ± 0.02	0.16 ± 0.04	E Africa F	E Europe M	0.51
17	0.27 ± 0.05	0.041 ± 0.006	0.04 ± 0.01	0.10 ± 0.01	0.05 ± 0.01	0.25 ± 0.05	0.28 ± 0.06	0.065 ± 0.008	0.04 ± 0.01	0.12 ± 0.01	0.07 ± 0.02	0.24 ± 0.05	E Africa M	E Europe M	0.43
18	0.40 ± 0.05	0.054 ± 0.006	0.08 ± 0.02	0.15 ± 0.02	0.07 ± 0.01	0.29 ± 0.05	0.36 ± 0.06	0.097 ± 0.008	0.08 ± 0.02	0.18 ± 0.02	0.13 ± 0.02	0.26 ± 0.05	E Africa F	E Asia F	0.38
19	0.46 ± 0.04	0.090 ± 0.007	0.10 ± 0.01	0.20 ± 0.02	0.09 ± 0.01	0.40 ± 0.04	0.44 ± 0.06	0.153 ± 0.009	0.10 ± 0.02	0.28 ± 0.02	0.19 ± 0.02	0.31 ± 0.04	E Africa F	E Asia F	0.35
20	0.50 ± 0.04	0.141 ± 0.008	0.13 ± 0.01	0.24 ± 0.01	0.16 ± 0.02	0.48 ± 0.04	0.51 ± 0.04	0.21 ± 0.01	0.18 ± 0.02	0.37 ± 0.02	0.27 ± 0.02	0.42 ± 0.04	E Africa M	E Europe F	0.28
21	0.57 ± 0.04	0.185 ± 0.008	0.18 ± 0.01	0.31 ± 0.01	0.20 ± 0.02	0.52 ± 0.04	0.60 ± 0.04	0.31 ± 0.01	0.31 ± 0.03	0.48 ± 0.02	0.34 ± 0.02	0.44 ± 0.04	E Africa M	E Europe F	0.24
22	0.62 ± 0.04	0.255 ± 0.009	0.26 ± 0.02	0.38 ± 0.01	0.27 ± 0.02	0.59 ± 0.03	0.66 ± 0.04	0.41 ± 0.01	0.38 ± 0.03	0.59 ± 0.02	0.45 ± 0.03	0.53 ± 0.04	E Africa M	E Asia F	0.19
23	0.67 ± 0.03	0.314 ± 0.008	0.33 ± 0.01	0.43 ± 0.01	0.36 ± 0.02	0.62 ± 0.03	0.78 ± 0.03	0.51 ± 0.01	0.54 ± 0.02	0.69 ± 0.01	0.53 ± 0.03	0.59 ± 0.03	E Africa M	E Asia F	0.17
24	0.72 ± 0.03	0.394 ± 0.009	0.42 ± 0.01	0.51 ± 0.01	0.44 ± 0.02	0.70 ± 0.03	0.79 ± 0.03	0.61 ± 0.01	0.64 ± 0.02	0.76 ± 0.01	0.63 ± 0.02	0.66 ± 0.03	E Africa M	E Asia F	0.13
25	0.76 ± 0.03	0.483 ± 0.009	0.51 ± 0.01	0.556 ± 0.010	0.52 ± 0.02	0.76 ± 0.02	0.84 ± 0.02	0.70 ± 0.01	0.74 ± 0.02	0.832 ± 0.009	0.75 ± 0.02	0.72 ± 0.03	E Africa M	E Asia F	0.11
26	0.81 ± 0.02	0.569 ± 0.008	0.57 ± 0.01	0.622 ± 0.009	0.61 ± 0.01	0.79 ± 0.02	0.89 ± 0.02	0.771 ± 0.009	0.82 ± 0.01	0.876 ± 0.008	0.80 ± 0.02	0.78 ± 0.02	E Africa M	E Asia F	0.09
27	0.81 ± 0.02	0.638 ± 0.007	0.68 ± 0.01	0.676 ± 0.009	0.69 ± 0.01	0.83 ± 0.02	0.91 ± 0.02	0.826 ± 0.007	0.88 ± 0.01	0.910 ± 0.006	0.86 ± 0.02	0.84 ± 0.02	E Africa M	E Asia F	0.07
28	0.88 ± 0.02	0.711 ± 0.007	0.75 ± 0.01	0.725 ± 0.007	0.75 ± 0.01	0.85 ± 0.02	0.93 ± 0.01	0.888 ± 0.007	0.930 ± 0.009	0.943 ± 0.004	0.92 ± 0.01	0.87 ± 0.01	S Asia M	E Asia F	0.06
29	0.89 ± 0.02	0.776 ± 0.006	0.825 ± 0.009	0.764 ± 0.007	0.80 ± 0.01	0.89 ± 0.01	0.96 ± 0.01	0.923 ± 0.006	0.955 ± 0.007	0.962 ± 0.003	0.94 ± 0.01	0.91 ± 0.01	S Asia M	S Asia F	0.05
30	0.92 ± 0.02	0.836 ± 0.005	0.870 ± 0.008	0.819 ± 0.006	0.85 ± 0.01	0.91 ± 0.01	0.97 ± 0.01	0.948 ± 0.005	0.974 ± 0.005	0.973 ± 0.003	0.956 ± 0.009	0.93 ± 0.01	E Europe M	S Asia F	0.04
31	0.93 ± 0.01	0.884 ± 0.005	0.908 ± 0.007	0.850 ± 0.006	0.884 ± 0.009	0.93 ± 0.01	0.979 ± 0.008	0.969 ± 0.004	0.986 ± 0.004	0.983 ± 0.002	0.969 ± 0.008	0.947 ± 0.009	E Europe M	S Asia F	0.03
32	0.94 ± 0.01	0.916 ± 0.004	0.946 ± 0.006	0.886 ± 0.005	0.917 ± 0.009	0.95 ± 0.01	0.989 ± 0.006	0.979 ± 0.003	0.992 ± 0.003	0.991 ± 0.001	0.981 ± 0.006	0.961 ± 0.008	E Europe M	S Asia F	0.02
33	0.97 ± 0.01	0.942 ± 0.004	0.964 ± 0.005	0.920 ± 0.005	0.937 ± 0.007	0.961 ± 0.009	0.990 ± 0.006	0.989 ± 0.002	0.995 ± 0.002	0.994 ± 0.001	0.983 ± 0.006	0.974 ± 0.007	E Europe M	S Asia F	0.01
34	0.980 ± 0.009	0.960 ± 0.003	0.977 ± 0.004	0.939 ± 0.004	0.962 ± 0.006	0.971 ± 0.009	0.996 ± 0.004	0.992 ± 0.002	0.999 ± 0.001	0.996 ± 0.001	0.995 ± 0.004	0.983 ± 0.004	E Europe M	S Asia F	0.01

Table 113. *For algorithm cvut-001 with Application images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.23 ± 0.04	0.028 ± 0.008	0.002 ± 0.002	0.015 ± 0.006	0.02 ± 0.01	0.21 ± 0.05	0.06 ± 0.02	0.010 ± 0.004	0.000 ± 0.000	0.005 ± 0.003	0.009 ± 0.007	0.07 ± 0.03	E Africa F	E Europe M	0.71
15	0.30 ± 0.05	0.05 ± 0.01	0.02 ± 0.01	0.06 ± 0.02	0.04 ± 0.02	0.21 ± 0.05	0.08 ± 0.03	0.016 ± 0.006	0.006 ± 0.006	0.016 ± 0.008	0.010 ± 0.007	0.10 ± 0.04	E Africa F	E Europe M	0.61
16	0.38 ± 0.04	0.08 ± 0.02	0.03 ± 0.02	0.07 ± 0.02	0.06 ± 0.02	0.29 ± 0.05	0.11 ± 0.03	0.024 ± 0.007	0.009 ± 0.009	0.03 ± 0.01	0.01 ± 0.01	0.16 ± 0.05	E Africa F	E Europe M	0.58
17	0.46 ± 0.05	0.12 ± 0.02	0.04 ± 0.02	0.11 ± 0.02	0.07 ± 0.03	0.34 ± 0.05	0.17 ± 0.04	0.05 ± 0.01	0.03 ± 0.01	0.07 ± 0.02	0.05 ± 0.02	0.27 ± 0.05	E Africa F	E Europe M	0.50
18	0.50 ± 0.04	0.13 ± 0.01	0.05 ± 0.02	0.14 ± 0.02	0.09 ± 0.02	0.37 ± 0.04	0.25 ± 0.04	0.056 ± 0.009	0.06 ± 0.02	0.10 ± 0.01	0.03 ± 0.01	0.28 ± 0.05	E Africa F	S E Asia M	0.47
19	0.59 ± 0.04	0.18 ± 0.02	0.08 ± 0.02	0.21 ± 0.02	0.12 ± 0.02	0.49 ± 0.05	0.35 ± 0.04	0.08 ± 0.01	0.11 ± 0.03	0.19 ± 0.02	0.06 ± 0.02	0.43 ± 0.04	E Africa F	S E Asia M	0.42
20	0.66 ± 0.04	0.23 ± 0.02	0.12 ± 0.02	0.24 ± 0.02	0.18 ± 0.02	0.54 ± 0.04	0.48 ± 0.04	0.12 ± 0.01	0.20 ± 0.03	0.29 ± 0.02	0.09 ± 0.02	0.50 ± 0.05	E Africa F	S E Asia M	0.36
21	0.71 ± 0.03	0.29 ± 0.02	0.17 ± 0.02	0.33 ± 0.02	0.21 ± 0.02	0.59 ± 0.04	0.59 ± 0.04	0.16 ± 0.01	0.29 ± 0.04	0.38 ± 0.02	0.14 ± 0.02	0.58 ± 0.04	E Africa F	S E Asia M	0.31
22	0.75 ± 0.03	0.33 ± 0.02	0.23 ± 0.02	0.40 ± 0.02	0.25 ± 0.02	0.66 ± 0.04	0.71 ± 0.03	0.21 ± 0.02	0.43 ± 0.03	0.49 ± 0.02	0.19 ± 0.02	0.69 ± 0.04	E Africa F	S E Asia M	0.28
23	0.80 ± 0.02	0.42 ± 0.02	0.27 ± 0.02	0.49 ± 0.02	0.30 ± 0.02	0.68 ± 0.03	0.77 ± 0.03	0.29 ± 0.02	0.51 ± 0.04	0.61 ± 0.02	0.25 ± 0.03	0.76 ± 0.03	E Africa F	S E Asia M	0.24
24	0.83 ± 0.02	0.46 ± 0.02	0.34 ± 0.02	0.56 ± 0.02	0.35 ± 0.02	0.76 ± 0.03	0.83 ± 0.02	0.37 ± 0.02	0.62 ± 0.03	0.70 ± 0.02	0.30 ± 0.03	0.83 ± 0.02	E Africa M	S E Asia M	0.21
25	0.84 ± 0.02	0.54 ± 0.02	0.40 ± 0.02	0.60 ± 0.01	0.39 ± 0.02	0.79 ± 0.02	0.86 ± 0.02	0.45 ± 0.02	0.72 ± 0.03	0.78 ± 0.02	0.41 ± 0.03	0.87 ± 0.02	W Africa M	S E Asia F	0.18
26	0.87 ± 0.02	0.60 ± 0.01	0.47 ± 0.02	0.66 ± 0.01	0.46 ± 0.02	0.81 ± 0.02	0.91 ± 0.02	0.55 ± 0.02	0.79 ± 0.02	0.83 ± 0.01	0.49 ± 0.03	0.89 ± 0.02	E Africa M	S E Asia F	0.15
27	0.90 ± 0.02	0.67 ± 0.01	0.55 ± 0.02	0.71 ± 0.01	0.52 ± 0.02	0.85 ± 0.02	0.94 ± 0.01	0.61 ± 0.02	0.87 ± 0.02	0.881 ± 0.010	0.58 ± 0.03	0.91 ± 0.02	E Africa M	S E Asia F	0.12
28	0.90 ± 0.01	0.72 ± 0.01	0.61 ± 0.02	0.76 ± 0.01	0.58 ± 0.02	0.87 ± 0.02	0.96 ± 0.01	0.69 ± 0.02	0.92 ± 0.02	0.908 ± 0.009	0.66 ± 0.03	0.94 ± 0.01	E Africa M	S E Asia F	0.10
29	0.91 ± 0.02	0.77 ± 0.01	0.70 ± 0.02	0.80 ± 0.01	0.64 ± 0.02	0.90 ± 0.01	0.966 ± 0.010	0.77 ± 0.02	0.94 ± 0.01	0.939 ± 0.006	0.72 ± 0.03	0.96 ± 0.01	E Africa M	S E Asia F	0.08
30	0.93 ± 0.01	0.82 ± 0.01	0.76 ± 0.02	0.835 ± 0.010	0.70 ± 0.02	0.92 ± 0.02	0.978 ± 0.009	0.82 ± 0.01	0.96 ± 0.01	0.945 ± 0.006	0.77 ± 0.03	0.963 ± 0.009	E Africa M	S E Asia F	0.06
31	0.95 ± 0.01	0.857 ± 0.009	0.84 ± 0.01	0.850 ± 0.009	0.74 ± 0.02	0.93 ± 0.01	0.980 ± 0.008	0.86 ± 0.01	0.971 ± 0.008	0.965 ± 0.005	0.82 ± 0.02	0.975 ± 0.008	E Africa M	S E Asia F	0.05
32	0.966 ± 0.010	0.885 ± 0.007	0.87 ± 0.01	0.894 ± 0.008	0.78 ± 0.02	0.94 ± 0.01	0.989 ± 0.006	0.90 ± 0.01	0.978 ± 0.008	0.971 ± 0.004	0.87 ± 0.02	0.985 ± 0.006	E Africa M	S E Asia F	0.04
33	0.97 ± 0.01	0.916 ± 0.007	0.89 ± 0.01	0.903 ± 0.008	0.81 ± 0.02	0.96 ± 0.01	0.992 ± 0.005	0.924 ± 0.010	0.990 ± 0.005	0.981 ± 0.003	0.90 ± 0.02	0.987 ± 0.006	E Africa M	S E Asia F	0.03
34	0.97 ± 0.01	0.931 ± 0.007	0.92 ± 0.01	0.930 ± 0.007	0.86 ± 0.01	0.966 ± 0.010	0.994 ± 0.004	0.935 ± 0.009	0.990 ± 0.006	0.984 ± 0.003	0.93 ± 0.02	0.987 ± 0.006	E Africa M	S E Asia F	0.02

Table 114. *For algorithm cvut-001 with Border images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.35 ± 0.07	0.023 ± 0.006	0.04 ± 0.02	0.07 ± 0.02	0.02 ± 0.01	0.41 ± 0.08	0.14 ± 0.05	0.003 ± 0.002	0.010 ± 0.007	0.007 ± 0.004	0.02 ± 0.01	0.11 ± 0.05	W Africa F	E Asia M	0.69
15	0.43 ± 0.07	0.046 ± 0.008	0.05 ± 0.02	0.11 ± 0.02	0.03 ± 0.01	0.46 ± 0.07	0.20 ± 0.06	0.006 ± 0.002	0.02 ± 0.01	0.025 ± 0.009	0.014 ± 0.009	0.17 ± 0.06	W Africa F	E Asia M	0.64
16	0.61 ± 0.06	0.074 ± 0.009	0.08 ± 0.02	0.16 ± 0.02	0.05 ± 0.02	0.50 ± 0.07	0.24 ± 0.06	0.022 ± 0.005	0.02 ± 0.01	0.05 ± 0.01	0.020 ± 0.009	0.24 ± 0.05	E Africa F	S E Asia M	0.60
17	0.57 ± 0.05	0.105 ± 0.010	0.13 ± 0.02	0.22 ± 0.02	0.07 ± 0.02	0.59 ± 0.06	0.34 ± 0.06	0.030 ± 0.005	0.07 ± 0.02	0.12 ± 0.02	0.04 ± 0.01	0.39 ± 0.05	W Africa F	E Asia M	0.51
18	0.68 ± 0.05	0.14 ± 0.01	0.19 ± 0.02	0.29 ± 0.02	0.10 ± 0.02	0.66 ± 0.05	0.52 ± 0.06	0.042 ± 0.005	0.11 ± 0.02	0.19 ± 0.02	0.06 ± 0.01	0.49 ± 0.05	E Africa F	E Asia M	0.47
19	0.74 ± 0.04	0.199 ± 0.010	0.26 ± 0.02	0.35 ± 0.02	0.13 ± 0.02	0.71 ± 0.04	0.63 ± 0.05	0.072 ± 0.007	0.18 ± 0.03	0.30 ± 0.02	0.09 ± 0.02	0.60 ± 0.04	E Africa F	E Asia M	0.41
20	0.78 ± 0.03	0.24 ± 0.01	0.32 ± 0.02	0.43 ± 0.02	0.16 ± 0.02	0.76 ± 0.04	0.70 ± 0.04	0.108 ± 0.008	0.28 ± 0.03	0.42 ± 0.02	0.13 ± 0.02	0.66 ± 0.04	E Africa F	E Asia M	0.36
21	0.80 ± 0.03	0.282 ± 0.010	0.38 ± 0.02	0.51 ± 0.02	0.20 ± 0.02	0.80 ± 0.03	0.78 ± 0.04	0.154 ± 0.009	0.43 ± 0.03	0.54 ± 0.02	0.17 ± 0.02	0.77 ± 0.03	E Africa F	E Asia M	0.31
22	0.86 ± 0.03	0.321 ± 0.009	0.46 ± 0.02	0.56 ± 0.01	0.25 ± 0.02	0.84 ± 0.02	0.84 ± 0.03	0.22 ± 0.01	0.49 ± 0.03	0.64 ± 0.01	0.25 ± 0.02	0.81 ± 0.03	E Africa F	E Asia M	0.27
23	0.89 ± 0.02	0.369 ± 0.009	0.55 ± 0.02	0.60 ± 0.01	0.32 ± 0.02	0.86 ± 0.02	0.87 ± 0.02	0.27 ± 0.01	0.60 ± 0.02	0.71 ± 0.01	0.31 ± 0.02	0.86 ± 0.02	E Africa F	E Asia M	0.23
24	0.90 ± 0.02	0.434 ± 0.009	0.60 ± 0.01	0.66 ± 0.01	0.38 ± 0.02	0.90 ± 0.02	0.91 ± 0.02	0.34 ± 0.01	0.72 ± 0.02	0.77 ± 0.01	0.37 ± 0.02	0.88 ± 0.02	E Africa M	E Asia M	0.20
25	0.91 ± 0.02	0.489 ± 0.009	0.68 ± 0.01	0.686 ± 0.010	0.45 ± 0.02	0.91 ± 0.01	0.93 ± 0.02	0.42 ± 0.01	0.77 ± 0.02	0.825 ± 0.010	0.46 ± 0.03	0.91 ± 0.02	E Africa M	E Asia M	0.17
26	0.91 ± 0.02	0.535 ± 0.008	0.72 ± 0.01	0.722 ± 0.010	0.49 ± 0.01	0.91 ± 0.01	0.95 ± 0.01	0.47 ± 0.01	0.82 ± 0.02	0.861 ± 0.007	0.52 ± 0.02	0.93 ± 0.01	E Africa M	E Asia M	0.15
27	0.93 ± 0.01	0.579 ± 0.008	0.773 ± 0.009	0.752 ± 0.008	0.56 ± 0.02	0.93 ± 0.01	0.96 ± 0.01	0.53 ± 0.01	0.87 ± 0.01	0.890 ± 0.006	0.58 ± 0.02	0.953 ± 0.010	E Africa M	E Asia M	0.13
28	0.94 ± 0.01	0.629 ± 0.007	0.817 ± 0.009	0.782 ± 0.007	0.60 ± 0.02	0.93 ± 0.01	0.96 ± 0.01	0.61 ± 0.01	0.903 ± 0.010	0.913 ± 0.006	0.66 ± 0.02	0.957 ± 0.009	E Africa M	S E Asia F	0.10
29	0.95 ± 0.01	0.679 ± 0.007	0.855 ± 0.008	0.806 ± 0.006	0.64 ± 0.01	0.947 ± 0.010	0.970 ± 0.010	0.663 ± 0.010	0.912 ± 0.009	0.925 ± 0.005	0.71 ± 0.02	0.955 ± 0.009	E Africa M	S E Asia F	0.09
30	0.94 ± 0.01	0.716 ± 0.007	0.884 ± 0.007	0.838 ± 0.006	0.70 ± 0.01	0.95 ± 0.01	0.970 ± 0.009	0.711 ± 0.009	0.946 ± 0.007	0.941 ± 0.004	0.76 ± 0.02	0.960 ± 0.008	E Africa M	S E Asia F	0.07
31	0.96 ± 0.01	0.753 ± 0.006	0.913 ± 0.006	0.867 ± 0.006	0.72 ± 0.01	0.964 ± 0.008	0.978 ± 0.009	0.765 ± 0.009	0.951 ± 0.006	0.955 ± 0.003	0.79 ± 0.02	0.971 ± 0.007	E Africa M	S E Asia F	0.06
32	0.97 ± 0.01	0.783 ± 0.006	0.929 ± 0.006	0.884 ± 0.005	0.76 ± 0.01	0.957 ± 0.009	0.978 ± 0.008	0.805 ± 0.008	0.959 ± 0.007	0.961 ± 0.003	0.83 ± 0.02	0.971 ± 0.007	E Africa M	S E Asia F	0.05
33	0.96 ± 0.01	0.816 ± 0.006	0.937 ± 0.006	0.902 ± 0.005	0.80 ± 0.01	0.961 ± 0.010	0.983 ± 0.008	0.845 ± 0.007	0.967 ± 0.006	0.967 ± 0.003	0.86 ± 0.02	0.977 ± 0.006	E Africa M	S E Asia F	0.04
34	0.976 ± 0.010	0.844 ± 0.005	0.948 ± 0.006	0.917 ± 0.005	0.83 ± 0.01	0.969 ± 0.009	0.982 ± 0.008	0.872 ± 0.007	0.971 ± 0.005	0.972 ± 0.002	0.89 ± 0.02	0.982 ± 0.005	W Africa M	S E Asia F	0.04

Table 115. *For algorithm cvut-002 with Application images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.05 ± 0.02	0.003 ± 0.002	0.000 ± 0.000	0.004 ± 0.003	0.011 ± 0.009	0.06 ± 0.03	0.013 ± 0.010	0.001 ± 0.001	0.000 ± 0.000	0.005 ± 0.003	0.000 ± 0.000	0.009 ± 0.009	W Africa F	E Europe F	0.74
15	0.05 ± 0.02	0.007 ± 0.004	0.008 ± 0.008	0.021 ± 0.009	0.02 ± 0.01	0.07 ± 0.03	0.02 ± 0.01	0.001 ± 0.001	0.000 ± 0.000	0.003 ± 0.003	0.002 ± 0.002	0.02 ± 0.01	W Africa F	E Europe M	0.63
16	0.12 ± 0.03	0.015 ± 0.006	0.02 ± 0.01	0.019 ± 0.009	0.02 ± 0.01	0.14 ± 0.04	0.04 ± 0.02	0.003 ± 0.002	0.009 ± 0.009	0.013 ± 0.007	0.003 ± 0.003	0.03 ± 0.02	W Africa F	E Asia M	0.62
17	0.17 ± 0.04	0.024 ± 0.007	0.03 ± 0.02	0.05 ± 0.01	0.04 ± 0.02	0.22 ± 0.05	0.05 ± 0.02	0.006 ± 0.003	0.008 ± 0.008	0.04 ± 0.01	0.01 ± 0.01	0.11 ± 0.04	W Africa F	E Asia M	0.55
18	0.19 ± 0.03	0.028 ± 0.007	0.05 ± 0.02	0.08 ± 0.01	0.04 ± 0.01	0.25 ± 0.04	0.09 ± 0.02	0.014 ± 0.005	0.02 ± 0.01	0.07 ± 0.01	0.008 ± 0.006	0.15 ± 0.03	W Africa F	S E Asia M	0.52
19	0.27 ± 0.04	0.046 ± 0.008	0.10 ± 0.03	0.12 ± 0.01	0.08 ± 0.02	0.34 ± 0.04	0.18 ± 0.03	0.020 ± 0.006	0.07 ± 0.02	0.14 ± 0.02	0.03 ± 0.01	0.23 ± 0.04	W Africa F	E Asia M	0.43
20	0.34 ± 0.03	0.08 ± 0.01	0.15 ± 0.02	0.15 ± 0.02	0.10 ± 0.02	0.41 ± 0.04	0.29 ± 0.04	0.040 ± 0.008	0.15 ± 0.03	0.23 ± 0.02	0.06 ± 0.02	0.36 ± 0.04	W Africa F	E Asia M	0.38
21	0.41 ± 0.03	0.11 ± 0.01	0.18 ± 0.02	0.24 ± 0.02	0.13 ± 0.02	0.49 ± 0.04	0.42 ± 0.03	0.07 ± 0.01	0.26 ± 0.03	0.34 ± 0.02	0.10 ± 0.02	0.43 ± 0.04	W Africa F	E Asia M	0.33
22	0.49 ± 0.04	0.12 ± 0.01	0.25 ± 0.02	0.30 ± 0.02	0.15 ± 0.02	0.56 ± 0.04	0.52 ± 0.03	0.10 ± 0.01	0.38 ± 0.03	0.44 ± 0.02	0.14 ± 0.02	0.57 ± 0.04	W Africa M	E Asia M	0.32
23	0.55 ± 0.03	0.19 ± 0.01	0.34 ± 0.02	0.39 ± 0.02	0.21 ± 0.02	0.65 ± 0.03	0.61 ± 0.04	0.17 ± 0.02	0.47 ± 0.04	0.54 ± 0.02	0.21 ± 0.03	0.69 ± 0.03	W Africa M	E Asia M	0.27
24	0.62 ± 0.03	0.24 ± 0.01	0.41 ± 0.02	0.46 ± 0.02	0.26 ± 0.02	0.68 ± 0.03	0.70 ± 0.03	0.23 ± 0.02	0.60 ± 0.03	0.68 ± 0.02	0.29 ± 0.02	0.76 ± 0.03	W Africa M	E Asia M	0.24
25	0.62 ± 0.03	0.30 ± 0.01	0.50 ± 0.02	0.51 ± 0.02	0.32 ± 0.02	0.72 ± 0.03	0.77 ± 0.02	0.33 ± 0.02	0.73 ± 0.03	0.75 ± 0.02	0.40 ± 0.03	0.80 ± 0.02	W Africa M	E Asia F	0.20
26	0.69 ± 0.03	0.36 ± 0.01	0.58 ± 0.02	0.57 ± 0.01	0.40 ± 0.02	0.77 ± 0.02	0.84 ± 0.02	0.42 ± 0.02	0.78 ± 0.02	0.81 ± 0.01	0.48 ± 0.03	0.87 ± 0.02	W Africa M	E Asia F	0.17
27	0.73 ± 0.02	0.44 ± 0.01	0.67 ± 0.02	0.63 ± 0.01	0.46 ± 0.02	0.82 ± 0.02	0.87 ± 0.02	0.51 ± 0.02	0.86 ± 0.02	0.86 ± 0.01	0.59 ± 0.03	0.89 ± 0.02	W Africa M	E Asia F	0.14
28	0.78 ± 0.02	0.52 ± 0.01	0.75 ± 0.02	0.69 ± 0.01	0.55 ± 0.02	0.86 ± 0.02	0.91 ± 0.02	0.61 ± 0.02	0.93 ± 0.01	0.891 ± 0.009	0.67 ± 0.03	0.92 ± 0.01	E Europe M	E Asia F	0.12
29	0.81 ± 0.02	0.60 ± 0.01	0.82 ± 0.01	0.74 ± 0.01	0.61 ± 0.02	0.89 ± 0.02	0.93 ± 0.02	0.72 ± 0.02	0.95 ± 0.01	0.921 ± 0.008	0.72 ± 0.03	0.95 ± 0.01	E Europe M	E Asia F	0.09
30	0.86 ± 0.02	0.67 ± 0.01	0.87 ± 0.01	0.79 ± 0.01	0.69 ± 0.02	0.90 ± 0.02	0.95 ± 0.01	0.77 ± 0.01	0.973 ± 0.008	0.937 ± 0.006	0.80 ± 0.02	0.965 ± 0.009	E Europe M	E Asia F	0.07
31	0.89 ± 0.01	0.73 ± 0.01	0.923 ± 0.010	0.818 ± 0.010	0.73 ± 0.02	0.93 ± 0.01	0.96 ± 0.01	0.83 ± 0.01	0.979 ± 0.008	0.955 ± 0.005	0.84 ± 0.02	0.975 ± 0.008	E Europe M	S E Asia F	0.06
32	0.92 ± 0.01	0.78 ± 0.01	0.938 ± 0.010	0.861 ± 0.009	0.79 ± 0.02	0.94 ± 0.01	0.976 ± 0.009	0.87 ± 0.01	0.983 ± 0.007	0.965 ± 0.004	0.90 ± 0.02	0.978 ± 0.007	E Europe M	E Asia F	0.04
33	0.92 ± 0.01	0.843 ± 0.009	0.950 ± 0.009	0.894 ± 0.008	0.83 ± 0.02	0.97 ± 0.01	0.980 ± 0.008	0.91 ± 0.01	0.996 ± 0.004	0.975 ± 0.004	0.92 ± 0.02	0.990 ± 0.005	E Europe M	S E Asia F	0.04
34	0.94 ± 0.01	0.877 ± 0.009	0.969 ± 0.007	0.918 ± 0.008	0.88 ± 0.01	0.96 ± 0.01	0.988 ± 0.006	0.934 ± 0.009	0.996 ± 0.004	0.980 ± 0.004	0.93 ± 0.02	0.992 ± 0.005	E Europe M	E Asia F	0.03

Table 116. *For algorithm cvut-002 with Border images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.21 ± 0.06	0.037 ± 0.008	0.02 ± 0.01	0.07 ± 0.01	0.06 ± 0.02	0.25 ± 0.07	0.13 ± 0.05	0.010 ± 0.004	0.002 ± 0.002	0.017 ± 0.007	0.02 ± 0.01	0.13 ± 0.05	W Africa F	E Europe M	0.57
15	0.27 ± 0.06	0.056 ± 0.008	0.04 ± 0.02	0.12 ± 0.02	0.08 ± 0.02	0.41 ± 0.07	0.27 ± 0.07	0.024 ± 0.005	0.011 ± 0.009	0.05 ± 0.01	0.04 ± 0.01	0.24 ± 0.06	W Africa F	E Europe M	0.54
16	0.46 ± 0.06	0.10 ± 0.01	0.07 ± 0.02	0.17 ± 0.02	0.12 ± 0.02	0.45 ± 0.07	0.34 ± 0.07	0.047 ± 0.007	0.02 ± 0.01	0.10 ± 0.01	0.06 ± 0.02	0.27 ± 0.06	E Africa F	E Europe M	0.48
17	0.46 ± 0.06	0.15 ± 0.01	0.12 ± 0.02	0.25 ± 0.02	0.17 ± 0.02	0.51 ± 0.06	0.51 ± 0.07	0.084 ± 0.009	0.06 ± 0.02	0.23 ± 0.02	0.12 ± 0.02	0.46 ± 0.06	E Africa M	E Europe M	0.38
18	0.58 ± 0.05	0.22 ± 0.01	0.18 ± 0.02	0.31 ± 0.02	0.25 ± 0.02	0.53 ± 0.05	0.64 ± 0.06	0.14 ± 0.01	0.14 ± 0.02	0.34 ± 0.02	0.19 ± 0.02	0.57 ± 0.05	E Africa M	E Europe M	0.32
19	0.63 ± 0.05	0.28 ± 0.01	0.24 ± 0.02	0.38 ± 0.02	0.32 ± 0.02	0.64 ± 0.04	0.71 ± 0.05	0.206 ± 0.010	0.22 ± 0.03	0.49 ± 0.02	0.30 ± 0.02	0.67 ± 0.04	E Africa M	E Asia M	0.26
20	0.73 ± 0.04	0.35 ± 0.01	0.33 ± 0.02	0.46 ± 0.02	0.41 ± 0.02	0.74 ± 0.04	0.82 ± 0.04	0.30 ± 0.01	0.33 ± 0.03	0.62 ± 0.02	0.41 ± 0.03	0.77 ± 0.03	E Africa M	E Asia M	0.22
21	0.77 ± 0.03	0.41 ± 0.01	0.37 ± 0.02	0.53 ± 0.02	0.47 ± 0.02	0.79 ± 0.03	0.88 ± 0.03	0.41 ± 0.01	0.53 ± 0.03	0.74 ± 0.02	0.52 ± 0.03	0.87 ± 0.03	E Africa M	E Europe F	0.18
22	0.82 ± 0.03	0.485 ± 0.010	0.48 ± 0.02	0.61 ± 0.02	0.56 ± 0.02	0.83 ± 0.03	0.94 ± 0.02	0.51 ± 0.01	0.63 ± 0.03	0.83 ± 0.01	0.60 ± 0.03	0.90 ± 0.02	E Africa M	E Europe F	0.15
23	0.86 ± 0.03	0.535 ± 0.009	0.55 ± 0.02	0.66 ± 0.01	0.63 ± 0.02	0.86 ± 0.02	0.97 ± 0.01	0.60 ± 0.01	0.73 ± 0.02	0.874 ± 0.009	0.68 ± 0.02	0.93 ± 0.02	E Africa M	E Asia F	0.12
24	0.89 ± 0.02	0.607 ± 0.009	0.62 ± 0.01	0.72 ± 0.01	0.70 ± 0.01	0.91 ± 0.02	0.96 ± 0.01	0.69 ± 0.01	0.83 ± 0.02	0.918 ± 0.008	0.77 ± 0.02	0.95 ± 0.01	E Africa M	E Asia F	0.10
25	0.91 ± 0.02	0.672 ± 0.008	0.70 ± 0.01	0.750 ± 0.009	0.75 ± 0.01	0.93 ± 0.01	0.989 ± 0.007	0.772 ± 0.009	0.87 ± 0.01	0.943 ± 0.006	0.84 ± 0.02	0.977 ± 0.008	E Africa M	E Asia F	0.08
26	0.92 ± 0.02	0.722 ± 0.007	0.76 ± 0.01	0.792 ± 0.008	0.79 ± 0.01	0.92 ± 0.01	0.987 ± 0.008	0.828 ± 0.009	0.92 ± 0.01	0.960 ± 0.004	0.89 ± 0.02	0.980 ± 0.007	E Africa M	E Asia F	0.06
27	0.94 ± 0.01	0.765 ± 0.006	0.822 ± 0.009	0.822 ± 0.007	0.84 ± 0.01	0.960 ± 0.009	0.991 ± 0.006	0.871 ± 0.007	0.953 ± 0.008	0.972 ± 0.003	0.92 ± 0.01	0.990 ± 0.005	E Africa M	E Asia F	0.05
28	0.96 ± 0.01	0.814 ± 0.006	0.860 ± 0.008	0.858 ± 0.006	0.88 ± 0.01	0.964 ± 0.008	0.995 ± 0.005	0.912 ± 0.006	0.968 ± 0.006	0.983 ± 0.003	0.94 ± 0.01	0.992 ± 0.004	E Africa M	E Asia F	0.04
29	0.962 ± 0.010	0.854 ± 0.005	0.906 ± 0.007	0.882 ± 0.005	0.894 ± 0.009	0.973 ± 0.008	0.997 ± 0.004	0.942 ± 0.005	0.977 ± 0.005	0.988 ± 0.002	0.956 ± 0.010	0.993 ± 0.004	E Africa M	E Asia F	0.03
30	0.96 ± 0.01	0.888 ± 0.004	0.932 ± 0.006	0.905 ± 0.005	0.921 ± 0.009	0.970 ± 0.008	0.998 ± 0.002	0.952 ± 0.004	0.990 ± 0.003	0.992 ± 0.001	0.976 ± 0.008	0.997 ± 0.002	E Africa M	E Asia F	0.02
31	0.983 ± 0.008	0.919 ± 0.004	0.949 ± 0.005	0.933 ± 0.004	0.938 ± 0.008	0.980 ± 0.007	0.999 ± 0.002	0.972 ± 0.003	0.993 ± 0.003	0.996 ± 0.001	0.977 ± 0.007	0.997 ± 0.002	E Africa M	E Asia F	0.02
32	0.986 ± 0.006	0.938 ± 0.003	0.970 ± 0.004	0.942 ± 0.004	0.952 ± 0.007	0.989 ± 0.005	1.000 ± 0.000	0.983 ± 0.003	0.994 ± 0.002	0.995 ± 0.001	0.984 ± 0.006	1.000 ± 0.000	E Africa M	E Asia F	0.01
33	0.988 ± 0.007	0.954 ± 0.003	0.978 ± 0.004	0.959 ± 0.004	0.964 ± 0.006	0.992 ± 0.005	1.000 ± 0.000	0.987 ± 0.002	0.997 ± 0.002	0.998 ± 0.001	0.991 ± 0.004	0.998 ± 0.002	E Africa M	E Asia F	0.01
34	0.996 ± 0.004	0.968 ± 0.002	0.983 ± 0.004	0.969 ± 0.003	0.972 ± 0.006	0.991 ± 0.005	0.999 ± 0.002	0.992 ± 0.002	0.999 ± 0.001	0.998 ± 0.001	0.994 ± 0.004	0.999 ± 0.002	E Africa M	E Asia F	0.01

Table 117. *For algorithm cvut-003 with Application images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.03 ± 0.02	0.003 ± 0.002	0.000 ± 0.000	0.005 ± 0.003	0.011 ± 0.009	0.07 ± 0.03	0.012 ± 0.008	0.001 ± 0.001	0.000 ± 0.000	0.003 ± 0.002	0.002 ± 0.002	0.009 ± 0.009	W Africa F	E Europe F	0.75
15	0.05 ± 0.02	0.005 ± 0.003	0.010 ± 0.008	0.015 ± 0.008	0.02 ± 0.01	0.09 ± 0.04	0.010 ± 0.008	0.000 ± 0.000	0.000 ± 0.000	0.003 ± 0.003	0.000 ± 0.000	0.01 ± 0.01	W Africa F	E Asia M	0.69
16	0.10 ± 0.03	0.011 ± 0.005	0.02 ± 0.01	0.011 ± 0.006	0.02 ± 0.01	0.15 ± 0.04	0.04 ± 0.02	0.001 ± 0.001	0.003 ± 0.003	0.006 ± 0.004	0.000 ± 0.000	0.02 ± 0.01	W Africa F	S E Asia M	0.70
17	0.15 ± 0.04	0.022 ± 0.007	0.02 ± 0.01	0.03 ± 0.01	0.03 ± 0.02	0.20 ± 0.04	0.03 ± 0.02	0.004 ± 0.003	0.003 ± 0.003	0.03 ± 0.01	0.006 ± 0.006	0.08 ± 0.03	W Africa F	E Europe M	0.60
18	0.14 ± 0.03	0.026 ± 0.007	0.03 ± 0.01	0.053 ± 0.010	0.04 ± 0.01	0.25 ± 0.04	0.10 ± 0.02	0.011 ± 0.004	0.015 ± 0.009	0.030 ± 0.008	0.006 ± 0.006	0.12 ± 0.03	W Africa F	S E Asia M	0.56
19	0.23 ± 0.03	0.043 ± 0.009	0.06 ± 0.02	0.10 ± 0.01	0.08 ± 0.02	0.36 ± 0.04	0.13 ± 0.03	0.015 ± 0.005	0.03 ± 0.01	0.07 ± 0.01	0.022 ± 0.010	0.18 ± 0.04	W Africa F	E Asia M	0.50
20	0.27 ± 0.03	0.069 ± 0.010	0.11 ± 0.02	0.12 ± 0.01	0.11 ± 0.02	0.43 ± 0.04	0.26 ± 0.04	0.029 ± 0.006	0.07 ± 0.02	0.14 ± 0.01	0.05 ± 0.01	0.29 ± 0.04	W Africa F	E Asia M	0.42
21	0.35 ± 0.03	0.11 ± 0.01	0.15 ± 0.02	0.18 ± 0.02	0.14 ± 0.02	0.47 ± 0.04	0.35 ± 0.04	0.049 ± 0.009	0.12 ± 0.02	0.21 ± 0.02	0.08 ± 0.02	0.37 ± 0.04	W Africa F	E Asia M	0.36
22	0.45 ± 0.03	0.13 ± 0.01	0.22 ± 0.02	0.25 ± 0.02	0.17 ± 0.02	0.56 ± 0.04	0.48 ± 0.04	0.10 ± 0.01	0.22 ± 0.03	0.29 ± 0.02	0.11 ± 0.02	0.49 ± 0.04	W Africa F	E Asia M	0.33
23	0.48 ± 0.03	0.21 ± 0.01	0.29 ± 0.02	0.33 ± 0.02	0.23 ± 0.02	0.65 ± 0.03	0.55 ± 0.04	0.16 ± 0.01	0.28 ± 0.03	0.42 ± 0.02	0.18 ± 0.02	0.60 ± 0.04	W Africa F	E Asia M	0.28
24	0.57 ± 0.03	0.26 ± 0.01	0.35 ± 0.02	0.40 ± 0.02	0.31 ± 0.02	0.68 ± 0.03	0.66 ± 0.03	0.23 ± 0.02	0.44 ± 0.03	0.53 ± 0.02	0.25 ± 0.02	0.70 ± 0.03	W Africa M	E Asia M	0.23
25	0.57 ± 0.03	0.32 ± 0.01	0.45 ± 0.02	0.46 ± 0.01	0.36 ± 0.02	0.73 ± 0.03	0.73 ± 0.03	0.33 ± 0.02	0.55 ± 0.03	0.63 ± 0.02	0.37 ± 0.03	0.74 ± 0.02	W Africa M	E Asia F	0.18
26	0.64 ± 0.03	0.39 ± 0.01	0.51 ± 0.02	0.52 ± 0.01	0.46 ± 0.02	0.78 ± 0.02	0.80 ± 0.02	0.43 ± 0.02	0.63 ± 0.03	0.70 ± 0.02	0.45 ± 0.03	0.83 ± 0.02	W Africa M	E Asia F	0.15
27	0.69 ± 0.03	0.48 ± 0.01	0.62 ± 0.02	0.58 ± 0.01	0.53 ± 0.02	0.82 ± 0.02	0.83 ± 0.02	0.53 ± 0.02	0.77 ± 0.02	0.77 ± 0.01	0.58 ± 0.03	0.87 ± 0.02	W Africa M	E Asia F	0.12
28	0.74 ± 0.02	0.56 ± 0.01	0.70 ± 0.02	0.64 ± 0.01	0.60 ± 0.02	0.86 ± 0.02	0.89 ± 0.02	0.64 ± 0.02	0.84 ± 0.02	0.83 ± 0.01	0.67 ± 0.03	0.90 ± 0.02	W Africa M	E Asia F	0.10
29	0.78 ± 0.02	0.65 ± 0.01	0.78 ± 0.01	0.71 ± 0.01	0.67 ± 0.02	0.89 ± 0.02	0.91 ± 0.02	0.75 ± 0.02	0.89 ± 0.02	0.874 ± 0.009	0.70 ± 0.03	0.94 ± 0.01	W Africa M	E Asia F	0.07
30	0.82 ± 0.02	0.72 ± 0.01	0.83 ± 0.01	0.76 ± 0.01	0.74 ± 0.02	0.91 ± 0.02	0.94 ± 0.01	0.81 ± 0.01	0.94 ± 0.01	0.901 ± 0.007	0.80 ± 0.02	0.96 ± 0.01	W Africa M	E Asia F	0.06
31	0.88 ± 0.02	0.78 ± 0.01	0.90 ± 0.01	0.79 ± 0.01	0.79 ± 0.02	0.93 ± 0.01	0.95 ± 0.01	0.87 ± 0.01	0.966 ± 0.008	0.928 ± 0.007	0.85 ± 0.02	0.974 ± 0.008	W Africa M	E Asia F	0.05
32	0.91 ± 0.02	0.83 ± 0.01	0.93 ± 0.01	0.839 ± 0.010	0.83 ± 0.01	0.95 ± 0.01	0.976 ± 0.008	0.90 ± 0.01	0.973 ± 0.009	0.950 ± 0.006	0.90 ± 0.02	0.976 ± 0.007	W Africa M	E Asia F	0.04
33	0.92 ± 0.01	0.880 ± 0.009	0.946 ± 0.009	0.875 ± 0.008	0.87 ± 0.01	0.970 ± 0.010	0.983 ± 0.008	0.939 ± 0.008	0.988 ± 0.006	0.968 ± 0.004	0.92 ± 0.02	0.985 ± 0.005	E Europe M	S E Asia F	0.03
34	0.93 ± 0.01	0.913 ± 0.008	0.962 ± 0.009	0.901 ± 0.009	0.92 ± 0.01	0.970 ± 0.009	0.988 ± 0.007	0.963 ± 0.006	0.992 ± 0.005	0.974 ± 0.004	0.95 ± 0.01	0.992 ± 0.004	W Africa M	S Asia F	0.02

Table 118. *For algorithm cvut-003 with Border images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.25 ± 0.07	0.020 ± 0.006	0.013 ± 0.009	0.07 ± 0.01	0.05 ± 0.02	0.33 ± 0.07	0.12 ± 0.05	0.005 ± 0.003	0.000 ± 0.000	0.011 ± 0.005	0.015 ± 0.008	0.10 ± 0.05	W Africa F	E Europe M	0.67
15	0.27 ± 0.06	0.032 ± 0.006	0.03 ± 0.02	0.12 ± 0.02	0.05 ± 0.02	0.47 ± 0.07	0.21 ± 0.06	0.008 ± 0.003	0.009 ± 0.007	0.032 ± 0.009	0.012 ± 0.007	0.19 ± 0.06	W Africa F	E Asia M	0.62
16	0.45 ± 0.06	0.061 ± 0.009	0.06 ± 0.02	0.18 ± 0.02	0.10 ± 0.02	0.43 ± 0.06	0.30 ± 0.06	0.016 ± 0.004	0.005 ± 0.005	0.06 ± 0.01	0.04 ± 0.02	0.22 ± 0.05	E Africa F	E Europe M	0.55
17	0.45 ± 0.06	0.11 ± 0.01	0.10 ± 0.02	0.27 ± 0.02	0.14 ± 0.02	0.51 ± 0.06	0.41 ± 0.07	0.033 ± 0.006	0.04 ± 0.01	0.17 ± 0.02	0.07 ± 0.02	0.40 ± 0.05	W Africa F	E Asia M	0.45
18	0.55 ± 0.06	0.16 ± 0.01	0.17 ± 0.02	0.34 ± 0.02	0.22 ± 0.02	0.56 ± 0.05	0.55 ± 0.06	0.070 ± 0.007	0.09 ± 0.02	0.25 ± 0.02	0.12 ± 0.02	0.50 ± 0.05	W Africa F	E Asia M	0.38
19	0.61 ± 0.05	0.23 ± 0.01	0.24 ± 0.02	0.42 ± 0.02	0.29 ± 0.02	0.67 ± 0.04	0.65 ± 0.05	0.106 ± 0.008	0.14 ± 0.02	0.39 ± 0.02	0.20 ± 0.02	0.60 ± 0.05	W Africa F	E Asia M	0.32
20	0.74 ± 0.04	0.30 ± 0.01	0.32 ± 0.02	0.50 ± 0.02	0.39 ± 0.02	0.75 ± 0.03	0.77 ± 0.04	0.171 ± 0.009	0.22 ± 0.02	0.52 ± 0.02	0.28 ± 0.02	0.71 ± 0.04	E Africa M	E Asia M	0.28
21	0.77 ± 0.03	0.37 ± 0.01	0.38 ± 0.02	0.57 ± 0.02	0.46 ± 0.02	0.79 ± 0.03	0.81 ± 0.03	0.27 ± 0.01	0.38 ± 0.03	0.65 ± 0.02	0.39 ± 0.03	0.81 ± 0.03	E Africa M	E Asia M	0.21
22	0.82 ± 0.03	0.450 ± 0.009	0.47 ± 0.02	0.65 ± 0.01	0.54 ± 0.02	0.85 ± 0.02	0.91 ± 0.02	0.37 ± 0.01	0.49 ± 0.02	0.76 ± 0.01	0.49 ± 0.02	0.85 ± 0.03	E Africa M	E Asia M	0.18
23	0.86 ± 0.03	0.511 ± 0.009	0.55 ± 0.02	0.69 ± 0.01	0.64 ± 0.02	0.88 ± 0.02	0.93 ± 0.02	0.47 ± 0.01	0.63 ± 0.02	0.82 ± 0.01	0.58 ± 0.03	0.90 ± 0.02	E Africa M	E Asia M	0.14
24	0.89 ± 0.02	0.587 ± 0.009	0.64 ± 0.01	0.753 ± 0.010	0.71 ± 0.02	0.91 ± 0.02	0.95 ± 0.02	0.58 ± 0.01	0.74 ± 0.02	0.878 ± 0.009	0.68 ± 0.02	0.93 ± 0.02	E Africa M	E Asia M	0.10
25	0.92 ± 0.02	0.663 ± 0.008	0.72 ± 0.01	0.786 ± 0.009	0.77 ± 0.01	0.93 ± 0.01	0.98 ± 0.01	0.67 ± 0.01	0.80 ± 0.02	0.918 ± 0.007	0.78 ± 0.02	0.96 ± 0.01	E Africa M	E Asia F	0.08
26	0.92 ± 0.02	0.718 ± 0.007	0.770 ± 0.010	0.826 ± 0.007	0.81 ± 0.01	0.93 ± 0.01	0.984 ± 0.009	0.756 ± 0.010	0.87 ± 0.01	0.943 ± 0.005	0.84 ± 0.02	0.977 ± 0.008	E Africa M	E Asia F	0.06
27	0.94 ± 0.01	0.765 ± 0.007	0.837 ± 0.008	0.849 ± 0.007	0.85 ± 0.01	0.967 ± 0.009	0.988 ± 0.008	0.813 ± 0.009	0.91 ± 0.01	0.958 ± 0.004	0.88 ± 0.02	0.983 ± 0.007	E Africa M	E Asia F	0.05
28	0.96 ± 0.01	0.820 ± 0.006	0.872 ± 0.008	0.885 ± 0.006	0.894 ± 0.010	0.968 ± 0.008	0.991 ± 0.006	0.868 ± 0.007	0.950 ± 0.008	0.975 ± 0.003	0.92 ± 0.01	0.990 ± 0.005	E Africa M	E Asia F	0.04
29	0.965 ± 0.010	0.860 ± 0.005	0.915 ± 0.007	0.903 ± 0.005	0.908 ± 0.009	0.976 ± 0.007	0.996 ± 0.004	0.911 ± 0.006	0.963 ± 0.006	0.984 ± 0.002	0.94 ± 0.01	0.991 ± 0.004	E Africa M	E Asia F	0.03
30	0.969 ± 0.009	0.895 ± 0.004	0.940 ± 0.006	0.921 ± 0.004	0.938 ± 0.008	0.976 ± 0.007	0.997 ± 0.003	0.937 ± 0.005	0.983 ± 0.004	0.987 ± 0.002	0.963 ± 0.009	0.995 ± 0.003	E Africa M	E Asia F	0.02
31	0.985 ± 0.007	0.925 ± 0.004	0.955 ± 0.005	0.948 ± 0.004	0.950 ± 0.007	0.985 ± 0.006	0.999 ± 0.002	0.959 ± 0.004	0.990 ± 0.003	0.993 ± 0.001	0.970 ± 0.008	0.996 ± 0.002	E Africa M	E Asia F	0.01
32	0.984 ± 0.007	0.944 ± 0.003	0.976 ± 0.004	0.954 ± 0.003	0.960 ± 0.006	0.991 ± 0.005	1.000 ± 0.000	0.974 ± 0.003	0.993 ± 0.003	0.994 ± 0.001	0.981 ± 0.006	0.999 ± 0.002	E Africa M	E Asia F	0.01
33	0.992 ± 0.005	0.960 ± 0.003	0.982 ± 0.003	0.968 ± 0.003	0.968 ± 0.005	0.994 ± 0.004	1.000 ± 0.000	0.983 ± 0.002	0.996 ± 0.002	0.996 ± 0.001	0.988 ± 0.005	0.998 ± 0.002	E Africa M	E Asia F	0.01
34	0.995 ± 0.004	0.973 ± 0.002	0.988 ± 0.003	0.976 ± 0.002	0.977 ± 0.005	0.993 ± 0.005	0.999 ± 0.002	0.988 ± 0.002	0.998 ± 0.001	0.997 ± 0.001	0.993 ± 0.004	0.998 ± 0.002	E Africa M	E Asia F	0.01

Table 119. *For algorithm cyberlink-000 with Application images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.10 ± 0.03	0.026 ± 0.007	0.002 ± 0.002	0.023 ± 0.008	0.06 ± 0.02	0.11 ± 0.04	0.06 ± 0.02	0.013 ± 0.005	0.002 ± 0.002	0.021 ± 0.007	0.03 ± 0.02	0.04 ± 0.02	W Africa F	E Europe M	0.49
15	0.10 ± 0.03	0.06 ± 0.01	0.02 ± 0.01	0.05 ± 0.01	0.10 ± 0.03	0.15 ± 0.04	0.07 ± 0.02	0.022 ± 0.007	0.009 ± 0.009	0.028 ± 0.009	0.05 ± 0.02	0.06 ± 0.03	W Africa F	E Europe M	0.40
16	0.18 ± 0.04	0.10 ± 0.02	0.05 ± 0.02	0.08 ± 0.02	0.10 ± 0.03	0.22 ± 0.05	0.14 ± 0.03	0.033 ± 0.009	0.01 ± 0.01	0.05 ± 0.01	0.08 ± 0.03	0.09 ± 0.04	W Africa F	E Europe M	0.36
17	0.28 ± 0.05	0.14 ± 0.02	0.06 ± 0.02	0.12 ± 0.02	0.17 ± 0.04	0.28 ± 0.05	0.20 ± 0.04	0.09 ± 0.01	0.04 ± 0.02	0.12 ± 0.02	0.11 ± 0.03	0.19 ± 0.04	W Africa F	E Europe M	0.30
18	0.26 ± 0.03	0.20 ± 0.02	0.11 ± 0.02	0.15 ± 0.02	0.22 ± 0.03	0.32 ± 0.04	0.31 ± 0.04	0.13 ± 0.01	0.06 ± 0.02	0.18 ± 0.02	0.21 ± 0.03	0.24 ± 0.04	W Africa F	E Europe M	0.23
19	0.34 ± 0.04	0.26 ± 0.02	0.14 ± 0.03	0.19 ± 0.02	0.30 ± 0.03	0.44 ± 0.04	0.39 ± 0.04	0.22 ± 0.02	0.12 ± 0.03	0.30 ± 0.02	0.29 ± 0.04	0.38 ± 0.05	W Africa F	E Europe M	0.21
20	0.44 ± 0.04	0.34 ± 0.02	0.19 ± 0.03	0.25 ± 0.02	0.38 ± 0.03	0.48 ± 0.04	0.52 ± 0.04	0.35 ± 0.02	0.19 ± 0.03	0.43 ± 0.02	0.43 ± 0.03	0.49 ± 0.04	E Africa M	E Europe F	0.18
21	0.51 ± 0.03	0.42 ± 0.02	0.27 ± 0.03	0.29 ± 0.02	0.43 ± 0.03	0.52 ± 0.04	0.65 ± 0.04	0.48 ± 0.02	0.29 ± 0.04	0.54 ± 0.02	0.54 ± 0.03	0.59 ± 0.04	E Africa M	E Europe F	0.16
22	0.57 ± 0.03	0.50 ± 0.02	0.34 ± 0.02	0.34 ± 0.02	0.53 ± 0.02	0.61 ± 0.04	0.76 ± 0.03	0.59 ± 0.02	0.47 ± 0.04	0.66 ± 0.02	0.64 ± 0.03	0.69 ± 0.04	E Africa M	S Asia F	0.13
23	0.60 ± 0.03	0.60 ± 0.02	0.43 ± 0.02	0.40 ± 0.02	0.59 ± 0.02	0.66 ± 0.03	0.79 ± 0.03	0.70 ± 0.02	0.57 ± 0.04	0.76 ± 0.02	0.72 ± 0.03	0.77 ± 0.03	E Africa M	S Asia F	0.12
24	0.66 ± 0.03	0.66 ± 0.02	0.53 ± 0.02	0.46 ± 0.02	0.69 ± 0.02	0.70 ± 0.03	0.89 ± 0.02	0.79 ± 0.02	0.71 ± 0.03	0.83 ± 0.01	0.81 ± 0.02	0.83 ± 0.02	E Africa M	S Asia F	0.10
25	0.70 ± 0.03	0.73 ± 0.01	0.59 ± 0.02	0.51 ± 0.01	0.74 ± 0.02	0.75 ± 0.02	0.91 ± 0.02	0.85 ± 0.01	0.81 ± 0.02	0.89 ± 0.01	0.87 ± 0.02	0.90 ± 0.02	E Africa M	S Asia F	0.10
26	0.75 ± 0.02	0.78 ± 0.01	0.68 ± 0.02	0.54 ± 0.01	0.79 ± 0.01	0.79 ± 0.02	0.94 ± 0.01	0.911 ± 0.010	0.86 ± 0.02	0.924 ± 0.009	0.91 ± 0.02	0.94 ± 0.01	E Africa M	S Asia F	0.08
27	0.76 ± 0.02	0.82 ± 0.01	0.76 ± 0.01	0.60 ± 0.01	0.83 ± 0.01	0.83 ± 0.02	0.97 ± 0.01	0.948 ± 0.008	0.92 ± 0.01	0.946 ± 0.007	0.95 ± 0.01	0.96 ± 0.01	E Africa M	S Asia F	0.07
28	0.81 ± 0.02	0.869 ± 0.008	0.81 ± 0.01	0.66 ± 0.01	0.87 ± 0.01	0.87 ± 0.02	0.971 ± 0.009	0.966 ± 0.007	0.95 ± 0.01	0.965 ± 0.006	0.972 ± 0.009	0.96 ± 0.01	S E Asia M	S Asia F	0.06
29	0.86 ± 0.02	0.911 ± 0.008	0.88 ± 0.01	0.72 ± 0.01	0.90 ± 0.01	0.89 ± 0.01	0.987 ± 0.006	0.982 ± 0.005	0.971 ± 0.008	0.978 ± 0.004	0.971 ± 0.009	0.985 ± 0.006	E Africa M	S Asia F	0.05
30	0.88 ± 0.02	0.930 ± 0.006	0.91 ± 0.01	0.76 ± 0.01	0.93 ± 0.01	0.90 ± 0.01	0.989 ± 0.006	0.990 ± 0.004	0.983 ± 0.008	0.987 ± 0.003	0.988 ± 0.006	0.984 ± 0.006	E Asia M	S Asia F	0.04
31	0.91 ± 0.02	0.955 ± 0.006	0.939 ± 0.009	0.807 ± 0.009	0.951 ± 0.008	0.92 ± 0.01	0.993 ± 0.005	0.993 ± 0.003	0.988 ± 0.006	0.993 ± 0.002	0.990 ± 0.006	0.992 ± 0.004	E Africa M	S Asia F	0.03
32	0.93 ± 0.01	0.964 ± 0.005	0.958 ± 0.008	0.851 ± 0.010	0.957 ± 0.008	0.94 ± 0.01	0.998 ± 0.002	0.997 ± 0.002	0.996 ± 0.004	0.994 ± 0.002	0.991 ± 0.005	0.994 ± 0.004	E Africa M	S Asia F	0.02
33	0.95 ± 0.01	0.976 ± 0.004	0.969 ± 0.007	0.879 ± 0.009	0.978 ± 0.006	0.95 ± 0.01	0.999 ± 0.002	0.998 ± 0.002	0.999 ± 0.002	0.997 ± 0.001	0.997 ± 0.004	0.997 ± 0.003	E Africa M	S Asia F	0.02
34	0.96 ± 0.01	0.985 ± 0.003	0.976 ± 0.007	0.908 ± 0.009	0.984 ± 0.006	0.96 ± 0.01	0.999 ± 0.002	0.998 ± 0.002	0.997 ± 0.003	0.998 ± 0.001	1.000 ± 0.000	0.996 ± 0.003	S E Asia M	S Asia F	0.01

Table 120. *For algorithm cyberlink-000 with Border images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.36 ± 0.07	0.033 ± 0.007	0.03 ± 0.02	0.09 ± 0.02	0.05 ± 0.02	0.29 ± 0.07	0.36 ± 0.07	0.017 ± 0.005	0.02 ± 0.01	0.034 ± 0.010	0.04 ± 0.02	0.23 ± 0.07	E Africa M	E Asia M	0.57
15	0.34 ± 0.07	0.042 ± 0.007	0.06 ± 0.02	0.12 ± 0.02	0.05 ± 0.02	0.31 ± 0.06	0.46 ± 0.08	0.027 ± 0.006	0.02 ± 0.01	0.07 ± 0.01	0.03 ± 0.01	0.26 ± 0.07	E Africa M	E Europe M	0.55
16	0.43 ± 0.07	0.064 ± 0.008	0.04 ± 0.02	0.14 ± 0.02	0.07 ± 0.02	0.34 ± 0.06	0.49 ± 0.08	0.040 ± 0.007	0.07 ± 0.02	0.11 ± 0.01	0.06 ± 0.02	0.30 ± 0.06	E Africa M	E Asia M	0.50
17	0.47 ± 0.06	0.096 ± 0.010	0.10 ± 0.02	0.17 ± 0.02	0.10 ± 0.02	0.40 ± 0.06	0.48 ± 0.07	0.067 ± 0.007	0.08 ± 0.02	0.18 ± 0.02	0.09 ± 0.02	0.44 ± 0.06	E Africa M	E Asia M	0.42
18	0.46 ± 0.05	0.125 ± 0.009	0.12 ± 0.02	0.22 ± 0.02	0.14 ± 0.02	0.45 ± 0.05	0.56 ± 0.05	0.100 ± 0.008	0.19 ± 0.03	0.27 ± 0.02	0.14 ± 0.02	0.48 ± 0.05	E Africa M	E Asia M	0.35
19	0.47 ± 0.05	0.164 ± 0.009	0.17 ± 0.02	0.25 ± 0.02	0.18 ± 0.02	0.48 ± 0.04	0.66 ± 0.05	0.146 ± 0.009	0.23 ± 0.03	0.36 ± 0.02	0.21 ± 0.02	0.55 ± 0.05	E Africa M	E Asia M	0.31
20	0.57 ± 0.04	0.206 ± 0.009	0.22 ± 0.02	0.27 ± 0.02	0.23 ± 0.02	0.54 ± 0.04	0.74 ± 0.04	0.21 ± 0.01	0.30 ± 0.03	0.49 ± 0.02	0.28 ± 0.03	0.62 ± 0.04	E Africa M	E Asia F	0.28
21	0.59 ± 0.04	0.264 ± 0.010	0.28 ± 0.02	0.31 ± 0.01	0.29 ± 0.02	0.58 ± 0.04	0.78 ± 0.03	0.30 ± 0.01	0.44 ± 0.03	0.58 ± 0.02	0.35 ± 0.02	0.72 ± 0.03	E Africa M	E Asia F	0.23
22	0.65 ± 0.04	0.313 ± 0.008	0.34 ± 0.02	0.36 ± 0.01	0.35 ± 0.02	0.68 ± 0.03	0.87 ± 0.03	0.38 ± 0.01	0.54 ± 0.03	0.67 ± 0.02	0.45 ± 0.03	0.76 ± 0.03	E Africa M	E Asia F	0.21
23	0.66 ± 0.03	0.368 ± 0.010	0.42 ± 0.02	0.39 ± 0.01	0.43 ± 0.02	0.71 ± 0.03	0.88 ± 0.03	0.48 ± 0.01	0.65 ± 0.02	0.75 ± 0.01	0.55 ± 0.03	0.84 ± 0.02	E Africa M	E Asia F	0.18
24	0.72 ± 0.03	0.439 ± 0.008	0.49 ± 0.01	0.46 ± 0.01	0.49 ± 0.02	0.73 ± 0.02	0.91 ± 0.02	0.57 ± 0.01	0.76 ± 0.02	0.831 ± 0.010	0.64 ± 0.02	0.85 ± 0.02	E Africa M	E Asia F	0.15
25	0.74 ± 0.02	0.513 ± 0.009	0.57 ± 0.01	0.491 ± 0.010	0.56 ± 0.02	0.78 ± 0.02	0.94 ± 0.02	0.65 ± 0.01	0.80 ± 0.02	0.879 ± 0.008	0.71 ± 0.02	0.89 ± 0.02	E Africa M	S Asia F	0.13
26	0.80 ± 0.02	0.575 ± 0.008	0.63 ± 0.01	0.538 ± 0.009	0.61 ± 0.01	0.79 ± 0.02	0.95 ± 0.01	0.721 ± 0.009	0.86 ± 0.01	0.899 ± 0.007	0.76 ± 0.02	0.92 ± 0.01	E Africa M	S Asia F	0.11
27	0.79 ± 0.02	0.628 ± 0.007	0.71 ± 0.01	0.578 ± 0.009	0.68 ± 0.01	0.83 ± 0.02	0.96 ± 0.01	0.775 ± 0.009	0.91 ± 0.01	0.930 ± 0.005	0.82 ± 0.02	0.94 ± 0.01	E Africa M	S Asia F	0.10
28	0.84 ± 0.02	0.685 ± 0.006	0.77 ± 0.01	0.627 ± 0.008	0.73 ± 0.01	0.84 ± 0.02	0.97 ± 0.01	0.834 ± 0.008	0.942 ± 0.008	0.949 ± 0.004	0.87 ± 0.02	0.958 ± 0.009	E Africa M	S Asia F	0.08
29	0.87 ± 0.02	0.736 ± 0.006	0.821 ± 0.009	0.668 ± 0.007	0.76 ± 0.01	0.88 ± 0.01	0.985 ± 0.007	0.873 ± 0.006	0.962 ± 0.006	0.963 ± 0.003	0.91 ± 0.01	0.965 ± 0.008	E Africa M	S Asia F	0.07
30	0.89 ± 0.02	0.787 ± 0.006	0.860 ± 0.008	0.709 ± 0.007	0.81 ± 0.01	0.90 ± 0.01	0.989 ± 0.007	0.911 ± 0.006	0.975 ± 0.006	0.973 ± 0.003	0.94 ± 0.01	0.973 ± 0.007	E Africa M	S Asia F	0.06
31	0.90 ± 0.02	0.825 ± 0.006	0.899 ± 0.007	0.758 ± 0.007	0.85 ± 0.01	0.91 ± 0.01	0.993 ± 0.005	0.932 ± 0.005	0.985 ± 0.004	0.982 ± 0.002	0.95 ± 0.01	0.982 ± 0.006	E Africa M	S Asia F	0.05
32	0.94 ± 0.01	0.861 ± 0.005	0.926 ± 0.006	0.799 ± 0.007	0.883 ± 0.009	0.93 ± 0.01	0.993 ± 0.005	0.955 ± 0.004	0.992 ± 0.003	0.987 ± 0.002	0.958 ± 0.009	0.981 ± 0.006	E Africa M	S Asia F	0.04
33	0.93 ± 0.01	0.889 ± 0.004	0.940 ± 0.006	0.833 ± 0.006	0.899 ± 0.010	0.94 ± 0.01	0.993 ± 0.005	0.964 ± 0.004	0.991 ± 0.003	0.990 ± 0.001	0.970 ± 0.007	0.991 ± 0.004	E Africa M	S Asia F	0.03
34	0.94 ± 0.01	0.910 ± 0.004	0.955 ± 0.005	0.867 ± 0.006	0.924 ± 0.009	0.95 ± 0.01	0.998 ± 0.003	0.975 ± 0.003	0.996 ± 0.002	0.993 ± 0.001	0.975 ± 0.007	0.994 ± 0.003	E Africa M	S Asia F	0.02

Table 121. *For algorithm cyberlink-001 with Application images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.02 ± 0.01	0.001 ± 0.001	0.000 ± 0.000	0.001 ± 0.001	0.002 ± 0.002	0.03 ± 0.02	0.010 ± 0.008	0.004 ± 0.003	0.000 ± 0.000	0.003 ± 0.002	0.005 ± 0.005	0.000 ± 0.000	W Africa F	E Europe F	0.72
15	0.02 ± 0.01	0.005 ± 0.003	0.010 ± 0.008	0.015 ± 0.008	0.02 ± 0.01	0.04 ± 0.03	0.02 ± 0.01	0.003 ± 0.002	0.006 ± 0.006	0.005 ± 0.004	0.002 ± 0.002	0.01 ± 0.01	W Africa F	S E Asia M	0.46
16	0.05 ± 0.02	0.021 ± 0.008	0.02 ± 0.01	0.022 ± 0.009	0.03 ± 0.01	0.08 ± 0.03	0.04 ± 0.02	0.010 ± 0.005	0.009 ± 0.009	0.015 ± 0.008	0.011 ± 0.008	0.02 ± 0.02	W Africa F	E Europe M	0.39
17	0.10 ± 0.03	0.034 ± 0.009	0.03 ± 0.02	0.03 ± 0.01	0.05 ± 0.02	0.12 ± 0.03	0.04 ± 0.02	0.020 ± 0.006	0.02 ± 0.01	0.03 ± 0.01	0.03 ± 0.02	0.05 ± 0.02	W Africa F	E Europe M	0.34
18	0.12 ± 0.03	0.054 ± 0.010	0.04 ± 0.01	0.06 ± 0.01	0.06 ± 0.02	0.14 ± 0.03	0.09 ± 0.02	0.041 ± 0.008	0.02 ± 0.01	0.06 ± 0.01	0.04 ± 0.01	0.09 ± 0.03	W Africa F	E Europe M	0.30
19	0.18 ± 0.03	0.09 ± 0.01	0.08 ± 0.02	0.09 ± 0.01	0.11 ± 0.02	0.22 ± 0.03	0.15 ± 0.03	0.08 ± 0.01	0.06 ± 0.02	0.12 ± 0.02	0.11 ± 0.02	0.17 ± 0.04	W Africa F	E Europe M	0.23
20	0.23 ± 0.03	0.14 ± 0.01	0.10 ± 0.02	0.14 ± 0.02	0.17 ± 0.02	0.29 ± 0.04	0.24 ± 0.04	0.14 ± 0.02	0.09 ± 0.02	0.23 ± 0.02	0.17 ± 0.02	0.25 ± 0.04	W Africa F	E Europe M	0.21
21	0.29 ± 0.03	0.20 ± 0.02	0.16 ± 0.02	0.16 ± 0.01	0.21 ± 0.02	0.35 ± 0.04	0.35 ± 0.03	0.22 ± 0.02	0.17 ± 0.03	0.32 ± 0.02	0.26 ± 0.03	0.29 ± 0.04	E Africa M	S Asia F	0.17
22	0.36 ± 0.03	0.26 ± 0.02	0.24 ± 0.02	0.22 ± 0.02	0.28 ± 0.02	0.39 ± 0.04	0.49 ± 0.03	0.35 ± 0.02	0.32 ± 0.03	0.44 ± 0.02	0.37 ± 0.03	0.39 ± 0.04	E Africa M	S Asia F	0.14
23	0.39 ± 0.03	0.38 ± 0.02	0.31 ± 0.02	0.29 ± 0.02	0.37 ± 0.02	0.48 ± 0.03	0.56 ± 0.03	0.46 ± 0.02	0.41 ± 0.04	0.59 ± 0.02	0.47 ± 0.03	0.53 ± 0.04	S Asia M	S Asia F	0.13
24	0.45 ± 0.03	0.42 ± 0.02	0.42 ± 0.02	0.36 ± 0.02	0.45 ± 0.02	0.52 ± 0.03	0.68 ± 0.03	0.58 ± 0.02	0.58 ± 0.03	0.71 ± 0.02	0.60 ± 0.03	0.63 ± 0.03	S Asia M	S Asia F	0.13
25	0.52 ± 0.03	0.54 ± 0.02	0.52 ± 0.02	0.41 ± 0.01	0.52 ± 0.02	0.58 ± 0.03	0.76 ± 0.03	0.70 ± 0.02	0.71 ± 0.03	0.79 ± 0.02	0.70 ± 0.03	0.69 ± 0.03	S Asia M	S Asia F	0.11
26	0.57 ± 0.03	0.61 ± 0.01	0.62 ± 0.02	0.45 ± 0.01	0.63 ± 0.02	0.63 ± 0.03	0.82 ± 0.02	0.79 ± 0.02	0.77 ± 0.02	0.85 ± 0.01	0.79 ± 0.02	0.77 ± 0.02	S Asia M	S Asia F	0.10
27	0.62 ± 0.02	0.68 ± 0.01	0.72 ± 0.02	0.52 ± 0.01	0.68 ± 0.02	0.67 ± 0.02	0.86 ± 0.02	0.86 ± 0.01	0.88 ± 0.02	0.896 ± 0.009	0.86 ± 0.02	0.83 ± 0.02	S Asia M	S Asia F	0.09
28	0.68 ± 0.03	0.75 ± 0.01	0.79 ± 0.01	0.58 ± 0.01	0.75 ± 0.02	0.71 ± 0.02	0.89 ± 0.02	0.91 ± 0.01	0.93 ± 0.01	0.929 ± 0.007	0.91 ± 0.02	0.87 ± 0.02	S Asia M	S Asia F	0.08
29	0.75 ± 0.02	0.81 ± 0.01	0.86 ± 0.01	0.66 ± 0.01	0.81 ± 0.01	0.77 ± 0.02	0.94 ± 0.01	0.949 ± 0.008	0.955 ± 0.010	0.956 ± 0.005	0.93 ± 0.01	0.91 ± 0.01	S Asia M	S Asia F	0.07
30	0.78 ± 0.02	0.861 ± 0.008	0.91 ± 0.01	0.71 ± 0.01	0.86 ± 0.01	0.79 ± 0.02	0.96 ± 0.01	0.970 ± 0.007	0.973 ± 0.008	0.972 ± 0.004	0.96 ± 0.01	0.93 ± 0.01	E Europe M	S Asia F	0.06
31	0.80 ± 0.02	0.901 ± 0.009	0.93 ± 0.01	0.75 ± 0.01	0.89 ± 0.01	0.84 ± 0.02	0.969 ± 0.010	0.982 ± 0.005	0.979 ± 0.008	0.981 ± 0.003	0.975 ± 0.009	0.95 ± 0.01	E Asia M	S Asia F	0.05
32	0.85 ± 0.02	0.929 ± 0.007	0.958 ± 0.008	0.80 ± 0.01	0.92 ± 0.01	0.86 ± 0.02	0.985 ± 0.007	0.989 ± 0.004	0.992 ± 0.005	0.988 ± 0.003	0.985 ± 0.007	0.965 ± 0.009	E Europe M	S Asia F	0.04
33	0.87 ± 0.02	0.951 ± 0.006	0.968 ± 0.007	0.84 ± 0.01	0.932 ± 0.010	0.89 ± 0.02	0.987 ± 0.007	0.991 ± 0.004	0.996 ± 0.004	0.994 ± 0.002	0.988 ± 0.007	0.976 ± 0.007	E Europe M	S Asia F	0.03
34	0.90 ± 0.02	0.968 ± 0.005	0.973 ± 0.007	0.874 ± 0.009	0.962 ± 0.008	0.91 ± 0.02	0.988 ± 0.007	0.994 ± 0.002	0.998 ± 0.003	0.995 ± 0.002	0.997 ± 0.003	0.984 ± 0.006	E Europe M	S Asia F	0.02

Table 122. *For algorithm cyberlink-001 with Border images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.06 ± 0.03	0.005 ± 0.002	0.006 ± 0.006	0.012 ± 0.006	0.009 ± 0.007	0.05 ± 0.03	0.06 ± 0.03	0.003 ± 0.002	0.002 ± 0.002	0.008 ± 0.004	0.004 ± 0.004	0.06 ± 0.04	W Africa M	E Europe M	0.58
15	0.10 ± 0.04	0.007 ± 0.003	0.02 ± 0.01	0.024 ± 0.009	0.016 ± 0.009	0.12 ± 0.05	0.21 ± 0.06	0.006 ± 0.003	0.004 ± 0.004	0.019 ± 0.007	0.011 ± 0.007	0.13 ± 0.05	E Africa M	E Europe M	0.64
16	0.15 ± 0.04	0.016 ± 0.004	0.009 ± 0.006	0.04 ± 0.01	0.014 ± 0.008	0.12 ± 0.04	0.18 ± 0.06	0.016 ± 0.004	0.015 ± 0.008	0.031 ± 0.008	0.017 ± 0.009	0.15 ± 0.04	E Africa M	E Europe F	0.56
17	0.15 ± 0.04	0.023 ± 0.005	0.024 ± 0.009	0.05 ± 0.01	0.03 ± 0.01	0.20 ± 0.05	0.26 ± 0.06	0.025 ± 0.005	0.03 ± 0.01	0.08 ± 0.01	0.04 ± 0.01	0.25 ± 0.05	E Africa M	E Asia F	0.51
18	0.23 ± 0.05	0.043 ± 0.005	0.05 ± 0.01	0.10 ± 0.01	0.044 ± 0.010	0.22 ± 0.04	0.33 ± 0.05	0.042 ± 0.006	0.08 ± 0.02	0.14 ± 0.02	0.05 ± 0.01	0.30 ± 0.05	E Africa M	E Asia M	0.44
19	0.26 ± 0.04	0.060 ± 0.006	0.06 ± 0.01	0.11 ± 0.01	0.06 ± 0.01	0.31 ± 0.04	0.45 ± 0.05	0.070 ± 0.006	0.12 ± 0.02	0.21 ± 0.02	0.10 ± 0.02	0.34 ± 0.05	E Africa M	E Asia F	0.42
20	0.32 ± 0.04	0.081 ± 0.006	0.10 ± 0.01	0.14 ± 0.01	0.10 ± 0.01	0.33 ± 0.04	0.56 ± 0.04	0.109 ± 0.008	0.20 ± 0.02	0.34 ± 0.02	0.15 ± 0.02	0.43 ± 0.04	E Africa M	E Asia F	0.37
21	0.39 ± 0.04	0.116 ± 0.007	0.13 ± 0.01	0.17 ± 0.01	0.14 ± 0.01	0.41 ± 0.04	0.63 ± 0.04	0.172 ± 0.009	0.32 ± 0.03	0.45 ± 0.02	0.23 ± 0.02	0.57 ± 0.04	E Africa M	E Asia F	0.34
22	0.45 ± 0.04	0.154 ± 0.007	0.18 ± 0.01	0.21 ± 0.01	0.18 ± 0.01	0.49 ± 0.03	0.73 ± 0.04	0.25 ± 0.01	0.42 ± 0.03	0.55 ± 0.02	0.32 ± 0.02	0.62 ± 0.03	E Africa M	E Asia F	0.30
23	0.46 ± 0.04	0.198 ± 0.008	0.24 ± 0.01	0.25 ± 0.01	0.25 ± 0.02	0.53 ± 0.03	0.76 ± 0.03	0.33 ± 0.01	0.56 ± 0.02	0.65 ± 0.01	0.39 ± 0.03	0.71 ± 0.03	E Africa M	E Asia F	0.26
24	0.56 ± 0.03	0.245 ± 0.007	0.29 ± 0.01	0.31 ± 0.01	0.29 ± 0.02	0.58 ± 0.03	0.85 ± 0.03	0.43 ± 0.01	0.66 ± 0.02	0.74 ± 0.01	0.50 ± 0.03	0.77 ± 0.03	E Africa M	E Asia F	0.24
25	0.59 ± 0.03	0.312 ± 0.008	0.39 ± 0.01	0.346 ± 0.010	0.35 ± 0.02	0.64 ± 0.02	0.87 ± 0.02	0.51 ± 0.01	0.74 ± 0.02	0.801 ± 0.010	0.58 ± 0.02	0.83 ± 0.02	E Africa M	E Asia F	0.21
26	0.66 ± 0.03	0.375 ± 0.008	0.45 ± 0.01	0.40 ± 0.01	0.43 ± 0.02	0.66 ± 0.02	0.92 ± 0.02	0.60 ± 0.01	0.80 ± 0.01	0.844 ± 0.008	0.65 ± 0.02	0.85 ± 0.02	E Africa M	E Asia F	0.18
27	0.66 ± 0.03	0.437 ± 0.007	0.54 ± 0.01	0.443 ± 0.009	0.48 ± 0.02	0.71 ± 0.02	0.92 ± 0.02	0.67 ± 0.01	0.86 ± 0.01	0.885 ± 0.007	0.71 ± 0.02	0.90 ± 0.01	E Africa M	E Asia F	0.16
28	0.72 ± 0.02	0.508 ± 0.007	0.61 ± 0.01	0.493 ± 0.009	0.54 ± 0.01	0.72 ± 0.02	0.94 ± 0.01	0.75 ± 0.01	0.90 ± 0.01	0.911 ± 0.005	0.78 ± 0.02	0.92 ± 0.01	E Africa M	S Asia F	0.13
29	0.76 ± 0.02	0.568 ± 0.007	0.69 ± 0.01	0.546 ± 0.009	0.59 ± 0.01	0.77 ± 0.02	0.96 ± 0.01	0.800 ± 0.009	0.925 ± 0.009	0.929 ± 0.005	0.83 ± 0.02	0.93 ± 0.01	E Africa M	S Asia F	0.11
30	0.79 ± 0.02	0.630 ± 0.007	0.754 ± 0.010	0.591 ± 0.008	0.65 ± 0.02	0.80 ± 0.02	0.977 ± 0.009	0.848 ± 0.007	0.955 ± 0.007	0.945 ± 0.004	0.87 ± 0.01	0.948 ± 0.009	E Africa M	S Asia F	0.10
31	0.81 ± 0.02	0.689 ± 0.006	0.794 ± 0.010	0.645 ± 0.008	0.71 ± 0.01	0.83 ± 0.02	0.984 ± 0.007	0.892 ± 0.006	0.968 ± 0.005	0.961 ± 0.003	0.89 ± 0.01	0.958 ± 0.008	E Africa M	S Asia F	0.08
32	0.86 ± 0.02	0.745 ± 0.006	0.845 ± 0.009	0.695 ± 0.008	0.76 ± 0.01	0.84 ± 0.02	0.984 ± 0.007	0.919 ± 0.006	0.978 ± 0.005	0.969 ± 0.003	0.92 ± 0.01	0.963 ± 0.007	E Africa M	S Asia F	0.07
33	0.87 ± 0.02	0.793 ± 0.005	0.871 ± 0.008	0.737 ± 0.007	0.79 ± 0.01	0.88 ± 0.02	0.988 ± 0.006	0.941 ± 0.004	0.984 ± 0.004	0.974 ± 0.002	0.941 ± 0.010	0.978 ± 0.006	E Africa M	S Asia F	0.06
34	0.87 ± 0.02	0.832 ± 0.005	0.901 ± 0.008	0.781 ± 0.007	0.83 ± 0.01	0.89 ± 0.02	0.994 ± 0.005	0.955 ± 0.004	0.989 ± 0.003	0.980 ± 0.002	0.958 ± 0.009	0.981 ± 0.006	E Africa M	S Asia F	0.05

Table 123. *For algorithm daon-000 with Application images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.05 ± 0.02	0.025 ± 0.008	0.000 ± 0.000	0.026 ± 0.008	0.03 ± 0.02	0.05 ± 0.02	0.05 ± 0.02	0.06 ± 0.01	0.000 ± 0.000	0.040 ± 0.009	0.04 ± 0.02	0.01 ± 0.01	E Asia M	E Europe F	0.37
15	0.07 ± 0.03	0.05 ± 0.01	0.000 ± 0.000	0.06 ± 0.02	0.06 ± 0.02	0.09 ± 0.04	0.08 ± 0.03	0.10 ± 0.01	0.009 ± 0.009	0.06 ± 0.01	0.10 ± 0.03	0.04 ± 0.02	S E Asia M	E Europe F	0.31
16	0.12 ± 0.03	0.08 ± 0.01	0.01 ± 0.01	0.06 ± 0.02	0.08 ± 0.03	0.16 ± 0.04	0.15 ± 0.03	0.12 ± 0.02	0.03 ± 0.01	0.12 ± 0.02	0.13 ± 0.03	0.07 ± 0.03	W Africa F	E Europe F	0.29
17	0.21 ± 0.04	0.10 ± 0.02	0.03 ± 0.02	0.09 ± 0.02	0.13 ± 0.03	0.25 ± 0.05	0.23 ± 0.04	0.17 ± 0.02	0.03 ± 0.01	0.19 ± 0.02	0.16 ± 0.04	0.13 ± 0.04	W Africa F	E Europe M	0.30
18	0.18 ± 0.03	0.11 ± 0.01	0.04 ± 0.02	0.09 ± 0.01	0.11 ± 0.02	0.27 ± 0.04	0.31 ± 0.04	0.19 ± 0.02	0.05 ± 0.02	0.26 ± 0.02	0.19 ± 0.03	0.23 ± 0.04	E Africa M	E Europe F	0.31
19	0.32 ± 0.04	0.15 ± 0.02	0.05 ± 0.02	0.14 ± 0.02	0.15 ± 0.02	0.33 ± 0.04	0.43 ± 0.04	0.25 ± 0.02	0.08 ± 0.02	0.38 ± 0.02	0.26 ± 0.03	0.28 ± 0.04	E Africa M	E Europe F	0.30
20	0.36 ± 0.04	0.19 ± 0.02	0.09 ± 0.02	0.19 ± 0.02	0.20 ± 0.02	0.41 ± 0.04	0.52 ± 0.04	0.30 ± 0.02	0.14 ± 0.03	0.49 ± 0.02	0.30 ± 0.03	0.39 ± 0.04	E Africa M	E Europe F	0.27
21	0.41 ± 0.04	0.24 ± 0.02	0.14 ± 0.02	0.22 ± 0.02	0.24 ± 0.02	0.49 ± 0.04	0.65 ± 0.04	0.35 ± 0.02	0.20 ± 0.03	0.55 ± 0.02	0.38 ± 0.03	0.45 ± 0.04	E Africa M	E Europe F	0.26
22	0.50 ± 0.03	0.31 ± 0.02	0.19 ± 0.02	0.27 ± 0.02	0.32 ± 0.02	0.53 ± 0.04	0.75 ± 0.03	0.43 ± 0.02	0.31 ± 0.04	0.66 ± 0.02	0.41 ± 0.03	0.56 ± 0.04	E Africa M	E Europe F	0.23
23	0.53 ± 0.03	0.36 ± 0.02	0.28 ± 0.02	0.32 ± 0.02	0.38 ± 0.02	0.58 ± 0.03	0.78 ± 0.03	0.51 ± 0.02	0.41 ± 0.04	0.73 ± 0.02	0.51 ± 0.03	0.59 ± 0.03	E Africa M	E Europe F	0.18
24	0.59 ± 0.03	0.43 ± 0.01	0.37 ± 0.02	0.37 ± 0.01	0.44 ± 0.02	0.62 ± 0.03	0.82 ± 0.03	0.56 ± 0.02	0.56 ± 0.03	0.80 ± 0.02	0.59 ± 0.03	0.68 ± 0.03	E Africa M	E Europe F	0.15
25	0.62 ± 0.03	0.50 ± 0.02	0.45 ± 0.02	0.43 ± 0.01	0.52 ± 0.02	0.64 ± 0.03	0.87 ± 0.02	0.64 ± 0.02	0.65 ± 0.03	0.85 ± 0.01	0.66 ± 0.03	0.74 ± 0.03	E Africa M	S Asia F	0.13
26	0.71 ± 0.03	0.55 ± 0.01	0.56 ± 0.02	0.46 ± 0.01	0.59 ± 0.02	0.71 ± 0.03	0.90 ± 0.02	0.72 ± 0.02	0.73 ± 0.03	0.88 ± 0.01	0.71 ± 0.02	0.77 ± 0.02	E Africa M	S Asia F	0.11
27	0.74 ± 0.02	0.62 ± 0.01	0.65 ± 0.02	0.52 ± 0.01	0.64 ± 0.02	0.75 ± 0.02	0.92 ± 0.01	0.78 ± 0.02	0.84 ± 0.02	0.915 ± 0.008	0.79 ± 0.02	0.83 ± 0.02	E Africa M	S Asia F	0.10
28	0.75 ± 0.02	0.67 ± 0.01	0.72 ± 0.02	0.57 ± 0.01	0.69 ± 0.02	0.76 ± 0.02	0.93 ± 0.01	0.83 ± 0.01	0.88 ± 0.02	0.934 ± 0.007	0.85 ± 0.02	0.85 ± 0.02	S Asia M	S Asia F	0.08
29	0.80 ± 0.02	0.74 ± 0.01	0.80 ± 0.01	0.63 ± 0.01	0.77 ± 0.02	0.78 ± 0.02	0.96 ± 0.01	0.87 ± 0.01	0.92 ± 0.01	0.951 ± 0.005	0.88 ± 0.02	0.89 ± 0.01	E Africa M	S Asia F	0.07
30	0.83 ± 0.02	0.78 ± 0.01	0.85 ± 0.01	0.68 ± 0.01	0.81 ± 0.02	0.81 ± 0.02	0.966 ± 0.010	0.91 ± 0.01	0.95 ± 0.01	0.963 ± 0.005	0.92 ± 0.02	0.92 ± 0.01	E Africa M	S Asia F	0.06
31	0.85 ± 0.02	0.817 ± 0.009	0.90 ± 0.01	0.71 ± 0.01	0.83 ± 0.01	0.84 ± 0.02	0.975 ± 0.008	0.943 ± 0.009	0.972 ± 0.008	0.975 ± 0.004	0.93 ± 0.01	0.93 ± 0.01	S Asia M	S Asia F	0.05
32	0.88 ± 0.02	0.861 ± 0.009	0.92 ± 0.01	0.76 ± 0.01	0.87 ± 0.01	0.85 ± 0.02	0.975 ± 0.008	0.961 ± 0.007	0.983 ± 0.007	0.978 ± 0.004	0.96 ± 0.01	0.95 ± 0.01	E Europe M	S Asia F	0.04
33	0.88 ± 0.02	0.892 ± 0.009	0.939 ± 0.010	0.80 ± 0.01	0.90 ± 0.01	0.89 ± 0.02	0.980 ± 0.008	0.970 ± 0.006	0.993 ± 0.004	0.988 ± 0.003	0.97 ± 0.01	0.957 ± 0.010	E Europe M	S Asia F	0.04
34	0.91 ± 0.02	0.913 ± 0.007	0.954 ± 0.009	0.84 ± 0.01	0.92 ± 0.01	0.88 ± 0.02	0.989 ± 0.007	0.981 ± 0.005	0.997 ± 0.003	0.990 ± 0.003	0.980 ± 0.009	0.967 ± 0.010	E Europe M	S Asia F	0.03

Table 124. *For algorithm daon-000 with Border images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.21 ± 0.06	0.035 ± 0.007	0.03 ± 0.01	0.12 ± 0.02	0.04 ± 0.02	0.14 ± 0.05	0.20 ± 0.06	0.10 ± 0.01	0.02 ± 0.01	0.10 ± 0.02	0.10 ± 0.03	0.17 ± 0.06	E Africa F	E Europe M	0.37
15	0.19 ± 0.06	0.062 ± 0.009	0.05 ± 0.02	0.13 ± 0.02	0.06 ± 0.02	0.24 ± 0.06	0.41 ± 0.07	0.15 ± 0.01	0.06 ± 0.02	0.18 ± 0.02	0.13 ± 0.02	0.27 ± 0.07	E Africa M	E Europe F	0.37
16	0.30 ± 0.06	0.083 ± 0.010	0.07 ± 0.02	0.18 ± 0.02	0.09 ± 0.02	0.29 ± 0.06	0.42 ± 0.07	0.21 ± 0.01	0.07 ± 0.02	0.24 ± 0.02	0.18 ± 0.03	0.27 ± 0.06	E Africa M	E Europe F	0.32
17	0.35 ± 0.05	0.10 ± 0.01	0.10 ± 0.02	0.21 ± 0.02	0.11 ± 0.02	0.40 ± 0.06	0.55 ± 0.07	0.28 ± 0.01	0.11 ± 0.03	0.37 ± 0.02	0.24 ± 0.03	0.47 ± 0.06	E Africa M	E Europe F	0.34
18	0.45 ± 0.05	0.129 ± 0.008	0.15 ± 0.02	0.22 ± 0.02	0.13 ± 0.02	0.39 ± 0.05	0.66 ± 0.06	0.31 ± 0.01	0.19 ± 0.03	0.44 ± 0.02	0.28 ± 0.03	0.50 ± 0.05	E Africa M	S E Asia F	0.31
19	0.44 ± 0.05	0.155 ± 0.009	0.18 ± 0.02	0.26 ± 0.02	0.15 ± 0.02	0.50 ± 0.04	0.69 ± 0.05	0.35 ± 0.01	0.24 ± 0.03	0.53 ± 0.02	0.35 ± 0.03	0.57 ± 0.05	E Africa M	S E Asia F	0.29
20	0.54 ± 0.04	0.187 ± 0.008	0.23 ± 0.02	0.28 ± 0.02	0.18 ± 0.02	0.56 ± 0.04	0.74 ± 0.04	0.42 ± 0.01	0.36 ± 0.03	0.62 ± 0.02	0.41 ± 0.03	0.60 ± 0.04	E Africa M	S E Asia F	0.26
21	0.58 ± 0.04	0.226 ± 0.009	0.28 ± 0.02	0.34 ± 0.02	0.21 ± 0.02	0.59 ± 0.04	0.78 ± 0.03	0.48 ± 0.01	0.47 ± 0.03	0.69 ± 0.02	0.48 ± 0.03	0.67 ± 0.04	E Africa M	S E Asia F	0.23
22	0.65 ± 0.04	0.256 ± 0.008	0.33 ± 0.02	0.37 ± 0.01	0.24 ± 0.02	0.64 ± 0.03	0.87 ± 0.03	0.54 ± 0.01	0.52 ± 0.03	0.75 ± 0.01	0.54 ± 0.03	0.70 ± 0.04	E Africa M	S E Asia F	0.22
23	0.67 ± 0.03	0.294 ± 0.009	0.42 ± 0.02	0.41 ± 0.01	0.32 ± 0.02	0.67 ± 0.03	0.88 ± 0.02	0.60 ± 0.01	0.65 ± 0.02	0.80 ± 0.01	0.60 ± 0.02	0.74 ± 0.03	E Africa M	E Asia F	0.19
24	0.70 ± 0.03	0.341 ± 0.009	0.47 ± 0.01	0.47 ± 0.01	0.35 ± 0.02	0.71 ± 0.03	0.90 ± 0.02	0.64 ± 0.01	0.73 ± 0.02	0.853 ± 0.010	0.66 ± 0.02	0.78 ± 0.03	E Africa M	E Asia F	0.17
25	0.75 ± 0.03	0.385 ± 0.008	0.57 ± 0.01	0.48 ± 0.01	0.42 ± 0.02	0.75 ± 0.02	0.92 ± 0.02	0.70 ± 0.01	0.80 ± 0.02	0.880 ± 0.008	0.73 ± 0.02	0.80 ± 0.02	E Africa M	E Asia F	0.15
26	0.75 ± 0.02	0.438 ± 0.007	0.62 ± 0.01	0.531 ± 0.010	0.48 ± 0.01	0.75 ± 0.02	0.95 ± 0.02	0.751 ± 0.010	0.85 ± 0.01	0.904 ± 0.006	0.77 ± 0.02	0.85 ± 0.02	E Africa M	E Asia F	0.14
27	0.79 ± 0.02	0.484 ± 0.007	0.69 ± 0.01	0.567 ± 0.009	0.52 ± 0.02	0.77 ± 0.02	0.95 ± 0.01	0.786 ± 0.009	0.90 ± 0.01	0.923 ± 0.006	0.81 ± 0.02	0.88 ± 0.02	E Africa M	E Asia F	0.12
28	0.81 ± 0.02	0.535 ± 0.008	0.74 ± 0.01	0.604 ± 0.009	0.57 ± 0.02	0.81 ± 0.02	0.95 ± 0.01	0.830 ± 0.008	0.935 ± 0.009	0.940 ± 0.005	0.85 ± 0.02	0.90 ± 0.02	E Africa M	E Asia F	0.11
29	0.83 ± 0.02	0.580 ± 0.007	0.801 ± 0.009	0.639 ± 0.008	0.61 ± 0.01	0.82 ± 0.02	0.95 ± 0.01	0.858 ± 0.007	0.949 ± 0.008	0.949 ± 0.004	0.90 ± 0.01	0.90 ± 0.01	E Africa M	E Asia F	0.09
30	0.86 ± 0.02	0.632 ± 0.007	0.838 ± 0.009	0.674 ± 0.007	0.66 ± 0.01	0.81 ± 0.02	0.96 ± 0.01	0.890 ± 0.006	0.968 ± 0.006	0.965 ± 0.003	0.91 ± 0.01	0.92 ± 0.01	E Europe M	E Asia F	0.08
31	0.87 ± 0.02	0.674 ± 0.006	0.873 ± 0.008	0.712 ± 0.008	0.71 ± 0.01	0.85 ± 0.02	0.977 ± 0.010	0.912 ± 0.006	0.982 ± 0.004	0.969 ± 0.003	0.91 ± 0.01	0.939 ± 0.010	E Europe M	E Asia F	0.07
32	0.89 ± 0.02	0.713 ± 0.007	0.904 ± 0.007	0.745 ± 0.007	0.74 ± 0.01	0.85 ± 0.02	0.977 ± 0.008	0.930 ± 0.005	0.987 ± 0.004	0.977 ± 0.002	0.92 ± 0.01	0.936 ± 0.009	E Europe M	E Asia F	0.06
33	0.89 ± 0.02	0.748 ± 0.006	0.924 ± 0.007	0.776 ± 0.007	0.77 ± 0.01	0.87 ± 0.02	0.985 ± 0.007	0.945 ± 0.004	0.992 ± 0.003	0.982 ± 0.002	0.93 ± 0.01	0.948 ± 0.009	E Europe M	E Asia F	0.06
34	0.89 ± 0.02	0.783 ± 0.006	0.942 ± 0.006	0.806 ± 0.007	0.79 ± 0.01	0.89 ± 0.02	0.986 ± 0.007	0.955 ± 0.004	0.995 ± 0.002	0.986 ± 0.002	0.958 ± 0.009	0.963 ± 0.008	E Europe M	E Asia F	0.05

Table 125. *For algorithm daon-001 with Application images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.02 ± 0.01	0.010 ± 0.005	0.000 ± 0.000	0.005 ± 0.003	0.009 ± 0.007	0.03 ± 0.02	0.03 ± 0.01	0.024 ± 0.007	0.000 ± 0.000	0.008 ± 0.004	0.02 ± 0.01	0.004 ± 0.004	E Africa M	E Europe F	0.48
15	0.03 ± 0.02	0.025 ± 0.008	0.000 ± 0.000	0.018 ± 0.009	0.02 ± 0.01	0.06 ± 0.03	0.03 ± 0.02	0.033 ± 0.010	0.006 ± 0.006	0.018 ± 0.007	0.03 ± 0.01	0.02 ± 0.02	W Africa F	E Europe F	0.34
16	0.07 ± 0.02	0.033 ± 0.009	0.008 ± 0.008	0.023 ± 0.009	0.03 ± 0.02	0.11 ± 0.03	0.07 ± 0.02	0.07 ± 0.01	0.003 ± 0.003	0.04 ± 0.01	0.04 ± 0.02	0.03 ± 0.02	W Africa F	E Europe M	0.39
17	0.14 ± 0.03	0.06 ± 0.01	0.02 ± 0.01	0.04 ± 0.01	0.06 ± 0.02	0.18 ± 0.04	0.13 ± 0.04	0.10 ± 0.01	0.008 ± 0.008	0.09 ± 0.02	0.10 ± 0.03	0.11 ± 0.04	W Africa F	E Europe M	0.35
18	0.12 ± 0.03	0.08 ± 0.01	0.03 ± 0.01	0.05 ± 0.01	0.06 ± 0.02	0.23 ± 0.04	0.21 ± 0.03	0.12 ± 0.01	0.03 ± 0.01	0.17 ± 0.02	0.11 ± 0.02	0.15 ± 0.03	W Africa F	E Europe F	0.34
19	0.24 ± 0.04	0.12 ± 0.01	0.06 ± 0.02	0.09 ± 0.01	0.10 ± 0.02	0.29 ± 0.04	0.33 ± 0.04	0.18 ± 0.01	0.06 ± 0.02	0.28 ± 0.02	0.15 ± 0.02	0.24 ± 0.04	E Africa M	E Europe M	0.32
20	0.31 ± 0.03	0.16 ± 0.01	0.08 ± 0.02	0.13 ± 0.02	0.14 ± 0.02	0.38 ± 0.04	0.49 ± 0.04	0.25 ± 0.02	0.12 ± 0.03	0.41 ± 0.02	0.24 ± 0.03	0.37 ± 0.04	E Africa M	E Europe F	0.31
21	0.39 ± 0.03	0.22 ± 0.02	0.14 ± 0.02	0.17 ± 0.02	0.19 ± 0.02	0.45 ± 0.04	0.61 ± 0.04	0.33 ± 0.02	0.17 ± 0.03	0.51 ± 0.02	0.33 ± 0.03	0.44 ± 0.04	E Africa M	E Europe F	0.28
22	0.48 ± 0.03	0.28 ± 0.02	0.21 ± 0.02	0.22 ± 0.01	0.27 ± 0.02	0.50 ± 0.04	0.73 ± 0.03	0.41 ± 0.02	0.30 ± 0.03	0.63 ± 0.02	0.38 ± 0.03	0.58 ± 0.04	E Africa M	E Europe F	0.24
23	0.52 ± 0.03	0.35 ± 0.02	0.30 ± 0.02	0.29 ± 0.02	0.34 ± 0.02	0.59 ± 0.03	0.78 ± 0.03	0.53 ± 0.02	0.41 ± 0.03	0.74 ± 0.02	0.50 ± 0.03	0.63 ± 0.03	E Africa M	S Asia F	0.20
24	0.58 ± 0.03	0.42 ± 0.02	0.38 ± 0.02	0.35 ± 0.01	0.41 ± 0.02	0.64 ± 0.03	0.85 ± 0.02	0.61 ± 0.02	0.57 ± 0.03	0.82 ± 0.01	0.60 ± 0.03	0.73 ± 0.03	E Africa M	S Asia F	0.17
25	0.64 ± 0.03	0.51 ± 0.02	0.49 ± 0.02	0.41 ± 0.02	0.49 ± 0.02	0.68 ± 0.03	0.90 ± 0.02	0.69 ± 0.02	0.69 ± 0.03	0.88 ± 0.01	0.70 ± 0.03	0.79 ± 0.02	E Africa M	S Asia F	0.14
26	0.71 ± 0.02	0.58 ± 0.01	0.61 ± 0.02	0.47 ± 0.01	0.59 ± 0.02	0.75 ± 0.03	0.93 ± 0.01	0.78 ± 0.02	0.78 ± 0.02	0.916 ± 0.009	0.78 ± 0.02	0.83 ± 0.02	E Africa M	S Asia F	0.11
27	0.76 ± 0.02	0.66 ± 0.01	0.71 ± 0.02	0.54 ± 0.01	0.66 ± 0.02	0.78 ± 0.02	0.95 ± 0.01	0.84 ± 0.01	0.88 ± 0.02	0.939 ± 0.007	0.84 ± 0.02	0.88 ± 0.02	E Africa M	S Asia F	0.10
28	0.80 ± 0.02	0.71 ± 0.01	0.78 ± 0.01	0.60 ± 0.01	0.73 ± 0.02	0.81 ± 0.02	0.96 ± 0.01	0.89 ± 0.01	0.92 ± 0.02	0.958 ± 0.006	0.91 ± 0.02	0.92 ± 0.01	E Africa M	S Asia F	0.08
29	0.85 ± 0.02	0.78 ± 0.01	0.86 ± 0.01	0.67 ± 0.01	0.80 ± 0.01	0.84 ± 0.02	0.979 ± 0.008	0.921 ± 0.009	0.95 ± 0.01	0.973 ± 0.004	0.93 ± 0.01	0.94 ± 0.01	E Africa M	S Asia F	0.06
30	0.88 ± 0.02	0.829 ± 0.010	0.90 ± 0.01	0.72 ± 0.01	0.84 ± 0.01	0.84 ± 0.02	0.984 ± 0.007	0.953 ± 0.008	0.978 ± 0.008	0.983 ± 0.003	0.96 ± 0.01	0.96 ± 0.01	E Africa M	S Asia F	0.05
31	0.89 ± 0.02	0.870 ± 0.009	0.936 ± 0.010	0.77 ± 0.01	0.88 ± 0.01	0.90 ± 0.02	0.985 ± 0.007	0.976 ± 0.005	0.985 ± 0.007	0.989 ± 0.003	0.97 ± 0.01	0.969 ± 0.008	S Asia M	S Asia F	0.04
32	0.92 ± 0.01	0.901 ± 0.007	0.956 ± 0.009	0.823 ± 0.010	0.91 ± 0.01	0.92 ± 0.01	0.991 ± 0.006	0.987 ± 0.004	0.991 ± 0.005	0.991 ± 0.002	0.984 ± 0.008	0.982 ± 0.007	E Europe M	S Asia F	0.03
33	0.93 ± 0.01	0.932 ± 0.007	0.970 ± 0.007	0.859 ± 0.009	0.93 ± 0.01	0.93 ± 0.01	0.995 ± 0.004	0.991 ± 0.004	0.998 ± 0.003	0.995 ± 0.002	0.990 ± 0.006	0.984 ± 0.006	E Europe M	S Asia F	0.02
34	0.95 ± 0.01	0.953 ± 0.005	0.974 ± 0.007	0.895 ± 0.008	0.95 ± 0.01	0.95 ± 0.01	0.998 ± 0.002	0.994 ± 0.003	0.999 ± 0.002	0.997 ± 0.001	0.997 ± 0.004	0.990 ± 0.006	E Europe M	S Asia F	0.02

Table 126. *For algorithm daon-001 with Border images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.14 ± 0.05	0.020 ± 0.006	0.02 ± 0.01	0.05 ± 0.01	0.02 ± 0.01	0.11 ± 0.05	0.12 ± 0.04	0.036 ± 0.008	0.002 ± 0.002	0.031 ± 0.009	0.06 ± 0.02	0.09 ± 0.04	E Africa F	E Europe M	0.45
15	0.16 ± 0.05	0.036 ± 0.007	0.03 ± 0.01	0.08 ± 0.01	0.04 ± 0.01	0.20 ± 0.05	0.29 ± 0.07	0.075 ± 0.009	0.02 ± 0.01	0.08 ± 0.01	0.06 ± 0.02	0.15 ± 0.06	E Africa M	E Europe M	0.45
16	0.27 ± 0.06	0.053 ± 0.007	0.05 ± 0.02	0.12 ± 0.02	0.07 ± 0.02	0.27 ± 0.05	0.32 ± 0.06	0.11 ± 0.01	0.04 ± 0.01	0.14 ± 0.02	0.09 ± 0.02	0.23 ± 0.05	E Africa M	E Europe M	0.39
17	0.30 ± 0.05	0.076 ± 0.008	0.07 ± 0.02	0.15 ± 0.02	0.08 ± 0.02	0.36 ± 0.06	0.49 ± 0.07	0.17 ± 0.01	0.06 ± 0.02	0.25 ± 0.02	0.14 ± 0.02	0.38 ± 0.05	E Africa M	E Europe M	0.39
18	0.40 ± 0.05	0.108 ± 0.009	0.11 ± 0.02	0.17 ± 0.02	0.10 ± 0.01	0.36 ± 0.05	0.56 ± 0.06	0.21 ± 0.01	0.11 ± 0.02	0.33 ± 0.02	0.19 ± 0.02	0.43 ± 0.05	E Africa M	S E Asia F	0.34
19	0.45 ± 0.05	0.146 ± 0.009	0.15 ± 0.02	0.21 ± 0.01	0.14 ± 0.02	0.46 ± 0.04	0.63 ± 0.05	0.27 ± 0.01	0.15 ± 0.02	0.42 ± 0.02	0.24 ± 0.02	0.52 ± 0.05	E Africa M	S E Asia F	0.31
20	0.55 ± 0.04	0.189 ± 0.009	0.20 ± 0.02	0.26 ± 0.02	0.16 ± 0.01	0.57 ± 0.04	0.72 ± 0.04	0.33 ± 0.01	0.24 ± 0.03	0.55 ± 0.02	0.33 ± 0.03	0.56 ± 0.04	E Africa M	S E Asia F	0.28
21	0.59 ± 0.04	0.227 ± 0.008	0.26 ± 0.02	0.30 ± 0.01	0.20 ± 0.02	0.61 ± 0.04	0.77 ± 0.04	0.41 ± 0.01	0.36 ± 0.03	0.65 ± 0.02	0.41 ± 0.03	0.64 ± 0.04	E Africa M	S E Asia F	0.25
22	0.66 ± 0.03	0.265 ± 0.008	0.32 ± 0.02	0.35 ± 0.01	0.24 ± 0.02	0.66 ± 0.03	0.87 ± 0.03	0.48 ± 0.01	0.48 ± 0.03	0.71 ± 0.01	0.49 ± 0.03	0.71 ± 0.03	E Africa M	S E Asia F	0.23
23	0.68 ± 0.03	0.311 ± 0.009	0.40 ± 0.02	0.39 ± 0.01	0.33 ± 0.02	0.69 ± 0.03	0.89 ± 0.02	0.55 ± 0.01	0.60 ± 0.02	0.79 ± 0.01	0.55 ± 0.03	0.77 ± 0.03	E Africa M	E Asia F	0.20
24	0.73 ± 0.03	0.373 ± 0.008	0.48 ± 0.01	0.46 ± 0.01	0.39 ± 0.02	0.72 ± 0.03	0.93 ± 0.02	0.62 ± 0.01	0.72 ± 0.02	0.844 ± 0.009	0.64 ± 0.02	0.80 ± 0.02	E Africa M	E Asia F	0.17
25	0.78 ± 0.03	0.424 ± 0.009	0.59 ± 0.01	0.50 ± 0.01	0.45 ± 0.02	0.78 ± 0.02	0.94 ± 0.02	0.68 ± 0.01	0.79 ± 0.02	0.889 ± 0.007	0.71 ± 0.02	0.83 ± 0.02	E Africa M	E Asia F	0.15
26	0.80 ± 0.02	0.489 ± 0.008	0.64 ± 0.01	0.551 ± 0.009	0.51 ± 0.02	0.78 ± 0.02	0.96 ± 0.01	0.75 ± 0.01	0.86 ± 0.01	0.915 ± 0.007	0.77 ± 0.02	0.87 ± 0.02	E Africa M	E Asia F	0.13
27	0.83 ± 0.02	0.532 ± 0.008	0.72 ± 0.01	0.595 ± 0.009	0.56 ± 0.02	0.82 ± 0.02	0.96 ± 0.01	0.792 ± 0.008	0.90 ± 0.01	0.934 ± 0.006	0.83 ± 0.02	0.92 ± 0.01	E Africa M	E Asia F	0.11
28	0.85 ± 0.02	0.597 ± 0.007	0.785 ± 0.009	0.639 ± 0.009	0.63 ± 0.01	0.84 ± 0.02	0.971 ± 0.009	0.845 ± 0.008	0.946 ± 0.008	0.953 ± 0.004	0.86 ± 0.02	0.93 ± 0.01	E Africa M	E Asia F	0.09
29	0.87 ± 0.02	0.652 ± 0.007	0.842 ± 0.009	0.682 ± 0.008	0.67 ± 0.02	0.87 ± 0.02	0.97 ± 0.01	0.874 ± 0.007	0.958 ± 0.006	0.964 ± 0.003	0.91 ± 0.01	0.940 ± 0.009	E Africa M	E Asia F	0.08
30	0.90 ± 0.02	0.704 ± 0.006	0.882 ± 0.007	0.730 ± 0.008	0.72 ± 0.01	0.86 ± 0.02	0.979 ± 0.009	0.909 ± 0.006	0.976 ± 0.005	0.977 ± 0.002	0.92 ± 0.01	0.953 ± 0.009	E Africa M	E Asia F	0.07
31	0.91 ± 0.02	0.747 ± 0.006	0.914 ± 0.007	0.769 ± 0.007	0.77 ± 0.01	0.90 ± 0.02	0.989 ± 0.007	0.931 ± 0.005	0.990 ± 0.003	0.981 ± 0.002	0.93 ± 0.01	0.964 ± 0.007	E Europe M	E Asia F	0.06
32	0.94 ± 0.01	0.785 ± 0.006	0.944 ± 0.006	0.803 ± 0.007	0.81 ± 0.01	0.92 ± 0.01	0.990 ± 0.005	0.949 ± 0.004	0.991 ± 0.003	0.987 ± 0.002	0.95 ± 0.01	0.967 ± 0.007	E Europe M	E Asia F	0.04
33	0.94 ± 0.01	0.820 ± 0.005	0.959 ± 0.005	0.832 ± 0.007	0.84 ± 0.01	0.92 ± 0.01	0.997 ± 0.003	0.964 ± 0.003	0.996 ± 0.002	0.991 ± 0.001	0.963 ± 0.008	0.980 ± 0.005	E Africa M	E Asia F	0.04
34	0.94 ± 0.01	0.847 ± 0.005	0.969 ± 0.005	0.863 ± 0.006	0.86 ± 0.01	0.93 ± 0.01	0.995 ± 0.005	0.969 ± 0.003	0.998 ± 0.002	0.993 ± 0.001	0.976 ± 0.007	0.989 ± 0.004	E Europe M	E Asia F	0.03

Table 127. *For algorithm dermalog-001 with Application images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.04 ± 0.02	0.05 ± 0.01	0.08 ± 0.02	0.06 ± 0.01	0.09 ± 0.03	0.02 ± 0.01	0.02 ± 0.01	0.017 ± 0.006	0.02 ± 0.01	0.042 ± 0.009	0.02 ± 0.01	0.02 ± 0.01	S E Asia F	E Europe M	0.38
15	0.08 ± 0.03	0.07 ± 0.01	0.14 ± 0.03	0.13 ± 0.02	0.11 ± 0.03	0.02 ± 0.02	0.01 ± 0.01	0.032 ± 0.008	0.04 ± 0.02	0.05 ± 0.01	0.03 ± 0.01	0.01 ± 0.01	E Europe F	E Africa M	0.43
16	0.10 ± 0.03	0.10 ± 0.02	0.21 ± 0.04	0.16 ± 0.02	0.16 ± 0.04	0.06 ± 0.03	0.05 ± 0.02	0.05 ± 0.01	0.04 ± 0.02	0.10 ± 0.02	0.08 ± 0.02	0.04 ± 0.02	E Europe F	W Africa M	0.32
17	0.13 ± 0.04	0.14 ± 0.02	0.31 ± 0.04	0.24 ± 0.03	0.20 ± 0.04	0.07 ± 0.03	0.10 ± 0.03	0.07 ± 0.01	0.04 ± 0.02	0.12 ± 0.02	0.10 ± 0.03	0.09 ± 0.03	E Europe F	E Europe M	0.33
18	0.13 ± 0.03	0.16 ± 0.01	0.27 ± 0.04	0.25 ± 0.02	0.20 ± 0.03	0.12 ± 0.03	0.13 ± 0.03	0.07 ± 0.01	0.05 ± 0.02	0.18 ± 0.02	0.10 ± 0.02	0.14 ± 0.03	E Europe F	E Europe M	0.26
19	0.23 ± 0.03	0.20 ± 0.02	0.41 ± 0.04	0.34 ± 0.02	0.24 ± 0.03	0.17 ± 0.03	0.26 ± 0.03	0.11 ± 0.01	0.11 ± 0.02	0.27 ± 0.02	0.15 ± 0.02	0.24 ± 0.04	E Europe F	E Asia M	0.23
20	0.28 ± 0.03	0.26 ± 0.02	0.43 ± 0.03	0.39 ± 0.02	0.32 ± 0.03	0.18 ± 0.03	0.34 ± 0.04	0.15 ± 0.01	0.17 ± 0.03	0.38 ± 0.02	0.22 ± 0.03	0.28 ± 0.04	E Europe F	E Asia M	0.19
21	0.31 ± 0.03	0.30 ± 0.02	0.51 ± 0.03	0.49 ± 0.02	0.38 ± 0.02	0.22 ± 0.03	0.40 ± 0.04	0.19 ± 0.02	0.20 ± 0.03	0.46 ± 0.02	0.29 ± 0.03	0.39 ± 0.04	E Europe F	E Asia M	0.19
22	0.38 ± 0.03	0.35 ± 0.02	0.59 ± 0.03	0.56 ± 0.02	0.42 ± 0.02	0.27 ± 0.03	0.55 ± 0.03	0.26 ± 0.02	0.33 ± 0.03	0.58 ± 0.02	0.35 ± 0.03	0.49 ± 0.04	E Europe F	E Asia M	0.17
23	0.42 ± 0.03	0.42 ± 0.02	0.67 ± 0.02	0.63 ± 0.02	0.50 ± 0.02	0.30 ± 0.03	0.61 ± 0.03	0.32 ± 0.02	0.40 ± 0.04	0.66 ± 0.02	0.42 ± 0.03	0.59 ± 0.04	E Europe F	W Africa F	0.15
24	0.48 ± 0.03	0.48 ± 0.02	0.73 ± 0.02	0.69 ± 0.01	0.57 ± 0.02	0.33 ± 0.03	0.70 ± 0.03	0.42 ± 0.02	0.50 ± 0.03	0.74 ± 0.02	0.49 ± 0.03	0.66 ± 0.03	S Asia M	W Africa F	0.14
25	0.49 ± 0.03	0.55 ± 0.01	0.77 ± 0.02	0.75 ± 0.01	0.61 ± 0.02	0.38 ± 0.03	0.77 ± 0.02	0.46 ± 0.02	0.58 ± 0.03	0.80 ± 0.01	0.62 ± 0.03	0.69 ± 0.03	S Asia M	W Africa F	0.13
26	0.57 ± 0.03	0.62 ± 0.01	0.81 ± 0.01	0.78 ± 0.01	0.69 ± 0.02	0.45 ± 0.03	0.81 ± 0.02	0.58 ± 0.02	0.67 ± 0.03	0.85 ± 0.01	0.67 ± 0.03	0.75 ± 0.02	S Asia M	W Africa F	0.10
27	0.60 ± 0.03	0.69 ± 0.01	0.87 ± 0.01	0.82 ± 0.01	0.73 ± 0.01	0.49 ± 0.03	0.85 ± 0.02	0.66 ± 0.02	0.80 ± 0.02	0.88 ± 0.01	0.75 ± 0.02	0.80 ± 0.02	S Asia M	W Africa F	0.09
28	0.67 ± 0.02	0.72 ± 0.01	0.90 ± 0.01	0.855 ± 0.009	0.78 ± 0.01	0.54 ± 0.03	0.89 ± 0.02	0.73 ± 0.02	0.84 ± 0.02	0.919 ± 0.008	0.82 ± 0.02	0.85 ± 0.02	S Asia M	W Africa F	0.08
29	0.70 ± 0.02	0.79 ± 0.01	0.922 ± 0.010	0.884 ± 0.008	0.83 ± 0.01	0.61 ± 0.02	0.91 ± 0.02	0.80 ± 0.01	0.85 ± 0.02	0.944 ± 0.006	0.85 ± 0.02	0.87 ± 0.02	S Asia M	W Africa F	0.07
30	0.74 ± 0.02	0.833 ± 0.009	0.931 ± 0.010	0.912 ± 0.007	0.86 ± 0.01	0.65 ± 0.03	0.95 ± 0.01	0.84 ± 0.01	0.92 ± 0.01	0.955 ± 0.005	0.89 ± 0.02	0.90 ± 0.01	S Asia M	W Africa F	0.06
31	0.76 ± 0.03	0.873 ± 0.009	0.950 ± 0.009	0.923 ± 0.007	0.89 ± 0.01	0.69 ± 0.02	0.95 ± 0.01	0.90 ± 0.01	0.93 ± 0.01	0.967 ± 0.005	0.92 ± 0.02	0.93 ± 0.01	S Asia M	W Africa F	0.05
32	0.80 ± 0.02	0.903 ± 0.007	0.970 ± 0.007	0.941 ± 0.006	0.92 ± 0.01	0.74 ± 0.02	0.95 ± 0.01	0.917 ± 0.009	0.96 ± 0.01	0.977 ± 0.004	0.94 ± 0.01	0.94 ± 0.01	S Asia M	W Africa F	0.04
33	0.81 ± 0.02	0.928 ± 0.007	0.978 ± 0.006	0.957 ± 0.006	0.93 ± 0.01	0.78 ± 0.02	0.968 ± 0.010	0.943 ± 0.008	0.978 ± 0.008	0.982 ± 0.003	0.96 ± 0.01	0.961 ± 0.010	S Asia M	W Africa F	0.04
34	0.86 ± 0.02	0.949 ± 0.006	0.981 ± 0.006	0.967 ± 0.005	0.952 ± 0.008	0.81 ± 0.02	0.979 ± 0.008	0.955 ± 0.007	0.981 ± 0.007	0.986 ± 0.003	0.97 ± 0.01	0.969 ± 0.010	S Asia M	W Africa F	0.03

Table 128. *For algorithm dermalog-001 with Border images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.21 ± 0.06	0.16 ± 0.01	0.15 ± 0.03	0.21 ± 0.02	0.19 ± 0.04	0.13 ± 0.05	0.15 ± 0.06	0.064 ± 0.009	0.06 ± 0.02	0.10 ± 0.02	0.07 ± 0.02	0.15 ± 0.06	E Africa F	E Europe M	0.24
15	0.24 ± 0.06	0.20 ± 0.02	0.22 ± 0.03	0.32 ± 0.03	0.22 ± 0.03	0.24 ± 0.06	0.26 ± 0.07	0.10 ± 0.01	0.08 ± 0.02	0.16 ± 0.02	0.10 ± 0.02	0.21 ± 0.06	S Asia F	E Europe M	0.21
16	0.35 ± 0.06	0.27 ± 0.01	0.27 ± 0.03	0.38 ± 0.03	0.34 ± 0.03	0.23 ± 0.05	0.30 ± 0.06	0.15 ± 0.01	0.10 ± 0.02	0.22 ± 0.02	0.15 ± 0.02	0.31 ± 0.06	S Asia F	E Europe M	0.20
17	0.37 ± 0.06	0.34 ± 0.01	0.34 ± 0.03	0.44 ± 0.02	0.37 ± 0.03	0.31 ± 0.06	0.43 ± 0.06	0.22 ± 0.01	0.12 ± 0.03	0.35 ± 0.02	0.22 ± 0.03	0.46 ± 0.05	W Africa M	E Europe M	0.17
18	0.43 ± 0.05	0.42 ± 0.01	0.44 ± 0.03	0.52 ± 0.02	0.45 ± 0.03	0.35 ± 0.04	0.54 ± 0.06	0.30 ± 0.01	0.23 ± 0.03	0.45 ± 0.02	0.32 ± 0.03	0.55 ± 0.05	W Africa M	E Europe M	0.14
19	0.50 ± 0.05	0.49 ± 0.01	0.51 ± 0.02	0.60 ± 0.02	0.50 ± 0.02	0.43 ± 0.05	0.63 ± 0.05	0.38 ± 0.01	0.30 ± 0.03	0.56 ± 0.02	0.38 ± 0.03	0.60 ± 0.05	E Africa M	E Europe M	0.12
20	0.58 ± 0.04	0.57 ± 0.01	0.55 ± 0.02	0.66 ± 0.02	0.58 ± 0.02	0.50 ± 0.04	0.73 ± 0.04	0.47 ± 0.01	0.36 ± 0.03	0.68 ± 0.02	0.49 ± 0.03	0.71 ± 0.04	E Africa M	E Europe M	0.11
21	0.66 ± 0.04	0.63 ± 0.01	0.61 ± 0.02	0.71 ± 0.01	0.62 ± 0.02	0.57 ± 0.04	0.80 ± 0.03	0.56 ± 0.01	0.47 ± 0.03	0.76 ± 0.02	0.60 ± 0.02	0.76 ± 0.03	E Africa M	E Europe M	0.09
22	0.66 ± 0.04	0.689 ± 0.009	0.66 ± 0.02	0.77 ± 0.01	0.69 ± 0.02	0.63 ± 0.03	0.86 ± 0.03	0.64 ± 0.01	0.56 ± 0.03	0.82 ± 0.01	0.67 ± 0.02	0.82 ± 0.03	E Africa M	E Europe M	0.07
23	0.73 ± 0.03	0.738 ± 0.008	0.72 ± 0.01	0.811 ± 0.010	0.75 ± 0.02	0.65 ± 0.03	0.91 ± 0.02	0.72 ± 0.01	0.66 ± 0.02	0.866 ± 0.009	0.72 ± 0.03	0.88 ± 0.02	E Africa M	W Africa F	0.06
24	0.78 ± 0.03	0.780 ± 0.008	0.76 ± 0.01	0.845 ± 0.008	0.80 ± 0.01	0.71 ± 0.03	0.91 ± 0.02	0.77 ± 0.01	0.74 ± 0.02	0.909 ± 0.008	0.78 ± 0.02	0.90 ± 0.02	E Africa M	W Africa F	0.05
25	0.79 ± 0.03	0.829 ± 0.007	0.810 ± 0.009	0.863 ± 0.007	0.84 ± 0.01	0.77 ± 0.02	0.94 ± 0.02	0.842 ± 0.008	0.80 ± 0.02	0.934 ± 0.006	0.84 ± 0.02	0.95 ± 0.01	W Africa M	W Africa F	0.04
26	0.83 ± 0.02	0.864 ± 0.005	0.834 ± 0.009	0.883 ± 0.007	0.87 ± 0.01	0.80 ± 0.02	0.96 ± 0.01	0.874 ± 0.007	0.85 ± 0.01	0.947 ± 0.005	0.88 ± 0.02	0.95 ± 0.01	E Africa M	W Africa F	0.03
27	0.85 ± 0.02	0.888 ± 0.005	0.868 ± 0.008	0.904 ± 0.005	0.897 ± 0.009	0.83 ± 0.02	0.97 ± 0.01	0.901 ± 0.006	0.90 ± 0.01	0.963 ± 0.004	0.91 ± 0.01	0.966 ± 0.008	E Africa M	W Africa F	0.03
28	0.88 ± 0.02	0.915 ± 0.004	0.907 ± 0.007	0.921 ± 0.004	0.914 ± 0.009	0.83 ± 0.02	0.984 ± 0.008	0.928 ± 0.005	0.935 ± 0.009	0.973 ± 0.003	0.94 ± 0.01	0.974 ± 0.008	E Africa M	W Africa F	0.03
29	0.91 ± 0.02	0.932 ± 0.004	0.925 ± 0.006	0.932 ± 0.004	0.932 ± 0.007	0.88 ± 0.01	0.990 ± 0.005	0.951 ± 0.005	0.946 ± 0.008	0.979 ± 0.003	0.94 ± 0.01	0.981 ± 0.006	E Africa M	W Africa F	0.02
30	0.91 ± 0.02	0.951 ± 0.003	0.939 ± 0.006	0.946 ± 0.004	0.949 ± 0.007	0.90 ± 0.01	0.993 ± 0.006	0.964 ± 0.004	0.963 ± 0.006	0.983 ± 0.002	0.962 ± 0.009	0.984 ± 0.005	E Africa M	W Africa F	0.02
31	0.94 ± 0.01	0.963 ± 0.003	0.959 ± 0.005	0.959 ± 0.003	0.959 ± 0.006	0.92 ± 0.01	0.996 ± 0.004	0.975 ± 0.003	0.975 ± 0.005	0.987 ± 0.002	0.974 ± 0.008	0.991 ± 0.004	E Africa M	W Africa F	0.01
32	0.94 ± 0.01	0.971 ± 0.002	0.975 ± 0.004	0.966 ± 0.003	0.963 ± 0.006	0.93 ± 0.01	0.992 ± 0.005	0.982 ± 0.003	0.985 ± 0.004	0.990 ± 0.001	0.980 ± 0.007	0.992 ± 0.004	W Africa M	W Africa F	0.01
33	0.95 ± 0.01	0.979 ± 0.002	0.978 ± 0.004	0.972 ± 0.003	0.969 ± 0.005	0.958 ± 0.010	0.998 ± 0.003	0.986 ± 0.002	0.989 ± 0.004	0.992 ± 0.001	0.984 ± 0.006	0.995 ± 0.003	E Africa M	E Africa F	0.01
34	0.96 ± 0.01	0.984 ± 0.002	0.982 ± 0.003	0.981 ± 0.002	0.982 ± 0.004	0.968 ± 0.010	0.998 ± 0.003	0.990 ± 0.002	0.993 ± 0.003	0.994 ± 0.001	0.991 ± 0.004	0.994 ± 0.003	E Africa M	E Africa F	0.01

Table 129. *For algorithm dermalog-002 with Application images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.04 ± 0.02	0.10 ± 0.01	0.10 ± 0.03	0.08 ± 0.01	0.12 ± 0.03	0.04 ± 0.02	0.010 ± 0.008	0.014 ± 0.005	0.011 ± 0.009	0.021 ± 0.007	0.005 ± 0.005	0.02 ± 0.01	S E Asia F	S E Asia M	0.52
15	0.03 ± 0.02	0.17 ± 0.02	0.20 ± 0.04	0.14 ± 0.02	0.18 ± 0.04	0.05 ± 0.03	0.02 ± 0.01	0.028 ± 0.009	0.02 ± 0.02	0.025 ± 0.010	0.012 ± 0.010	0.009 ± 0.009	E Europe F	W Africa M	0.54
16	0.07 ± 0.02	0.23 ± 0.02	0.24 ± 0.04	0.19 ± 0.03	0.21 ± 0.04	0.10 ± 0.03	0.04 ± 0.02	0.038 ± 0.009	0.04 ± 0.02	0.03 ± 0.01	0.04 ± 0.02	0.03 ± 0.02	E Europe F	W Africa M	0.45
17	0.11 ± 0.03	0.29 ± 0.02	0.31 ± 0.05	0.26 ± 0.03	0.30 ± 0.05	0.14 ± 0.03	0.07 ± 0.03	0.05 ± 0.01	0.06 ± 0.02	0.09 ± 0.02	0.08 ± 0.03	0.05 ± 0.02	E Europe F	W Africa M	0.39
18	0.13 ± 0.03	0.35 ± 0.02	0.39 ± 0.04	0.29 ± 0.02	0.32 ± 0.03	0.14 ± 0.03	0.12 ± 0.03	0.08 ± 0.01	0.11 ± 0.03	0.13 ± 0.02	0.11 ± 0.02	0.11 ± 0.03	E Europe F	E Asia M	0.33
19	0.17 ± 0.03	0.40 ± 0.02	0.45 ± 0.04	0.37 ± 0.02	0.43 ± 0.03	0.18 ± 0.03	0.19 ± 0.03	0.13 ± 0.01	0.15 ± 0.03	0.22 ± 0.02	0.15 ± 0.03	0.17 ± 0.03	E Europe F	E Asia M	0.27
20	0.22 ± 0.03	0.52 ± 0.02	0.53 ± 0.04	0.40 ± 0.02	0.54 ± 0.03	0.26 ± 0.04	0.26 ± 0.04	0.17 ± 0.02	0.23 ± 0.04	0.29 ± 0.02	0.24 ± 0.03	0.20 ± 0.03	S E Asia F	E Asia M	0.24
21	0.24 ± 0.03	0.57 ± 0.02	0.59 ± 0.03	0.48 ± 0.02	0.60 ± 0.02	0.33 ± 0.04	0.32 ± 0.04	0.24 ± 0.02	0.32 ± 0.04	0.38 ± 0.02	0.30 ± 0.03	0.31 ± 0.04	S E Asia F	E Africa F	0.20
22	0.29 ± 0.03	0.64 ± 0.02	0.66 ± 0.03	0.51 ± 0.02	0.64 ± 0.02	0.32 ± 0.04	0.44 ± 0.03	0.29 ± 0.02	0.46 ± 0.04	0.45 ± 0.02	0.34 ± 0.03	0.35 ± 0.04	E Europe F	E Africa F	0.18
23	0.34 ± 0.03	0.71 ± 0.02	0.74 ± 0.02	0.60 ± 0.02	0.71 ± 0.02	0.38 ± 0.03	0.47 ± 0.03	0.40 ± 0.02	0.52 ± 0.03	0.55 ± 0.02	0.41 ± 0.03	0.46 ± 0.03	E Europe F	E Africa F	0.15
24	0.39 ± 0.03	0.76 ± 0.01	0.81 ± 0.02	0.63 ± 0.01	0.77 ± 0.02	0.42 ± 0.03	0.56 ± 0.03	0.46 ± 0.02	0.60 ± 0.03	0.62 ± 0.02	0.50 ± 0.03	0.53 ± 0.03	E Europe F	E Africa F	0.14
25	0.42 ± 0.03	0.81 ± 0.01	0.83 ± 0.02	0.67 ± 0.01	0.79 ± 0.02	0.44 ± 0.03	0.63 ± 0.03	0.55 ± 0.02	0.71 ± 0.03	0.70 ± 0.02	0.57 ± 0.03	0.57 ± 0.03	E Europe F	E Africa F	0.13
26	0.46 ± 0.03	0.850 ± 0.010	0.86 ± 0.01	0.70 ± 0.01	0.83 ± 0.01	0.49 ± 0.03	0.67 ± 0.03	0.61 ± 0.02	0.75 ± 0.02	0.73 ± 0.01	0.62 ± 0.03	0.63 ± 0.03	E Europe F	E Africa F	0.11
27	0.51 ± 0.03	0.886 ± 0.008	0.90 ± 0.01	0.73 ± 0.01	0.86 ± 0.01	0.54 ± 0.03	0.74 ± 0.02	0.70 ± 0.02	0.84 ± 0.02	0.77 ± 0.01	0.73 ± 0.03	0.68 ± 0.02	E Europe F	E Africa F	0.10
28	0.56 ± 0.02	0.914 ± 0.007	0.924 ± 0.009	0.76 ± 0.01	0.89 ± 0.01	0.58 ± 0.02	0.78 ± 0.02	0.76 ± 0.01	0.88 ± 0.02	0.80 ± 0.01	0.79 ± 0.02	0.72 ± 0.02	E Europe F	E Africa F	0.09
29	0.61 ± 0.03	0.937 ± 0.006	0.949 ± 0.008	0.784 ± 0.010	0.91 ± 0.01	0.65 ± 0.03	0.80 ± 0.02	0.82 ± 0.01	0.90 ± 0.02	0.83 ± 0.01	0.82 ± 0.02	0.77 ± 0.02	E Europe F	E Africa F	0.07
30	0.64 ± 0.02	0.953 ± 0.005	0.953 ± 0.008	0.821 ± 0.010	0.936 ± 0.010	0.65 ± 0.02	0.82 ± 0.02	0.86 ± 0.01	0.93 ± 0.01	0.850 ± 0.009	0.86 ± 0.02	0.81 ± 0.02	E Asia F	E Africa F	0.07
31	0.68 ± 0.02	0.955 ± 0.005	0.964 ± 0.008	0.844 ± 0.009	0.950 ± 0.008	0.68 ± 0.02	0.86 ± 0.02	0.90 ± 0.01	0.94 ± 0.01	0.876 ± 0.008	0.88 ± 0.02	0.83 ± 0.02	E Europe F	E Africa F	0.06
32	0.71 ± 0.02	0.971 ± 0.004	0.975 ± 0.007	0.869 ± 0.008	0.961 ± 0.007	0.75 ± 0.02	0.88 ± 0.02	0.912 ± 0.010	0.971 ± 0.009	0.890 ± 0.008	0.92 ± 0.02	0.85 ± 0.02	E Europe F	E Africa F	0.05
33	0.73 ± 0.02	0.979 ± 0.004	0.980 ± 0.006	0.893 ± 0.008	0.964 ± 0.008	0.76 ± 0.02	0.90 ± 0.02	0.937 ± 0.009	0.978 ± 0.008	0.909 ± 0.007	0.95 ± 0.01	0.89 ± 0.02	E Europe F	E Africa F	0.05
34	0.77 ± 0.03	0.985 ± 0.003	0.985 ± 0.006	0.911 ± 0.008	0.979 ± 0.006	0.80 ± 0.02	0.92 ± 0.02	0.951 ± 0.008	0.985 ± 0.007	0.921 ± 0.007	0.95 ± 0.01	0.89 ± 0.01	E Asia F	E Africa F	0.04

Table 130. *For algorithm dermalog-002 with Border images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.18 ± 0.05	0.22 ± 0.02	0.27 ± 0.04	0.24 ± 0.02	0.23 ± 0.04	0.17 ± 0.06	0.15 ± 0.06	0.09 ± 0.01	0.10 ± 0.03	0.13 ± 0.02	0.10 ± 0.03	0.16 ± 0.06	E Europe F	E Asia M	0.21
15	0.18 ± 0.05	0.31 ± 0.02	0.38 ± 0.04	0.26 ± 0.03	0.26 ± 0.03	0.22 ± 0.05	0.29 ± 0.07	0.13 ± 0.01	0.14 ± 0.03	0.15 ± 0.02	0.13 ± 0.03	0.28 ± 0.07	E Europe F	S E Asia M	0.21
16	0.33 ± 0.06	0.37 ± 0.02	0.43 ± 0.04	0.33 ± 0.03	0.38 ± 0.04	0.23 ± 0.05	0.32 ± 0.07	0.19 ± 0.01	0.20 ± 0.03	0.23 ± 0.02	0.16 ± 0.03	0.28 ± 0.05	E Europe F	S E Asia M	0.18
17	0.30 ± 0.05	0.45 ± 0.02	0.51 ± 0.04	0.41 ± 0.02	0.44 ± 0.03	0.34 ± 0.06	0.46 ± 0.07	0.24 ± 0.01	0.27 ± 0.04	0.32 ± 0.02	0.22 ± 0.03	0.43 ± 0.06	E Europe F	S E Asia M	0.15
18	0.36 ± 0.05	0.52 ± 0.01	0.58 ± 0.03	0.45 ± 0.02	0.49 ± 0.03	0.33 ± 0.05	0.50 ± 0.06	0.31 ± 0.01	0.39 ± 0.04	0.40 ± 0.02	0.31 ± 0.03	0.52 ± 0.05	E Europe F	E Asia M	0.13
19	0.43 ± 0.05	0.59 ± 0.01	0.64 ± 0.02	0.50 ± 0.02	0.57 ± 0.02	0.39 ± 0.04	0.52 ± 0.05	0.36 ± 0.01	0.50 ± 0.03	0.50 ± 0.02	0.36 ± 0.03	0.56 ± 0.05	E Europe F	E Asia M	0.11
20	0.46 ± 0.04	0.65 ± 0.01	0.70 ± 0.02	0.54 ± 0.02	0.62 ± 0.02	0.41 ± 0.04	0.65 ± 0.04	0.44 ± 0.01	0.60 ± 0.03	0.58 ± 0.02	0.46 ± 0.03	0.61 ± 0.04	E Europe F	W Africa F	0.10
21	0.49 ± 0.04	0.701 ± 0.009	0.74 ± 0.02	0.60 ± 0.02	0.66 ± 0.02	0.48 ± 0.04	0.72 ± 0.04	0.52 ± 0.01	0.69 ± 0.03	0.66 ± 0.02	0.52 ± 0.02	0.71 ± 0.04	E Europe F	W Africa F	0.09
22	0.55 ± 0.04	0.751 ± 0.008	0.78 ± 0.02	0.64 ± 0.01	0.71 ± 0.02	0.53 ± 0.03	0.76 ± 0.04	0.58 ± 0.01	0.74 ± 0.02	0.72 ± 0.01	0.59 ± 0.02	0.73 ± 0.03	E Europe F	W Africa F	0.08
23	0.58 ± 0.04	0.789 ± 0.007	0.82 ± 0.01	0.67 ± 0.01	0.78 ± 0.02	0.59 ± 0.03	0.80 ± 0.03	0.65 ± 0.01	0.81 ± 0.02	0.78 ± 0.01	0.65 ± 0.03	0.79 ± 0.03	E Europe F	E Africa F	0.07
24	0.65 ± 0.03	0.822 ± 0.007	0.85 ± 0.01	0.72 ± 0.01	0.81 ± 0.01	0.60 ± 0.03	0.85 ± 0.03	0.70 ± 0.01	0.87 ± 0.02	0.83 ± 0.01	0.71 ± 0.02	0.83 ± 0.02	E Europe M	W Africa F	0.07
25	0.71 ± 0.03	0.850 ± 0.006	0.880 ± 0.009	0.740 ± 0.009	0.84 ± 0.01	0.65 ± 0.02	0.89 ± 0.02	0.766 ± 0.010	0.89 ± 0.01	0.865 ± 0.008	0.76 ± 0.02	0.87 ± 0.02	E Europe M	W Africa F	0.06
26	0.71 ± 0.02	0.884 ± 0.005	0.900 ± 0.008	0.770 ± 0.008	0.868 ± 0.010	0.67 ± 0.02	0.93 ± 0.02	0.803 ± 0.009	0.92 ± 0.01	0.884 ± 0.007	0.80 ± 0.02	0.88 ± 0.02	E Africa M	W Africa F	0.06
27	0.74 ± 0.03	0.900 ± 0.004	0.923 ± 0.006	0.795 ± 0.007	0.900 ± 0.009	0.70 ± 0.02	0.93 ± 0.02	0.836 ± 0.008	0.941 ± 0.009	0.903 ± 0.006	0.86 ± 0.02	0.91 ± 0.01	E Europe M	W Africa F	0.05
28	0.80 ± 0.02	0.920 ± 0.004	0.942 ± 0.006	0.826 ± 0.007	0.915 ± 0.008	0.73 ± 0.02	0.94 ± 0.01	0.871 ± 0.007	0.960 ± 0.007	0.921 ± 0.005	0.89 ± 0.01	0.92 ± 0.01	E Europe M	W Africa F	0.04
29	0.83 ± 0.02	0.935 ± 0.003	0.958 ± 0.005	0.847 ± 0.006	0.923 ± 0.008	0.76 ± 0.02	0.96 ± 0.01	0.898 ± 0.006	0.960 ± 0.006	0.929 ± 0.005	0.91 ± 0.01	0.93 ± 0.01	E Europe M	W Africa F	0.04
30	0.83 ± 0.02	0.948 ± 0.003	0.964 ± 0.004	0.870 ± 0.006	0.941 ± 0.007	0.80 ± 0.02	0.96 ± 0.01	0.916 ± 0.006	0.976 ± 0.005	0.940 ± 0.004	0.92 ± 0.01	0.954 ± 0.008	E Europe M	W Africa F	0.03
31	0.85 ± 0.02	0.959 ± 0.003	0.970 ± 0.004	0.887 ± 0.005	0.948 ± 0.007	0.82 ± 0.02	0.975 ± 0.008	0.932 ± 0.005	0.982 ± 0.004	0.952 ± 0.003	0.94 ± 0.01	0.962 ± 0.007	E Europe M	W Africa F	0.03
32	0.86 ± 0.02	0.965 ± 0.003	0.977 ± 0.004	0.907 ± 0.005	0.959 ± 0.006	0.84 ± 0.02	0.971 ± 0.010	0.952 ± 0.004	0.983 ± 0.004	0.962 ± 0.003	0.95 ± 0.01	0.963 ± 0.007	E Europe M	W Africa F	0.03
33	0.89 ± 0.02	0.973 ± 0.002	0.982 ± 0.003	0.920 ± 0.005	0.962 ± 0.006	0.87 ± 0.02	0.978 ± 0.009	0.957 ± 0.004	0.988 ± 0.003	0.968 ± 0.003	0.954 ± 0.010	0.967 ± 0.007	E Europe M	W Africa F	0.02
34	0.90 ± 0.02	0.977 ± 0.002	0.982 ± 0.004	0.931 ± 0.004	0.974 ± 0.005	0.87 ± 0.02	0.979 ± 0.008	0.965 ± 0.004	0.992 ± 0.003	0.972 ± 0.002	0.967 ± 0.008	0.979 ± 0.006	E Europe M	W Africa F	0.02

Table 131. *For algorithm hzailu-001 with Application images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.24 ± 0.04	0.19 ± 0.02	0.41 ± 0.05	0.25 ± 0.02	0.21 ± 0.04	0.38 ± 0.06	0.21 ± 0.03	0.12 ± 0.01	0.17 ± 0.03	0.29 ± 0.02	0.18 ± 0.03	0.30 ± 0.06	E Europe F	E Asia M	0.20
15	0.29 ± 0.05	0.27 ± 0.02	0.51 ± 0.05	0.38 ± 0.03	0.29 ± 0.04	0.41 ± 0.07	0.26 ± 0.05	0.21 ± 0.02	0.27 ± 0.05	0.44 ± 0.03	0.28 ± 0.04	0.42 ± 0.06	E Europe F	E Asia M	0.16
16	0.33 ± 0.05	0.33 ± 0.02	0.56 ± 0.05	0.43 ± 0.03	0.43 ± 0.04	0.52 ± 0.06	0.51 ± 0.05	0.25 ± 0.02	0.38 ± 0.05	0.58 ± 0.03	0.46 ± 0.05	0.56 ± 0.06	S Asia M	E Asia M	0.14
17	0.39 ± 0.05	0.40 ± 0.03	0.66 ± 0.05	0.51 ± 0.03	0.48 ± 0.05	0.61 ± 0.05	0.55 ± 0.05	0.34 ± 0.02	0.44 ± 0.05	0.68 ± 0.03	0.53 ± 0.05	0.67 ± 0.05	S Asia M	E Asia M	0.13
18	0.46 ± 0.04	0.47 ± 0.02	0.73 ± 0.04	0.55 ± 0.02	0.51 ± 0.03	0.63 ± 0.04	0.70 ± 0.04	0.40 ± 0.02	0.55 ± 0.04	0.77 ± 0.02	0.57 ± 0.04	0.74 ± 0.04	S Asia M	E Asia M	0.12
19	0.53 ± 0.04	0.52 ± 0.02	0.78 ± 0.03	0.64 ± 0.02	0.61 ± 0.03	0.66 ± 0.04	0.78 ± 0.03	0.48 ± 0.02	0.66 ± 0.04	0.82 ± 0.02	0.64 ± 0.04	0.84 ± 0.03	W Africa M	E Asia M	0.11
20	0.56 ± 0.04	0.60 ± 0.02	0.83 ± 0.03	0.67 ± 0.02	0.66 ± 0.03	0.71 ± 0.04	0.85 ± 0.03	0.54 ± 0.02	0.71 ± 0.04	0.88 ± 0.02	0.74 ± 0.03	0.86 ± 0.03	S Asia M	E Asia M	0.10
21	0.60 ± 0.04	0.66 ± 0.02	0.87 ± 0.02	0.71 ± 0.02	0.72 ± 0.02	0.74 ± 0.03	0.88 ± 0.03	0.62 ± 0.02	0.83 ± 0.03	0.93 ± 0.01	0.81 ± 0.03	0.90 ± 0.02	S Asia M	E Africa F	0.09
22	0.62 ± 0.03	0.71 ± 0.02	0.89 ± 0.02	0.74 ± 0.02	0.76 ± 0.02	0.78 ± 0.03	0.92 ± 0.02	0.67 ± 0.02	0.86 ± 0.03	0.94 ± 0.01	0.83 ± 0.02	0.93 ± 0.02	S Asia M	E Africa F	0.08
23	0.65 ± 0.03	0.77 ± 0.01	0.92 ± 0.01	0.78 ± 0.01	0.82 ± 0.02	0.78 ± 0.03	0.92 ± 0.02	0.72 ± 0.02	0.88 ± 0.02	0.951 ± 0.010	0.86 ± 0.02	0.93 ± 0.02	S Asia M	E Africa F	0.07
24	0.69 ± 0.03	0.79 ± 0.01	0.93 ± 0.01	0.82 ± 0.01	0.85 ± 0.02	0.80 ± 0.03	0.93 ± 0.02	0.78 ± 0.02	0.93 ± 0.02	0.961 ± 0.008	0.88 ± 0.02	0.96 ± 0.01	S Asia M	E Africa F	0.06
25	0.73 ± 0.02	0.84 ± 0.01	0.942 ± 0.009	0.83 ± 0.01	0.87 ± 0.01	0.81 ± 0.02	0.95 ± 0.01	0.82 ± 0.02	0.96 ± 0.01	0.971 ± 0.006	0.91 ± 0.02	0.95 ± 0.01	S Asia M	E Africa F	0.05
26	0.74 ± 0.02	0.86 ± 0.01	0.960 ± 0.008	0.851 ± 0.010	0.89 ± 0.01	0.85 ± 0.02	0.96 ± 0.01	0.87 ± 0.01	0.96 ± 0.01	0.978 ± 0.005	0.93 ± 0.01	0.96 ± 0.01	S Asia M	E Africa F	0.04
27	0.78 ± 0.02	0.895 ± 0.008	0.969 ± 0.006	0.862 ± 0.009	0.91 ± 0.01	0.86 ± 0.02	0.96 ± 0.01	0.89 ± 0.01	0.980 ± 0.007	0.981 ± 0.004	0.95 ± 0.01	0.97 ± 0.01	S Asia M	E Africa F	0.04
28	0.79 ± 0.02	0.913 ± 0.007	0.976 ± 0.006	0.868 ± 0.008	0.933 ± 0.009	0.86 ± 0.02	0.96 ± 0.01	0.92 ± 0.01	0.987 ± 0.006	0.983 ± 0.004	0.96 ± 0.01	0.97 ± 0.01	E Europe M	E Africa F	0.04
29	0.84 ± 0.02	0.932 ± 0.006	0.979 ± 0.005	0.893 ± 0.008	0.942 ± 0.008	0.89 ± 0.01	0.971 ± 0.009	0.953 ± 0.008	0.990 ± 0.006	0.988 ± 0.003	0.973 ± 0.009	0.979 ± 0.007	E Europe M	E Africa F	0.03
30	0.84 ± 0.02	0.946 ± 0.005	0.980 ± 0.006	0.896 ± 0.008	0.952 ± 0.008	0.90 ± 0.01	0.981 ± 0.008	0.957 ± 0.007	0.996 ± 0.004	0.991 ± 0.002	0.984 ± 0.008	0.981 ± 0.006	E Europe M	E Africa F	0.03
31	0.86 ± 0.02	0.960 ± 0.005	0.988 ± 0.004	0.900 ± 0.008	0.961 ± 0.007	0.90 ± 0.01	0.988 ± 0.006	0.969 ± 0.006	0.992 ± 0.005	0.993 ± 0.002	0.983 ± 0.008	0.984 ± 0.006	S Asia M	E Africa F	0.03
32	0.87 ± 0.02	0.966 ± 0.005	0.985 ± 0.005	0.914 ± 0.007	0.968 ± 0.007	0.91 ± 0.01	0.986 ± 0.007	0.975 ± 0.005	0.998 ± 0.003	0.993 ± 0.002	0.982 ± 0.008	0.990 ± 0.005	E Europe M	E Africa F	0.02
33	0.87 ± 0.02	0.975 ± 0.004	0.988 ± 0.005	0.921 ± 0.007	0.978 ± 0.006	0.92 ± 0.01	0.987 ± 0.006	0.981 ± 0.005	0.997 ± 0.003	0.995 ± 0.002	0.991 ± 0.006	0.989 ± 0.005	E Europe M	E Africa F	0.02
34	0.90 ± 0.02	0.984 ± 0.003	0.991 ± 0.004	0.931 ± 0.007	0.979 ± 0.006	0.94 ± 0.01	0.989 ± 0.006	0.988 ± 0.004	0.999 ± 0.002	0.996 ± 0.002	0.991 ± 0.007	0.989 ± 0.006	E Europe M	E Africa F	0.02

Table 132. *For algorithm hzailu-001 with Border images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.32 ± 0.07	0.20 ± 0.02	0.46 ± 0.05	0.36 ± 0.03	0.23 ± 0.04	0.48 ± 0.07	0.41 ± 0.07	0.17 ± 0.02	0.26 ± 0.04	0.42 ± 0.03	0.24 ± 0.04	0.49 ± 0.09	W Africa M	E Asia M	0.20
15	0.39 ± 0.07	0.28 ± 0.02	0.56 ± 0.04	0.43 ± 0.03	0.31 ± 0.04	0.62 ± 0.07	0.62 ± 0.07	0.25 ± 0.01	0.43 ± 0.05	0.58 ± 0.03	0.30 ± 0.04	0.66 ± 0.07	W Africa M	E Asia M	0.20
16	0.51 ± 0.06	0.32 ± 0.02	0.61 ± 0.03	0.50 ± 0.03	0.38 ± 0.04	0.58 ± 0.06	0.70 ± 0.07	0.33 ± 0.02	0.52 ± 0.04	0.65 ± 0.02	0.40 ± 0.04	0.73 ± 0.06	W Africa M	E Asia F	0.16
17	0.50 ± 0.06	0.39 ± 0.02	0.70 ± 0.03	0.57 ± 0.02	0.39 ± 0.03	0.65 ± 0.06	0.82 ± 0.06	0.41 ± 0.02	0.66 ± 0.04	0.76 ± 0.02	0.49 ± 0.03	0.86 ± 0.04	W Africa M	E Asia F	0.17
18	0.56 ± 0.05	0.43 ± 0.01	0.74 ± 0.03	0.63 ± 0.02	0.46 ± 0.02	0.63 ± 0.05	0.88 ± 0.04	0.45 ± 0.01	0.73 ± 0.03	0.83 ± 0.02	0.57 ± 0.03	0.90 ± 0.03	W Africa M	E Asia F	0.15
19	0.64 ± 0.05	0.50 ± 0.01	0.81 ± 0.02	0.67 ± 0.02	0.49 ± 0.02	0.68 ± 0.04	0.87 ± 0.03	0.53 ± 0.01	0.80 ± 0.03	0.87 ± 0.01	0.63 ± 0.03	0.93 ± 0.03	W Africa M	S E Asia F	0.13
20	0.61 ± 0.04	0.57 ± 0.01	0.83 ± 0.01	0.72 ± 0.02	0.58 ± 0.02	0.74 ± 0.04	0.93 ± 0.02	0.60 ± 0.01	0.85 ± 0.02	0.90 ± 0.01	0.71 ± 0.02	0.94 ± 0.02	W Africa M	E Asia F	0.11
21	0.71 ± 0.04	0.61 ± 0.01	0.85 ± 0.01	0.75 ± 0.01	0.63 ± 0.02	0.76 ± 0.03	0.94 ± 0.02	0.66 ± 0.01	0.90 ± 0.02	0.934 ± 0.009	0.78 ± 0.02	0.96 ± 0.02	W Africa M	E Asia F	0.09
22	0.74 ± 0.03	0.660 ± 0.009	0.88 ± 0.01	0.79 ± 0.01	0.66 ± 0.02	0.79 ± 0.03	0.95 ± 0.02	0.72 ± 0.01	0.93 ± 0.01	0.950 ± 0.007	0.80 ± 0.02	0.97 ± 0.01	W Africa M	E Asia F	0.08
23	0.75 ± 0.03	0.702 ± 0.009	0.895 ± 0.010	0.82 ± 0.01	0.74 ± 0.02	0.79 ± 0.03	0.96 ± 0.02	0.758 ± 0.009	0.95 ± 0.01	0.959 ± 0.006	0.83 ± 0.02	0.97 ± 0.01	W Africa M	E Asia F	0.07
24	0.76 ± 0.03	0.735 ± 0.008	0.915 ± 0.008	0.832 ± 0.008	0.77 ± 0.01	0.82 ± 0.02	0.97 ± 0.01	0.800 ± 0.009	0.972 ± 0.008	0.974 ± 0.004	0.88 ± 0.02	0.98 ± 0.01	W Africa M	E Asia F	0.06
25	0.80 ± 0.03	0.779 ± 0.007	0.936 ± 0.007	0.842 ± 0.008	0.81 ± 0.01	0.83 ± 0.02	0.98 ± 0.01	0.841 ± 0.008	0.973 ± 0.007	0.978 ± 0.004	0.89 ± 0.02	0.989 ± 0.006	W Africa M	E Asia F	0.05
26	0.83 ± 0.02	0.812 ± 0.006	0.943 ± 0.006	0.859 ± 0.007	0.82 ± 0.01	0.85 ± 0.02	0.983 ± 0.009	0.868 ± 0.008	0.979 ± 0.006	0.982 ± 0.003	0.91 ± 0.01	0.985 ± 0.006	W Africa M	E Asia F	0.04
27	0.83 ± 0.02	0.838 ± 0.006	0.950 ± 0.005	0.868 ± 0.006	0.87 ± 0.01	0.86 ± 0.02	0.980 ± 0.009	0.887 ± 0.007	0.984 ± 0.005	0.984 ± 0.003	0.93 ± 0.01	0.986 ± 0.006	W Africa M	E Africa F	0.04
28	0.85 ± 0.02	0.863 ± 0.005	0.954 ± 0.005	0.877 ± 0.005	0.884 ± 0.010	0.87 ± 0.02	0.988 ± 0.007	0.913 ± 0.006	0.992 ± 0.003	0.986 ± 0.002	0.95 ± 0.01	0.987 ± 0.005	E Europe M	E Africa F	0.04
29	0.89 ± 0.02	0.887 ± 0.005	0.965 ± 0.004	0.886 ± 0.005	0.896 ± 0.009	0.86 ± 0.02	0.982 ± 0.008	0.929 ± 0.005	0.990 ± 0.004	0.991 ± 0.002	0.958 ± 0.010	0.987 ± 0.005	S Asia M	W Africa F	0.03
30	0.87 ± 0.02	0.909 ± 0.004	0.969 ± 0.004	0.897 ± 0.005	0.910 ± 0.008	0.88 ± 0.02	0.989 ± 0.006	0.941 ± 0.005	0.992 ± 0.003	0.990 ± 0.002	0.957 ± 0.009	0.993 ± 0.004	W Africa M	E Africa F	0.03
31	0.88 ± 0.02	0.926 ± 0.004	0.971 ± 0.004	0.905 ± 0.005	0.922 ± 0.009	0.89 ± 0.01	0.993 ± 0.005	0.955 ± 0.004	0.994 ± 0.002	0.992 ± 0.001	0.968 ± 0.008	0.995 ± 0.003	W Africa M	E Africa F	0.03
32	0.89 ± 0.02	0.938 ± 0.004	0.980 ± 0.004	0.915 ± 0.005	0.936 ± 0.007	0.90 ± 0.01	0.993 ± 0.005	0.968 ± 0.004	0.996 ± 0.002	0.993 ± 0.001	0.973 ± 0.008	0.991 ± 0.004	E Europe M	E Africa F	0.02
33	0.92 ± 0.02	0.952 ± 0.003	0.976 ± 0.004	0.926 ± 0.004	0.946 ± 0.007	0.91 ± 0.01	0.993 ± 0.005	0.974 ± 0.003	0.995 ± 0.002	0.994 ± 0.001	0.979 ± 0.007	0.996 ± 0.003	W Africa M	W Africa F	0.02
34	0.92 ± 0.02	0.957 ± 0.003	0.981 ± 0.004	0.932 ± 0.005	0.951 ± 0.007	0.92 ± 0.01	0.992 ± 0.005	0.978 ± 0.003	0.997 ± 0.002	0.995 ± 0.001	0.985 ± 0.005	0.993 ± 0.003	E Europe M	E Africa F	0.02

Table 133. *For algorithm idemia-001 with Application images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.000 ± 0.000	0.000 ± 0.000	0.000 ± 0.000	0.002 ± 0.002	0.004 ± 0.004	0.000 ± 0.000	0.004 ± 0.004	0.001 ± 0.001	0.000 ± 0.000	0.001 ± 0.001	0.000 ± 0.000	0.000 ± 0.000	S E Asia F	E Africa F	0.77
15	0.009 ± 0.009	0.003 ± 0.002	0.000 ± 0.000	0.006 ± 0.004	0.01 ± 0.01	0.04 ± 0.02	0.005 ± 0.005	0.000 ± 0.000	0.000 ± 0.000	0.003 ± 0.003	0.000 ± 0.000	0.005 ± 0.005	W Africa F	E Europe F	0.70
16	0.02 ± 0.01	0.007 ± 0.004	0.000 ± 0.000	0.004 ± 0.004	0.03 ± 0.02	0.05 ± 0.03	0.02 ± 0.01	0.002 ± 0.002	0.003 ± 0.003	0.002 ± 0.002	0.000 ± 0.000	0.005 ± 0.005	W Africa F	E Europe F	0.67
17	0.04 ± 0.02	0.023 ± 0.007	0.003 ± 0.003	0.021 ± 0.009	0.05 ± 0.02	0.09 ± 0.03	0.01 ± 0.01	0.007 ± 0.004	0.000 ± 0.000	0.009 ± 0.005	0.006 ± 0.006	0.04 ± 0.02	W Africa F	E Europe M	0.55
18	0.08 ± 0.02	0.030 ± 0.008	0.014 ± 0.009	0.031 ± 0.008	0.04 ± 0.01	0.11 ± 0.03	0.04 ± 0.02	0.019 ± 0.006	0.000 ± 0.000	0.031 ± 0.008	0.022 ± 0.010	0.06 ± 0.02	W Africa F	E Europe M	0.42
19	0.12 ± 0.03	0.06 ± 0.01	0.02 ± 0.01	0.06 ± 0.01	0.11 ± 0.02	0.17 ± 0.03	0.12 ± 0.03	0.048 ± 0.009	0.009 ± 0.008	0.07 ± 0.01	0.04 ± 0.01	0.12 ± 0.03	W Africa F	E Europe M	0.37
20	0.19 ± 0.03	0.10 ± 0.01	0.03 ± 0.01	0.11 ± 0.01	0.18 ± 0.02	0.22 ± 0.03	0.22 ± 0.03	0.09 ± 0.01	0.03 ± 0.01	0.13 ± 0.02	0.10 ± 0.02	0.18 ± 0.03	W Africa F	E Europe M	0.30
21	0.26 ± 0.03	0.16 ± 0.02	0.04 ± 0.01	0.16 ± 0.02	0.23 ± 0.02	0.31 ± 0.04	0.31 ± 0.03	0.17 ± 0.02	0.04 ± 0.01	0.25 ± 0.02	0.21 ± 0.03	0.26 ± 0.04	W Africa F	E Europe F	0.26
22	0.33 ± 0.03	0.23 ± 0.02	0.07 ± 0.01	0.22 ± 0.02	0.33 ± 0.02	0.34 ± 0.03	0.47 ± 0.03	0.26 ± 0.02	0.13 ± 0.02	0.36 ± 0.02	0.30 ± 0.03	0.32 ± 0.04	E Africa M	E Europe F	0.22
23	0.40 ± 0.03	0.34 ± 0.02	0.11 ± 0.02	0.31 ± 0.02	0.45 ± 0.02	0.44 ± 0.03	0.53 ± 0.03	0.37 ± 0.02	0.20 ± 0.03	0.52 ± 0.02	0.44 ± 0.03	0.47 ± 0.04	E Africa M	E Europe F	0.19
24	0.49 ± 0.03	0.43 ± 0.02	0.15 ± 0.02	0.40 ± 0.01	0.55 ± 0.02	0.51 ± 0.03	0.64 ± 0.03	0.51 ± 0.02	0.35 ± 0.03	0.66 ± 0.02	0.56 ± 0.03	0.56 ± 0.03	S Asia M	E Europe F	0.16
25	0.53 ± 0.03	0.55 ± 0.01	0.22 ± 0.02	0.48 ± 0.01	0.63 ± 0.02	0.57 ± 0.03	0.76 ± 0.03	0.66 ± 0.02	0.50 ± 0.03	0.78 ± 0.01	0.71 ± 0.02	0.68 ± 0.03	S Asia M	E Europe F	0.15
26	0.62 ± 0.03	0.63 ± 0.01	0.29 ± 0.02	0.55 ± 0.01	0.74 ± 0.02	0.67 ± 0.03	0.83 ± 0.02	0.77 ± 0.02	0.65 ± 0.03	0.86 ± 0.01	0.81 ± 0.02	0.76 ± 0.02	S Asia M	E Europe F	0.13
27	0.69 ± 0.02	0.73 ± 0.01	0.39 ± 0.02	0.63 ± 0.01	0.81 ± 0.01	0.74 ± 0.02	0.87 ± 0.02	0.85 ± 0.01	0.78 ± 0.02	0.916 ± 0.009	0.90 ± 0.02	0.81 ± 0.02	S Asia M	E Europe F	0.10
28	0.76 ± 0.02	0.803 ± 0.010	0.49 ± 0.02	0.71 ± 0.01	0.85 ± 0.01	0.81 ± 0.02	0.93 ± 0.01	0.92 ± 0.01	0.86 ± 0.02	0.953 ± 0.006	0.94 ± 0.01	0.87 ± 0.02	S Asia M	E Europe F	0.08
29	0.83 ± 0.02	0.869 ± 0.009	0.61 ± 0.02	0.78 ± 0.01	0.91 ± 0.01	0.85 ± 0.02	0.96 ± 0.01	0.953 ± 0.008	0.92 ± 0.01	0.975 ± 0.004	0.95 ± 0.01	0.93 ± 0.01	S Asia M	E Europe F	0.06
30	0.87 ± 0.02	0.926 ± 0.006	0.71 ± 0.02	0.84 ± 0.01	0.943 ± 0.009	0.86 ± 0.02	0.978 ± 0.008	0.975 ± 0.005	0.964 ± 0.010	0.986 ± 0.003	0.982 ± 0.008	0.951 ± 0.010	S Asia M	E Europe F	0.05
31	0.90 ± 0.02	0.953 ± 0.005	0.80 ± 0.02	0.877 ± 0.008	0.968 ± 0.007	0.93 ± 0.01	0.986 ± 0.007	0.987 ± 0.004	0.979 ± 0.008	0.991 ± 0.003	0.989 ± 0.007	0.974 ± 0.008	S Asia M	E Europe F	0.03
32	0.94 ± 0.01	0.970 ± 0.005	0.87 ± 0.01	0.917 ± 0.008	0.968 ± 0.007	0.95 ± 0.01	0.987 ± 0.007	0.991 ± 0.003	0.989 ± 0.006	0.997 ± 0.001	0.994 ± 0.005	0.983 ± 0.007	S Asia M	E Europe F	0.02
33	0.95 ± 0.01	0.984 ± 0.003	0.92 ± 0.01	0.952 ± 0.006	0.985 ± 0.005	0.96 ± 0.01	0.996 ± 0.004	0.995 ± 0.003	0.996 ± 0.004	0.998 ± 0.001	0.997 ± 0.004	0.987 ± 0.007	S Asia M	E Europe F	0.01
34	0.96 ± 0.01	0.991 ± 0.002	0.94 ± 0.01	0.968 ± 0.005	0.991 ± 0.004	0.978 ± 0.008	0.996 ± 0.004	0.998 ± 0.002	0.997 ± 0.003	0.999 ± 0.001	0.999 ± 0.002	0.994 ± 0.004	S E Asia M	E Europe F	0.01

Table 134. *For algorithm idemia-001 with Border images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.03 ± 0.02	0.002 ± 0.001	0.000 ± 0.000	0.007 ± 0.005	0.000 ± 0.000	0.007 ± 0.007	0.03 ± 0.02	0.000 ± 0.000	0.000 ± 0.000	0.001 ± 0.001	0.000 ± 0.000	0.01 ± 0.01	E Africa M	E Europe F	0.76
15	0.03 ± 0.02	0.002 ± 0.001	0.000 ± 0.000	0.008 ± 0.005	0.000 ± 0.000	0.09 ± 0.04	0.04 ± 0.02	0.001 ± 0.001	0.000 ± 0.000	0.001 ± 0.001	0.000 ± 0.000	0.05 ± 0.03	W Africa F	E Europe F	0.78
16	0.06 ± 0.03	0.006 ± 0.003	0.003 ± 0.003	0.021 ± 0.007	0.010 ± 0.005	0.06 ± 0.03	0.04 ± 0.03	0.004 ± 0.002	0.002 ± 0.002	0.001 ± 0.001	0.005 ± 0.005	0.06 ± 0.03	E Africa F	S Asia M	0.61
17	0.10 ± 0.03	0.017 ± 0.004	0.010 ± 0.006	0.035 ± 0.009	0.022 ± 0.008	0.11 ± 0.04	0.11 ± 0.04	0.008 ± 0.003	0.003 ± 0.003	0.022 ± 0.007	0.009 ± 0.006	0.07 ± 0.03	W Africa F	E Europe M	0.55
18	0.17 ± 0.04	0.020 ± 0.004	0.023 ± 0.008	0.057 ± 0.010	0.028 ± 0.008	0.13 ± 0.03	0.16 ± 0.04	0.013 ± 0.003	0.008 ± 0.006	0.039 ± 0.008	0.016 ± 0.007	0.10 ± 0.03	E Africa F	E Europe M	0.52
19	0.24 ± 0.04	0.041 ± 0.005	0.033 ± 0.008	0.10 ± 0.01	0.07 ± 0.01	0.22 ± 0.04	0.26 ± 0.05	0.033 ± 0.005	0.010 ± 0.006	0.10 ± 0.01	0.05 ± 0.01	0.14 ± 0.03	E Africa M	E Europe M	0.47
20	0.30 ± 0.04	0.074 ± 0.005	0.047 ± 0.009	0.12 ± 0.01	0.12 ± 0.01	0.29 ± 0.03	0.34 ± 0.04	0.066 ± 0.006	0.028 ± 0.010	0.17 ± 0.01	0.10 ± 0.01	0.23 ± 0.03	E Africa M	E Europe M	0.40
21	0.36 ± 0.03	0.106 ± 0.006	0.071 ± 0.009	0.18 ± 0.01	0.16 ± 0.01	0.35 ± 0.03	0.39 ± 0.04	0.122 ± 0.009	0.06 ± 0.01	0.26 ± 0.02	0.18 ± 0.02	0.30 ± 0.03	E Africa M	E Europe M	0.33
22	0.46 ± 0.03	0.170 ± 0.008	0.11 ± 0.01	0.24 ± 0.01	0.24 ± 0.02	0.43 ± 0.03	0.56 ± 0.04	0.210 ± 0.010	0.11 ± 0.02	0.41 ± 0.01	0.27 ± 0.02	0.40 ± 0.03	E Africa M	E Europe M	0.29
23	0.51 ± 0.04	0.232 ± 0.007	0.15 ± 0.01	0.31 ± 0.01	0.35 ± 0.02	0.50 ± 0.03	0.63 ± 0.04	0.31 ± 0.01	0.21 ± 0.02	0.53 ± 0.01	0.36 ± 0.03	0.48 ± 0.03	E Africa M	E Europe F	0.23
24	0.57 ± 0.03	0.309 ± 0.008	0.22 ± 0.01	0.39 ± 0.01	0.45 ± 0.02	0.54 ± 0.03	0.71 ± 0.03	0.44 ± 0.01	0.33 ± 0.02	0.64 ± 0.01	0.48 ± 0.02	0.58 ± 0.03	E Africa M	E Europe F	0.18
25	0.63 ± 0.03	0.411 ± 0.009	0.30 ± 0.01	0.45 ± 0.01	0.53 ± 0.02	0.65 ± 0.03	0.81 ± 0.03	0.56 ± 0.01	0.46 ± 0.02	0.75 ± 0.01	0.61 ± 0.02	0.69 ± 0.02	E Africa M	E Europe F	0.15
26	0.72 ± 0.02	0.508 ± 0.008	0.37 ± 0.01	0.530 ± 0.010	0.63 ± 0.02	0.68 ± 0.02	0.88 ± 0.02	0.665 ± 0.010	0.60 ± 0.02	0.824 ± 0.008	0.72 ± 0.02	0.77 ± 0.02	E Africa M	E Europe F	0.13
27	0.75 ± 0.02	0.599 ± 0.007	0.46 ± 0.01	0.589 ± 0.009	0.71 ± 0.01	0.75 ± 0.02	0.91 ± 0.02	0.758 ± 0.009	0.70 ± 0.02	0.882 ± 0.007	0.79 ± 0.02	0.85 ± 0.02	E Africa M	E Europe F	0.10
28	0.81 ± 0.02	0.689 ± 0.007	0.55 ± 0.01	0.664 ± 0.008	0.78 ± 0.01	0.79 ± 0.02	0.94 ± 0.01	0.829 ± 0.008	0.80 ± 0.02	0.928 ± 0.005	0.87 ± 0.02	0.88 ± 0.01	E Africa M	E Europe F	0.08
29	0.83 ± 0.02	0.760 ± 0.006	0.65 ± 0.01	0.718 ± 0.008	0.83 ± 0.01	0.85 ± 0.02	0.95 ± 0.01	0.887 ± 0.006	0.86 ± 0.01	0.957 ± 0.004	0.91 ± 0.01	0.93 ± 0.01	S Asia M	E Europe F	0.07
30	0.87 ± 0.02	0.832 ± 0.005	0.72 ± 0.01	0.785 ± 0.007	0.89 ± 0.01	0.88 ± 0.02	0.979 ± 0.007	0.930 ± 0.005	0.922 ± 0.009	0.972 ± 0.003	0.956 ± 0.009	0.954 ± 0.009	E Africa M	E Europe F	0.05
31	0.91 ± 0.02	0.886 ± 0.004	0.799 ± 0.009	0.839 ± 0.006	0.915 ± 0.008	0.91 ± 0.01	0.985 ± 0.007	0.958 ± 0.004	0.955 ± 0.006	0.986 ± 0.002	0.963 ± 0.008	0.963 ± 0.007	S Asia M	E Europe F	0.04
32	0.94 ± 0.01	0.926 ± 0.004	0.864 ± 0.008	0.880 ± 0.005	0.949 ± 0.006	0.92 ± 0.01	0.992 ± 0.004	0.976 ± 0.003	0.977 ± 0.005	0.991 ± 0.001	0.982 ± 0.006	0.983 ± 0.005	E Africa M	E Europe F	0.03
33	0.94 ± 0.01	0.951 ± 0.003	0.906 ± 0.007	0.917 ± 0.005	0.961 ± 0.006	0.957 ± 0.010	0.994 ± 0.005	0.986 ± 0.002	0.989 ± 0.003	0.995 ± 0.001	0.989 ± 0.005	0.986 ± 0.005	S Asia M	E Europe F	0.02
34	0.96 ± 0.01	0.968 ± 0.002	0.936 ± 0.006	0.942 ± 0.004	0.975 ± 0.005	0.969 ± 0.009	0.995 ± 0.005	0.991 ± 0.002	0.995 ± 0.002	0.997 ± 0.001	0.994 ± 0.004	0.993 ± 0.003	S Asia M	E Europe F	0.01

Table 135. *For algorithm idemia-002 with Application images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.000 ± 0.000	0.000 ± 0.000	0.000 ± 0.000	0.002 ± 0.002	0.000 ± 0.000	0.000 ± 0.000	0.002 ± 0.002	0.001 ± 0.001	0.000 ± 0.000	0.001 ± 0.001	0.000 ± 0.000	0.000 ± 0.000	S Asia F	E Africa F	0.78
15	0.009 ± 0.009	0.002 ± 0.002	0.000 ± 0.000	0.006 ± 0.004	0.010 ± 0.007	0.03 ± 0.02	0.003 ± 0.003	0.000 ± 0.000	0.000 ± 0.000	0.002 ± 0.002	0.000 ± 0.000	0.000 ± 0.000	W Africa F	E Europe F	0.76
16	0.03 ± 0.02	0.004 ± 0.003	0.000 ± 0.000	0.005 ± 0.004	0.01 ± 0.01	0.03 ± 0.02	0.01 ± 0.01	0.001 ± 0.001	0.003 ± 0.003	0.000 ± 0.000	0.000 ± 0.000	0.000 ± 0.000	W Africa F	E Europe F	0.71
17	0.03 ± 0.02	0.013 ± 0.005	0.03 ± 0.02	0.018 ± 0.008	0.02 ± 0.01	0.07 ± 0.03	0.000 ± 0.000	0.004 ± 0.003	0.000 ± 0.000	0.006 ± 0.004	0.006 ± 0.006	0.03 ± 0.02	W Africa F	E Africa M	0.55
18	0.07 ± 0.02	0.015 ± 0.005	0.04 ± 0.02	0.025 ± 0.007	0.03 ± 0.01	0.09 ± 0.03	0.02 ± 0.01	0.012 ± 0.004	0.000 ± 0.000	0.012 ± 0.005	0.011 ± 0.007	0.03 ± 0.01	W Africa F	E Europe M	0.48
19	0.11 ± 0.02	0.031 ± 0.007	0.04 ± 0.02	0.05 ± 0.01	0.06 ± 0.01	0.13 ± 0.03	0.08 ± 0.02	0.027 ± 0.007	0.013 ± 0.009	0.040 ± 0.009	0.022 ± 0.010	0.08 ± 0.02	W Africa F	E Europe M	0.37
20	0.18 ± 0.03	0.060 ± 0.010	0.09 ± 0.02	0.11 ± 0.01	0.11 ± 0.02	0.19 ± 0.03	0.16 ± 0.03	0.052 ± 0.009	0.04 ± 0.01	0.08 ± 0.01	0.06 ± 0.02	0.10 ± 0.03	W Africa F	E Europe M	0.28
21	0.22 ± 0.03	0.10 ± 0.01	0.13 ± 0.02	0.15 ± 0.02	0.15 ± 0.02	0.24 ± 0.03	0.22 ± 0.03	0.10 ± 0.01	0.07 ± 0.02	0.15 ± 0.02	0.14 ± 0.02	0.15 ± 0.03	W Africa F	E Europe M	0.19
22	0.29 ± 0.03	0.15 ± 0.01	0.21 ± 0.02	0.22 ± 0.02	0.23 ± 0.02	0.30 ± 0.03	0.33 ± 0.03	0.17 ± 0.02	0.16 ± 0.03	0.23 ± 0.02	0.21 ± 0.02	0.19 ± 0.03	E Africa M	E Asia F	0.15
23	0.37 ± 0.03	0.22 ± 0.01	0.28 ± 0.02	0.31 ± 0.02	0.33 ± 0.02	0.37 ± 0.03	0.40 ± 0.03	0.28 ± 0.02	0.27 ± 0.03	0.34 ± 0.02	0.34 ± 0.03	0.30 ± 0.03	E Africa M	E Asia F	0.10
24	0.44 ± 0.03	0.31 ± 0.01	0.35 ± 0.02	0.41 ± 0.02	0.43 ± 0.02	0.46 ± 0.03	0.50 ± 0.03	0.40 ± 0.02	0.45 ± 0.03	0.48 ± 0.02	0.46 ± 0.03	0.38 ± 0.03	E Africa M	E Asia F	0.07
25	0.50 ± 0.03	0.41 ± 0.01	0.47 ± 0.02	0.49 ± 0.01	0.52 ± 0.02	0.52 ± 0.03	0.63 ± 0.03	0.55 ± 0.02	0.60 ± 0.03	0.60 ± 0.02	0.61 ± 0.03	0.48 ± 0.03	E Africa M	E Asia F	0.07
26	0.59 ± 0.03	0.51 ± 0.01	0.55 ± 0.02	0.56 ± 0.01	0.64 ± 0.02	0.61 ± 0.03	0.70 ± 0.03	0.69 ± 0.02	0.73 ± 0.02	0.71 ± 0.02	0.73 ± 0.03	0.58 ± 0.03	E Europe M	E Asia F	0.07
27	0.67 ± 0.03	0.62 ± 0.01	0.66 ± 0.02	0.64 ± 0.01	0.72 ± 0.02	0.68 ± 0.02	0.77 ± 0.02	0.78 ± 0.02	0.85 ± 0.02	0.81 ± 0.01	0.85 ± 0.02	0.67 ± 0.03	E Europe M	E Asia F	0.07
28	0.72 ± 0.02	0.70 ± 0.01	0.74 ± 0.02	0.72 ± 0.01	0.78 ± 0.01	0.75 ± 0.02	0.84 ± 0.02	0.86 ± 0.01	0.90 ± 0.01	0.87 ± 0.01	0.89 ± 0.02	0.75 ± 0.02	E Europe M	E Asia F	0.05
29	0.81 ± 0.02	0.795 ± 0.010	0.83 ± 0.01	0.790 ± 0.010	0.86 ± 0.01	0.80 ± 0.02	0.90 ± 0.02	0.924 ± 0.010	0.95 ± 0.01	0.921 ± 0.008	0.93 ± 0.01	0.84 ± 0.02	E Europe M	S Asia F	0.04
30	0.85 ± 0.02	0.875 ± 0.009	0.88 ± 0.01	0.849 ± 0.009	0.91 ± 0.01	0.83 ± 0.02	0.94 ± 0.01	0.958 ± 0.007	0.982 ± 0.007	0.950 ± 0.006	0.97 ± 0.01	0.88 ± 0.02	E Europe M	W Africa F	0.03
31	0.88 ± 0.02	0.911 ± 0.007	0.92 ± 0.01	0.882 ± 0.009	0.938 ± 0.009	0.89 ± 0.02	0.96 ± 0.01	0.977 ± 0.006	0.985 ± 0.006	0.970 ± 0.004	0.979 ± 0.009	0.92 ± 0.01	E Europe M	E Africa F	0.03
32	0.92 ± 0.01	0.944 ± 0.006	0.958 ± 0.008	0.925 ± 0.007	0.953 ± 0.009	0.92 ± 0.01	0.974 ± 0.008	0.986 ± 0.004	0.995 ± 0.004	0.988 ± 0.003	0.988 ± 0.006	0.95 ± 0.01	E Europe M	W Africa F	0.02
33	0.94 ± 0.01	0.966 ± 0.005	0.974 ± 0.007	0.956 ± 0.005	0.975 ± 0.007	0.94 ± 0.01	0.984 ± 0.008	0.992 ± 0.003	0.998 ± 0.003	0.993 ± 0.002	0.996 ± 0.004	0.962 ± 0.010	E Europe M	W Africa F	0.01
34	0.95 ± 0.01	0.983 ± 0.004	0.986 ± 0.006	0.972 ± 0.005	0.985 ± 0.005	0.97 ± 0.01	0.987 ± 0.007	0.997 ± 0.002	0.999 ± 0.002	0.997 ± 0.001	0.998 ± 0.003	0.987 ± 0.006	E Europe M	E Africa F	0.01

Table 136. *For algorithm idemia-002 with Border images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.03 ± 0.02	0.001 ± 0.001	0.000 ± 0.000	0.007 ± 0.005	0.000 ± 0.000	0.000 ± 0.000	0.01 ± 0.01	0.000 ± 0.000	0.000 ± 0.000	0.001 ± 0.001	0.000 ± 0.000	0.007 ± 0.007	E Africa F	E Europe F	0.82
15	0.04 ± 0.03	0.000 ± 0.000	0.004 ± 0.004	0.011 ± 0.005	0.000 ± 0.000	0.09 ± 0.04	0.02 ± 0.02	0.000 ± 0.000	0.000 ± 0.000	0.000 ± 0.000	0.000 ± 0.000	0.02 ± 0.02	W Africa F	S E Asia F	0.81
16	0.06 ± 0.03	0.004 ± 0.002	0.011 ± 0.008	0.024 ± 0.008	0.003 ± 0.003	0.05 ± 0.03	0.02 ± 0.02	0.003 ± 0.002	0.002 ± 0.002	0.001 ± 0.001	0.003 ± 0.003	0.04 ± 0.02	E Africa F	S Asia M	0.62
17	0.09 ± 0.03	0.010 ± 0.003	0.03 ± 0.01	0.034 ± 0.009	0.014 ± 0.006	0.10 ± 0.03	0.08 ± 0.04	0.005 ± 0.002	0.003 ± 0.003	0.016 ± 0.005	0.005 ± 0.004	0.04 ± 0.02	W Africa F	E Europe M	0.55
18	0.15 ± 0.04	0.011 ± 0.002	0.07 ± 0.01	0.058 ± 0.010	0.018 ± 0.007	0.10 ± 0.03	0.11 ± 0.03	0.007 ± 0.002	0.014 ± 0.008	0.021 ± 0.006	0.009 ± 0.005	0.05 ± 0.02	E Africa F	E Asia M	0.52
19	0.24 ± 0.04	0.022 ± 0.003	0.11 ± 0.01	0.10 ± 0.01	0.041 ± 0.009	0.19 ± 0.03	0.18 ± 0.04	0.021 ± 0.004	0.017 ± 0.008	0.057 ± 0.009	0.033 ± 0.009	0.10 ± 0.03	E Africa F	E Europe M	0.46
20	0.29 ± 0.04	0.043 ± 0.004	0.13 ± 0.01	0.13 ± 0.01	0.07 ± 0.01	0.24 ± 0.03	0.27 ± 0.04	0.041 ± 0.005	0.04 ± 0.01	0.10 ± 0.01	0.07 ± 0.01	0.14 ± 0.03	E Africa F	E Asia M	0.39
21	0.35 ± 0.04	0.064 ± 0.005	0.19 ± 0.01	0.19 ± 0.01	0.09 ± 0.01	0.30 ± 0.03	0.33 ± 0.04	0.078 ± 0.006	0.09 ± 0.01	0.15 ± 0.01	0.12 ± 0.02	0.18 ± 0.03	E Africa F	E Asia F	0.32
22	0.45 ± 0.04	0.105 ± 0.006	0.26 ± 0.01	0.26 ± 0.01	0.16 ± 0.01	0.38 ± 0.03	0.46 ± 0.04	0.142 ± 0.008	0.16 ± 0.02	0.24 ± 0.01	0.20 ± 0.02	0.28 ± 0.03	E Africa M	E Asia F	0.27
23	0.48 ± 0.04	0.149 ± 0.007	0.34 ± 0.02	0.32 ± 0.01	0.26 ± 0.02	0.44 ± 0.03	0.48 ± 0.04	0.225 ± 0.010	0.29 ± 0.02	0.34 ± 0.01	0.28 ± 0.02	0.33 ± 0.03	E Africa M	E Asia F	0.18
24	0.57 ± 0.03	0.216 ± 0.007	0.43 ± 0.01	0.41 ± 0.01	0.34 ± 0.02	0.48 ± 0.03	0.59 ± 0.03	0.33 ± 0.01	0.41 ± 0.02	0.45 ± 0.01	0.40 ± 0.03	0.41 ± 0.03	E Africa M	E Asia F	0.14
25	0.62 ± 0.03	0.300 ± 0.008	0.54 ± 0.01	0.46 ± 0.01	0.42 ± 0.02	0.59 ± 0.02	0.68 ± 0.03	0.46 ± 0.01	0.55 ± 0.02	0.56 ± 0.01	0.51 ± 0.02	0.52 ± 0.03	E Africa M	E Asia F	0.11
26	0.69 ± 0.02	0.393 ± 0.008	0.60 ± 0.01	0.548 ± 0.010	0.52 ± 0.02	0.62 ± 0.02	0.77 ± 0.03	0.56 ± 0.01	0.67 ± 0.02	0.66 ± 0.01	0.62 ± 0.02	0.61 ± 0.03	E Africa M	E Asia F	0.09
27	0.72 ± 0.03	0.482 ± 0.008	0.69 ± 0.01	0.608 ± 0.008	0.62 ± 0.02	0.71 ± 0.02	0.82 ± 0.03	0.67 ± 0.01	0.76 ± 0.02	0.750 ± 0.009	0.72 ± 0.02	0.71 ± 0.02	E Africa M	E Asia F	0.07
28	0.80 ± 0.02	0.585 ± 0.007	0.77 ± 0.01	0.680 ± 0.009	0.70 ± 0.01	0.75 ± 0.02	0.87 ± 0.02	0.756 ± 0.009	0.85 ± 0.01	0.825 ± 0.007	0.81 ± 0.02	0.77 ± 0.02	E Africa M	E Asia F	0.06
29	0.82 ± 0.02	0.666 ± 0.006	0.835 ± 0.008	0.735 ± 0.008	0.76 ± 0.01	0.81 ± 0.02	0.90 ± 0.02	0.837 ± 0.008	0.898 ± 0.010	0.882 ± 0.006	0.86 ± 0.02	0.84 ± 0.02	E Africa M	E Asia F	0.05
30	0.86 ± 0.02	0.751 ± 0.006	0.882 ± 0.007	0.798 ± 0.007	0.83 ± 0.01	0.86 ± 0.02	0.95 ± 0.01	0.891 ± 0.006	0.949 ± 0.007	0.921 ± 0.004	0.92 ± 0.01	0.89 ± 0.01	E Africa M	E Asia F	0.04
31	0.89 ± 0.02	0.823 ± 0.005	0.916 ± 0.007	0.851 ± 0.006	0.874 ± 0.010	0.89 ± 0.01	0.96 ± 0.01	0.935 ± 0.005	0.970 ± 0.006	0.952 ± 0.003	0.95 ± 0.01	0.91 ± 0.01	E Europe M	E Asia F	0.03
32	0.93 ± 0.01	0.880 ± 0.004	0.949 ± 0.006	0.891 ± 0.005	0.915 ± 0.007	0.90 ± 0.01	0.980 ± 0.007	0.961 ± 0.004	0.984 ± 0.004	0.969 ± 0.003	0.968 ± 0.008	0.941 ± 0.010	E Europe M	E Asia F	0.02
33	0.93 ± 0.02	0.918 ± 0.004	0.964 ± 0.005	0.925 ± 0.004	0.937 ± 0.008	0.94 ± 0.01	0.978 ± 0.009	0.977 ± 0.003	0.991 ± 0.003	0.983 ± 0.002	0.978 ± 0.007	0.962 ± 0.007	E Europe M	E Asia F	0.01
34	0.96 ± 0.01	0.947 ± 0.003	0.979 ± 0.004	0.947 ± 0.004	0.960 ± 0.006	0.958 ± 0.010	0.987 ± 0.007	0.984 ± 0.002	0.997 ± 0.002	0.990 ± 0.001	0.989 ± 0.005	0.974 ± 0.006	E Europe M	E Asia F	0.01

Table 137. *For algorithm inbut-000 with Application images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.17 ± 0.03	0.019 ± 0.007	0.10 ± 0.03	0.05 ± 0.01	0.03 ± 0.02	0.22 ± 0.05	0.20 ± 0.03	0.034 ± 0.008	0.04 ± 0.02	0.07 ± 0.01	0.06 ± 0.02	0.10 ± 0.04	W Africa F	E Asia F	0.43
15	0.26 ± 0.05	0.040 ± 0.010	0.15 ± 0.03	0.09 ± 0.02	0.06 ± 0.02	0.24 ± 0.05	0.19 ± 0.04	0.06 ± 0.01	0.06 ± 0.02	0.08 ± 0.02	0.07 ± 0.02	0.18 ± 0.05	E Africa F	E Asia F	0.36
16	0.26 ± 0.04	0.06 ± 0.01	0.19 ± 0.04	0.09 ± 0.02	0.09 ± 0.03	0.35 ± 0.06	0.23 ± 0.05	0.07 ± 0.01	0.12 ± 0.03	0.11 ± 0.02	0.12 ± 0.03	0.22 ± 0.05	W Africa F	E Asia F	0.33
17	0.39 ± 0.05	0.08 ± 0.01	0.22 ± 0.04	0.16 ± 0.02	0.11 ± 0.03	0.40 ± 0.05	0.30 ± 0.05	0.10 ± 0.01	0.12 ± 0.03	0.13 ± 0.02	0.13 ± 0.03	0.27 ± 0.05	W Africa F	E Asia F	0.32
18	0.40 ± 0.04	0.10 ± 0.01	0.23 ± 0.03	0.15 ± 0.02	0.11 ± 0.02	0.45 ± 0.04	0.27 ± 0.03	0.10 ± 0.01	0.15 ± 0.03	0.14 ± 0.02	0.08 ± 0.02	0.24 ± 0.04	W Africa F	S E Asia M	0.33
19	0.53 ± 0.04	0.15 ± 0.02	0.29 ± 0.04	0.25 ± 0.02	0.16 ± 0.02	0.54 ± 0.04	0.39 ± 0.04	0.16 ± 0.01	0.24 ± 0.04	0.22 ± 0.02	0.14 ± 0.02	0.38 ± 0.05	W Africa F	S E Asia M	0.28
20	0.60 ± 0.04	0.22 ± 0.02	0.37 ± 0.03	0.34 ± 0.02	0.23 ± 0.03	0.66 ± 0.04	0.51 ± 0.04	0.22 ± 0.02	0.33 ± 0.04	0.30 ± 0.02	0.18 ± 0.03	0.49 ± 0.04	W Africa F	S E Asia M	0.25
21	0.68 ± 0.03	0.31 ± 0.02	0.50 ± 0.04	0.44 ± 0.02	0.31 ± 0.02	0.70 ± 0.04	0.64 ± 0.03	0.33 ± 0.02	0.43 ± 0.04	0.41 ± 0.02	0.29 ± 0.03	0.61 ± 0.04	W Africa F	S E Asia M	0.19
22	0.78 ± 0.03	0.39 ± 0.02	0.58 ± 0.03	0.54 ± 0.02	0.40 ± 0.02	0.77 ± 0.03	0.79 ± 0.03	0.44 ± 0.02	0.61 ± 0.04	0.57 ± 0.02	0.42 ± 0.03	0.68 ± 0.04	E Africa M	E Asia F	0.15
23	0.83 ± 0.02	0.52 ± 0.02	0.67 ± 0.02	0.65 ± 0.02	0.52 ± 0.02	0.87 ± 0.02	0.84 ± 0.03	0.56 ± 0.02	0.73 ± 0.03	0.70 ± 0.02	0.52 ± 0.03	0.81 ± 0.03	W Africa F	S E Asia M	0.12
24	0.87 ± 0.02	0.60 ± 0.02	0.77 ± 0.02	0.73 ± 0.01	0.62 ± 0.02	0.87 ± 0.02	0.91 ± 0.02	0.69 ± 0.02	0.83 ± 0.02	0.81 ± 0.01	0.67 ± 0.03	0.87 ± 0.02	E Africa M	E Asia F	0.08
25	0.90 ± 0.02	0.71 ± 0.01	0.83 ± 0.01	0.81 ± 0.01	0.69 ± 0.02	0.91 ± 0.02	0.93 ± 0.02	0.79 ± 0.02	0.89 ± 0.02	0.89 ± 0.01	0.77 ± 0.02	0.91 ± 0.02	E Africa M	S E Asia F	0.06
26	0.93 ± 0.01	0.78 ± 0.01	0.90 ± 0.01	0.850 ± 0.009	0.79 ± 0.02	0.94 ± 0.01	0.965 ± 0.010	0.87 ± 0.01	0.93 ± 0.02	0.928 ± 0.009	0.86 ± 0.02	0.94 ± 0.01	E Africa M	E Asia F	0.04
27	0.96 ± 0.01	0.855 ± 0.009	0.926 ± 0.009	0.890 ± 0.008	0.85 ± 0.01	0.96 ± 0.01	0.974 ± 0.009	0.92 ± 0.01	0.965 ± 0.010	0.955 ± 0.007	0.93 ± 0.01	0.963 ± 0.010	E Africa M	E Asia F	0.03
28	0.967 ± 0.010	0.893 ± 0.008	0.963 ± 0.007	0.921 ± 0.007	0.90 ± 0.01	0.975 ± 0.009	0.985 ± 0.007	0.961 ± 0.007	0.988 ± 0.006	0.972 ± 0.005	0.95 ± 0.01	0.980 ± 0.007	E Europe M	E Asia F	0.02
29	0.985 ± 0.007	0.937 ± 0.006	0.980 ± 0.005	0.946 ± 0.006	0.925 ± 0.009	0.980 ± 0.007	0.995 ± 0.004	0.980 ± 0.005	0.995 ± 0.003	0.984 ± 0.003	0.97 ± 0.01	0.994 ± 0.004	E Africa M	S E Asia F	0.01
30	0.981 ± 0.008	0.957 ± 0.005	0.983 ± 0.006	0.962 ± 0.005	0.947 ± 0.009	0.984 ± 0.006	0.995 ± 0.004	0.988 ± 0.004	0.997 ± 0.003	0.989 ± 0.003	0.984 ± 0.008	0.994 ± 0.004	E Europe M	S E Asia F	0.01
31	0.990 ± 0.006	0.975 ± 0.004	0.994 ± 0.003	0.972 ± 0.004	0.970 ± 0.007	0.991 ± 0.005	0.999 ± 0.002	0.997 ± 0.002	0.999 ± 0.002	0.995 ± 0.002	0.991 ± 0.007	0.995 ± 0.003	E Europe M	S E Asia F	0.01
32	0.995 ± 0.004	0.984 ± 0.003	0.997 ± 0.002	0.981 ± 0.004	0.984 ± 0.005	0.994 ± 0.005	0.999 ± 0.001	0.997 ± 0.002	0.999 ± 0.002	0.997 ± 0.001	0.998 ± 0.003	0.999 ± 0.002	E Africa M	S Asia F	0.00
33	0.995 ± 0.005	0.994 ± 0.002	0.995 ± 0.003	0.989 ± 0.003	0.988 ± 0.004	0.994 ± 0.004	1.000 ± 0.000	0.999 ± 0.002	0.999 ± 0.001	0.999 ± 0.001	0.997 ± 0.004	0.999 ± 0.002	E Africa M	S E Asia F	0.00
34	0.995 ± 0.004	0.996 ± 0.002	0.998 ± 0.002	0.992 ± 0.003	0.993 ± 0.004	0.995 ± 0.004	1.000 ± 0.000	0.999 ± 0.001	0.999 ± 0.001	0.999 ± 0.001	1.000 ± 0.000	0.998 ± 0.003	E Africa M	S Asia F	0.00

Table 138. *For algorithm inbut-000 with Border images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.31 ± 0.07	0.011 ± 0.004	0.006 ± 0.006	0.04 ± 0.01	0.011 ± 0.009	0.37 ± 0.07	0.23 ± 0.06	0.007 ± 0.003	0.000 ± 0.000	0.008 ± 0.005	0.02 ± 0.01	0.15 ± 0.06	W Africa F	E Europe M	0.72
15	0.39 ± 0.07	0.015 ± 0.004	0.05 ± 0.02	0.08 ± 0.01	0.03 ± 0.01	0.51 ± 0.07	0.28 ± 0.07	0.015 ± 0.004	0.004 ± 0.004	0.023 ± 0.008	0.02 ± 0.01	0.20 ± 0.06	W Africa F	E Europe M	0.67
16	0.48 ± 0.06	0.039 ± 0.007	0.06 ± 0.02	0.12 ± 0.02	0.04 ± 0.01	0.52 ± 0.07	0.40 ± 0.07	0.040 ± 0.006	0.03 ± 0.01	0.05 ± 0.01	0.04 ± 0.01	0.26 ± 0.05	W Africa F	E Europe M	0.58
17	0.53 ± 0.05	0.071 ± 0.008	0.09 ± 0.02	0.17 ± 0.02	0.06 ± 0.01	0.64 ± 0.06	0.47 ± 0.07	0.083 ± 0.008	0.04 ± 0.02	0.14 ± 0.02	0.08 ± 0.02	0.44 ± 0.06	W Africa F	E Europe M	0.51
18	0.62 ± 0.05	0.096 ± 0.008	0.15 ± 0.02	0.22 ± 0.02	0.10 ± 0.01	0.63 ± 0.05	0.57 ± 0.06	0.138 ± 0.010	0.13 ± 0.03	0.22 ± 0.02	0.13 ± 0.02	0.52 ± 0.05	W Africa F	E Asia F	0.41
19	0.66 ± 0.04	0.148 ± 0.008	0.20 ± 0.02	0.30 ± 0.02	0.14 ± 0.02	0.72 ± 0.04	0.69 ± 0.05	0.21 ± 0.01	0.19 ± 0.02	0.35 ± 0.02	0.18 ± 0.02	0.59 ± 0.05	W Africa F	S E Asia F	0.36
20	0.70 ± 0.04	0.210 ± 0.009	0.27 ± 0.02	0.36 ± 0.02	0.23 ± 0.02	0.80 ± 0.03	0.76 ± 0.04	0.29 ± 0.01	0.31 ± 0.03	0.48 ± 0.02	0.29 ± 0.02	0.70 ± 0.04	W Africa F	E Asia F	0.29
21	0.76 ± 0.03	0.264 ± 0.009	0.33 ± 0.02	0.42 ± 0.02	0.30 ± 0.02	0.82 ± 0.03	0.78 ± 0.04	0.39 ± 0.01	0.50 ± 0.03	0.61 ± 0.02	0.39 ± 0.03	0.83 ± 0.03	W Africa M	E Asia F	0.24
22	0.85 ± 0.03	0.334 ± 0.009	0.42 ± 0.02	0.50 ± 0.01	0.36 ± 0.02	0.87 ± 0.02	0.89 ± 0.03	0.49 ± 0.01	0.59 ± 0.03	0.72 ± 0.02	0.49 ± 0.03	0.86 ± 0.03	E Africa M	E Asia F	0.20
23	0.86 ± 0.02	0.399 ± 0.009	0.49 ± 0.01	0.56 ± 0.01	0.49 ± 0.02	0.90 ± 0.02	0.89 ± 0.02	0.57 ± 0.01	0.69 ± 0.02	0.79 ± 0.01	0.58 ± 0.03	0.90 ± 0.02	W Africa M	E Asia F	0.16
24	0.87 ± 0.02	0.482 ± 0.009	0.57 ± 0.01	0.64 ± 0.01	0.55 ± 0.02	0.91 ± 0.02	0.95 ± 0.02	0.66 ± 0.01	0.80 ± 0.02	0.863 ± 0.008	0.66 ± 0.02	0.92 ± 0.02	E Africa M	E Asia F	0.13
25	0.91 ± 0.02	0.556 ± 0.008	0.66 ± 0.01	0.691 ± 0.010	0.63 ± 0.02	0.94 ± 0.01	0.96 ± 0.01	0.73 ± 0.01	0.86 ± 0.02	0.894 ± 0.007	0.75 ± 0.02	0.96 ± 0.01	E Africa M	E Asia F	0.11
26	0.93 ± 0.01	0.632 ± 0.007	0.72 ± 0.01	0.736 ± 0.008	0.69 ± 0.01	0.94 ± 0.01	0.97 ± 0.01	0.794 ± 0.009	0.90 ± 0.01	0.926 ± 0.006	0.81 ± 0.02	0.959 ± 0.010	E Africa M	E Asia F	0.08
27	0.94 ± 0.01	0.684 ± 0.007	0.790 ± 0.009	0.776 ± 0.008	0.76 ± 0.01	0.962 ± 0.009	0.980 ± 0.009	0.837 ± 0.009	0.940 ± 0.008	0.947 ± 0.005	0.86 ± 0.02	0.984 ± 0.006	W Africa M	E Asia F	0.07
28	0.95 ± 0.01	0.750 ± 0.006	0.848 ± 0.008	0.816 ± 0.007	0.81 ± 0.01	0.965 ± 0.009	0.985 ± 0.007	0.878 ± 0.008	0.965 ± 0.006	0.965 ± 0.004	0.90 ± 0.01	0.983 ± 0.006	E Africa M	E Asia F	0.05
29	0.97 ± 0.01	0.804 ± 0.006	0.894 ± 0.007	0.849 ± 0.006	0.84 ± 0.01	0.975 ± 0.007	0.991 ± 0.005	0.908 ± 0.006	0.974 ± 0.005	0.970 ± 0.003	0.92 ± 0.01	0.989 ± 0.005	E Africa M	E Asia F	0.04
30	0.97 ± 0.01	0.841 ± 0.005	0.924 ± 0.006	0.883 ± 0.005	0.876 ± 0.010	0.979 ± 0.007	0.997 ± 0.003	0.929 ± 0.005	0.984 ± 0.004	0.982 ± 0.002	0.94 ± 0.01	0.993 ± 0.003	E Africa M	E Asia F	0.03
31	0.985 ± 0.007	0.873 ± 0.005	0.948 ± 0.006	0.911 ± 0.004	0.904 ± 0.008	0.986 ± 0.005	0.999 ± 0.002	0.949 ± 0.005	0.995 ± 0.003	0.986 ± 0.002	0.954 ± 0.010	0.994 ± 0.003	E Africa M	E Asia F	0.03
32	0.980 ± 0.008	0.901 ± 0.005	0.969 ± 0.004	0.929 ± 0.004	0.921 ± 0.008	0.987 ± 0.006	0.998 ± 0.002	0.961 ± 0.004	0.995 ± 0.002	0.991 ± 0.001	0.965 ± 0.009	0.995 ± 0.003	E Africa M	E Asia F	0.02
33	0.985 ± 0.008	0.926 ± 0.004	0.975 ± 0.004	0.945 ± 0.004	0.939 ± 0.008	0.991 ± 0.005	0.999 ± 0.002	0.970 ± 0.004	0.997 ± 0.002	0.992 ± 0.001	0.971 ± 0.007	0.998 ± 0.002	E Africa M	E Asia F	0.01
34	0.985 ± 0.007	0.943 ± 0.004	0.981 ± 0.004	0.960 ± 0.003	0.950 ± 0.007	0.993 ± 0.004	0.998 ± 0.003	0.977 ± 0.003	0.999 ± 0.001	0.995 ± 0.001	0.977 ± 0.007	0.998 ± 0.002	E Europe M	E Asia F	0.01

Table 139. *For algorithm incode-000 with Application images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.02 ± 0.01	0.007 ± 0.004	0.02 ± 0.01	0.008 ± 0.004	0.013 ± 0.009	0.008 ± 0.008	0.010 ± 0.008	0.002 ± 0.002	0.002 ± 0.002	0.003 ± 0.003	0.000 ± 0.000	0.004 ± 0.004	E Africa F	S E Asia M	0.47
15	0.03 ± 0.01	0.010 ± 0.005	0.02 ± 0.01	0.018 ± 0.008	0.02 ± 0.01	0.02 ± 0.02	0.008 ± 0.008	0.001 ± 0.001	0.000 ± 0.000	0.004 ± 0.003	0.000 ± 0.000	0.01 ± 0.01	E Africa F	E Europe M	0.47
16	0.08 ± 0.03	0.026 ± 0.009	0.04 ± 0.02	0.03 ± 0.01	0.05 ± 0.02	0.09 ± 0.03	0.03 ± 0.02	0.002 ± 0.002	0.006 ± 0.006	0.004 ± 0.003	0.006 ± 0.006	0.01 ± 0.01	W Africa F	E Asia M	0.52
17	0.11 ± 0.03	0.05 ± 0.01	0.07 ± 0.03	0.06 ± 0.02	0.06 ± 0.02	0.11 ± 0.03	0.02 ± 0.01	0.006 ± 0.004	0.003 ± 0.003	0.017 ± 0.007	0.01 ± 0.01	0.05 ± 0.02	E Africa F	E Europe M	0.46
18	0.15 ± 0.03	0.07 ± 0.01	0.08 ± 0.02	0.08 ± 0.01	0.09 ± 0.02	0.13 ± 0.03	0.04 ± 0.01	0.013 ± 0.004	0.013 ± 0.009	0.023 ± 0.006	0.015 ± 0.008	0.06 ± 0.02	E Africa F	E Europe M	0.42
19	0.24 ± 0.03	0.11 ± 0.01	0.14 ± 0.03	0.13 ± 0.02	0.14 ± 0.02	0.19 ± 0.04	0.12 ± 0.03	0.032 ± 0.007	0.03 ± 0.01	0.06 ± 0.01	0.03 ± 0.01	0.11 ± 0.03	E Africa F	E Europe M	0.34
20	0.30 ± 0.03	0.17 ± 0.01	0.22 ± 0.03	0.20 ± 0.02	0.22 ± 0.02	0.26 ± 0.03	0.20 ± 0.03	0.044 ± 0.009	0.07 ± 0.02	0.13 ± 0.02	0.09 ± 0.02	0.17 ± 0.03	E Africa F	E Asia M	0.27
21	0.39 ± 0.04	0.24 ± 0.02	0.29 ± 0.03	0.26 ± 0.02	0.31 ± 0.02	0.36 ± 0.04	0.30 ± 0.03	0.10 ± 0.01	0.12 ± 0.02	0.20 ± 0.02	0.16 ± 0.02	0.24 ± 0.04	E Africa F	E Asia M	0.22
22	0.47 ± 0.03	0.32 ± 0.02	0.40 ± 0.03	0.34 ± 0.02	0.38 ± 0.02	0.39 ± 0.04	0.46 ± 0.03	0.18 ± 0.02	0.23 ± 0.03	0.31 ± 0.02	0.21 ± 0.03	0.31 ± 0.03	E Africa F	E Asia M	0.17
23	0.56 ± 0.03	0.41 ± 0.02	0.50 ± 0.02	0.45 ± 0.02	0.49 ± 0.02	0.50 ± 0.03	0.51 ± 0.03	0.28 ± 0.02	0.34 ± 0.03	0.45 ± 0.02	0.35 ± 0.03	0.46 ± 0.03	E Africa F	E Asia M	0.11
24	0.63 ± 0.03	0.49 ± 0.02	0.61 ± 0.02	0.54 ± 0.02	0.57 ± 0.02	0.54 ± 0.03	0.64 ± 0.03	0.38 ± 0.02	0.50 ± 0.03	0.59 ± 0.02	0.46 ± 0.03	0.53 ± 0.03	E Africa M	E Asia M	0.08
25	0.69 ± 0.02	0.60 ± 0.01	0.70 ± 0.02	0.61 ± 0.01	0.67 ± 0.02	0.64 ± 0.03	0.74 ± 0.03	0.52 ± 0.02	0.65 ± 0.03	0.71 ± 0.02	0.61 ± 0.03	0.62 ± 0.03	E Africa M	E Asia M	0.05
26	0.77 ± 0.02	0.68 ± 0.01	0.79 ± 0.02	0.69 ± 0.01	0.75 ± 0.02	0.71 ± 0.03	0.80 ± 0.02	0.64 ± 0.02	0.75 ± 0.02	0.79 ± 0.01	0.72 ± 0.02	0.70 ± 0.02	E Africa M	E Asia M	0.04
27	0.81 ± 0.02	0.75 ± 0.01	0.85 ± 0.01	0.75 ± 0.01	0.82 ± 0.01	0.77 ± 0.02	0.86 ± 0.02	0.74 ± 0.02	0.86 ± 0.02	0.85 ± 0.01	0.81 ± 0.02	0.76 ± 0.02	E Africa M	E Asia M	0.04
28	0.85 ± 0.02	0.812 ± 0.010	0.91 ± 0.01	0.807 ± 0.010	0.86 ± 0.01	0.83 ± 0.02	0.90 ± 0.02	0.82 ± 0.01	0.91 ± 0.02	0.902 ± 0.009	0.87 ± 0.02	0.83 ± 0.02	E Europe F	S Asia F	0.03
29	0.90 ± 0.02	0.866 ± 0.009	0.946 ± 0.008	0.853 ± 0.009	0.911 ± 0.010	0.85 ± 0.02	0.94 ± 0.01	0.88 ± 0.01	0.95 ± 0.01	0.934 ± 0.007	0.91 ± 0.01	0.89 ± 0.02	E Europe M	S Asia F	0.02
30	0.92 ± 0.01	0.911 ± 0.007	0.963 ± 0.006	0.895 ± 0.008	0.942 ± 0.009	0.87 ± 0.02	0.95 ± 0.01	0.92 ± 0.01	0.973 ± 0.008	0.955 ± 0.006	0.96 ± 0.01	0.92 ± 0.01	E Europe M	W Africa F	0.02
31	0.93 ± 0.01	0.940 ± 0.006	0.984 ± 0.005	0.926 ± 0.007	0.962 ± 0.007	0.92 ± 0.01	0.968 ± 0.010	0.955 ± 0.007	0.984 ± 0.007	0.966 ± 0.005	0.96 ± 0.01	0.950 ± 0.010	E Europe F	W Africa F	0.01
32	0.96 ± 0.01	0.958 ± 0.006	0.990 ± 0.005	0.939 ± 0.006	0.971 ± 0.007	0.94 ± 0.01	0.976 ± 0.009	0.968 ± 0.006	0.994 ± 0.004	0.978 ± 0.004	0.986 ± 0.008	0.958 ± 0.010	E Europe M	W Africa F	0.01
33	0.974 ± 0.009	0.971 ± 0.004	0.993 ± 0.004	0.966 ± 0.005	0.984 ± 0.006	0.95 ± 0.01	0.989 ± 0.006	0.981 ± 0.005	0.997 ± 0.004	0.989 ± 0.003	0.991 ± 0.006	0.973 ± 0.008	E Europe M	W Africa F	0.01
34	0.97 ± 0.01	0.985 ± 0.003	0.996 ± 0.003	0.980 ± 0.004	0.990 ± 0.004	0.96 ± 0.01	0.993 ± 0.005	0.988 ± 0.004	0.997 ± 0.003	0.992 ± 0.003	0.992 ± 0.006	0.987 ± 0.006	E Europe M	W Africa F	0.01

Table 140. *For algorithm incode-000 with Border images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.33 ± 0.06	0.059 ± 0.010	0.22 ± 0.04	0.20 ± 0.02	0.06 ± 0.02	0.20 ± 0.06	0.27 ± 0.06	0.012 ± 0.004	0.06 ± 0.02	0.05 ± 0.01	0.02 ± 0.01	0.22 ± 0.06	E Africa F	E Asia M	0.44
15	0.33 ± 0.07	0.063 ± 0.008	0.27 ± 0.04	0.25 ± 0.02	0.10 ± 0.03	0.34 ± 0.06	0.37 ± 0.07	0.017 ± 0.005	0.06 ± 0.02	0.06 ± 0.01	0.02 ± 0.01	0.23 ± 0.07	E Africa M	E Asia M	0.45
16	0.43 ± 0.07	0.080 ± 0.009	0.32 ± 0.03	0.30 ± 0.03	0.13 ± 0.02	0.35 ± 0.06	0.34 ± 0.07	0.024 ± 0.005	0.11 ± 0.02	0.08 ± 0.01	0.03 ± 0.01	0.20 ± 0.05	E Africa F	E Asia M	0.42
17	0.48 ± 0.06	0.12 ± 0.01	0.40 ± 0.03	0.33 ± 0.02	0.14 ± 0.02	0.42 ± 0.06	0.43 ± 0.06	0.038 ± 0.006	0.12 ± 0.03	0.15 ± 0.02	0.05 ± 0.02	0.36 ± 0.05	E Africa F	E Asia M	0.38
18	0.55 ± 0.06	0.139 ± 0.009	0.45 ± 0.03	0.36 ± 0.02	0.20 ± 0.02	0.42 ± 0.05	0.46 ± 0.06	0.053 ± 0.006	0.19 ± 0.03	0.20 ± 0.02	0.07 ± 0.02	0.36 ± 0.04	E Africa F	E Asia M	0.34
19	0.58 ± 0.05	0.179 ± 0.009	0.50 ± 0.02	0.42 ± 0.02	0.23 ± 0.02	0.53 ± 0.04	0.52 ± 0.05	0.077 ± 0.007	0.24 ± 0.03	0.28 ± 0.02	0.13 ± 0.02	0.45 ± 0.05	E Africa F	E Asia M	0.30
20	0.65 ± 0.04	0.224 ± 0.009	0.56 ± 0.02	0.49 ± 0.02	0.29 ± 0.02	0.57 ± 0.04	0.60 ± 0.05	0.111 ± 0.008	0.35 ± 0.03	0.40 ± 0.02	0.16 ± 0.02	0.50 ± 0.04	E Africa F	E Asia M	0.26
21	0.69 ± 0.04	0.262 ± 0.009	0.62 ± 0.02	0.55 ± 0.02	0.37 ± 0.02	0.64 ± 0.04	0.69 ± 0.04	0.160 ± 0.009	0.44 ± 0.03	0.50 ± 0.02	0.23 ± 0.02	0.60 ± 0.04	E Africa M	E Asia M	0.23
22	0.78 ± 0.03	0.319 ± 0.010	0.68 ± 0.02	0.60 ± 0.01	0.41 ± 0.02	0.70 ± 0.03	0.76 ± 0.03	0.22 ± 0.01	0.56 ± 0.03	0.59 ± 0.02	0.34 ± 0.03	0.65 ± 0.03	E Africa F	E Asia M	0.20
23	0.79 ± 0.03	0.370 ± 0.009	0.74 ± 0.01	0.66 ± 0.01	0.52 ± 0.02	0.73 ± 0.03	0.82 ± 0.03	0.30 ± 0.01	0.67 ± 0.02	0.67 ± 0.01	0.42 ± 0.03	0.71 ± 0.03	E Africa M	E Asia M	0.16
24	0.84 ± 0.02	0.436 ± 0.009	0.80 ± 0.01	0.71 ± 0.01	0.56 ± 0.02	0.77 ± 0.02	0.86 ± 0.02	0.38 ± 0.01	0.75 ± 0.02	0.76 ± 0.01	0.49 ± 0.02	0.76 ± 0.03	E Africa M	E Asia M	0.14
25	0.83 ± 0.02	0.502 ± 0.009	0.849 ± 0.009	0.747 ± 0.008	0.64 ± 0.02	0.82 ± 0.02	0.89 ± 0.02	0.46 ± 0.01	0.82 ± 0.02	0.815 ± 0.010	0.59 ± 0.02	0.83 ± 0.02	E Africa M	E Asia M	0.11
26	0.89 ± 0.02	0.561 ± 0.008	0.874 ± 0.008	0.795 ± 0.008	0.69 ± 0.01	0.84 ± 0.02	0.92 ± 0.02	0.55 ± 0.01	0.88 ± 0.01	0.852 ± 0.007	0.67 ± 0.02	0.86 ± 0.02	E Africa M	E Asia M	0.09
27	0.90 ± 0.02	0.622 ± 0.008	0.906 ± 0.007	0.828 ± 0.007	0.75 ± 0.01	0.87 ± 0.02	0.95 ± 0.01	0.61 ± 0.01	0.91 ± 0.01	0.887 ± 0.006	0.76 ± 0.02	0.89 ± 0.01	E Africa M	E Asia M	0.08
28	0.93 ± 0.01	0.688 ± 0.007	0.935 ± 0.006	0.858 ± 0.006	0.80 ± 0.01	0.88 ± 0.01	0.96 ± 0.01	0.70 ± 0.01	0.947 ± 0.008	0.920 ± 0.005	0.81 ± 0.02	0.92 ± 0.01	E Africa M	E Asia F	0.06
29	0.94 ± 0.01	0.737 ± 0.006	0.954 ± 0.005	0.886 ± 0.005	0.83 ± 0.01	0.91 ± 0.01	0.979 ± 0.008	0.767 ± 0.009	0.953 ± 0.007	0.940 ± 0.004	0.87 ± 0.02	0.94 ± 0.01	E Africa M	E Asia F	0.05
30	0.94 ± 0.01	0.787 ± 0.006	0.970 ± 0.004	0.907 ± 0.005	0.878 ± 0.009	0.93 ± 0.01	0.979 ± 0.009	0.821 ± 0.008	0.975 ± 0.005	0.957 ± 0.003	0.89 ± 0.01	0.957 ± 0.008	E Africa M	E Asia F	0.04
31	0.97 ± 0.01	0.829 ± 0.005	0.978 ± 0.004	0.929 ± 0.004	0.905 ± 0.009	0.95 ± 0.01	0.983 ± 0.007	0.867 ± 0.007	0.987 ± 0.004	0.969 ± 0.003	0.91 ± 0.01	0.960 ± 0.007	E Europe M	E Asia F	0.03
32	0.976 ± 0.010	0.867 ± 0.005	0.986 ± 0.003	0.947 ± 0.004	0.929 ± 0.008	0.957 ± 0.009	0.991 ± 0.006	0.901 ± 0.006	0.992 ± 0.003	0.977 ± 0.002	0.94 ± 0.01	0.970 ± 0.007	E Europe M	E Asia F	0.02
33	0.978 ± 0.008	0.896 ± 0.005	0.989 ± 0.003	0.956 ± 0.003	0.934 ± 0.008	0.966 ± 0.009	0.991 ± 0.005	0.926 ± 0.005	0.992 ± 0.003	0.983 ± 0.002	0.950 ± 0.010	0.980 ± 0.006	E Europe M	E Asia F	0.02
34	0.980 ± 0.008	0.918 ± 0.004	0.991 ± 0.002	0.973 ± 0.003	0.958 ± 0.007	0.979 ± 0.008	0.993 ± 0.005	0.943 ± 0.005	0.997 ± 0.002	0.988 ± 0.002	0.971 ± 0.007	0.983 ± 0.005	E Europe M	E Asia F	0.01

Table 141. *For algorithm incode-001 with Application images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.02 ± 0.01	0.003 ± 0.002	0.005 ± 0.005	0.005 ± 0.004	0.007 ± 0.007	0.02 ± 0.01	0.004 ± 0.004	0.003 ± 0.002	0.000 ± 0.000	0.002 ± 0.002	0.002 ± 0.002	0.004 ± 0.004	E Africa F	E Europe M	0.53
15	0.03 ± 0.02	0.011 ± 0.005	0.01 ± 0.01	0.015 ± 0.008	0.02 ± 0.01	0.03 ± 0.02	0.01 ± 0.01	0.002 ± 0.002	0.000 ± 0.000	0.003 ± 0.003	0.000 ± 0.000	0.005 ± 0.005	E Africa F	E Europe M	0.53
16	0.07 ± 0.02	0.023 ± 0.008	0.04 ± 0.02	0.03 ± 0.01	0.06 ± 0.02	0.08 ± 0.03	0.02 ± 0.01	0.005 ± 0.003	0.003 ± 0.003	0.004 ± 0.003	0.000 ± 0.000	0.005 ± 0.005	W Africa F	S E Asia M	0.57
17	0.11 ± 0.03	0.07 ± 0.01	0.06 ± 0.02	0.06 ± 0.02	0.06 ± 0.02	0.16 ± 0.03	0.02 ± 0.01	0.011 ± 0.004	0.000 ± 0.000	0.011 ± 0.006	0.02 ± 0.01	0.04 ± 0.02	W Africa F	E Europe M	0.49
18	0.13 ± 0.03	0.10 ± 0.01	0.08 ± 0.02	0.10 ± 0.01	0.15 ± 0.02	0.19 ± 0.04	0.04 ± 0.01	0.022 ± 0.006	0.009 ± 0.007	0.025 ± 0.008	0.03 ± 0.01	0.06 ± 0.02	W Africa F	E Europe M	0.43
19	0.26 ± 0.03	0.17 ± 0.02	0.13 ± 0.03	0.16 ± 0.02	0.21 ± 0.02	0.27 ± 0.04	0.14 ± 0.03	0.07 ± 0.01	0.02 ± 0.01	0.06 ± 0.01	0.05 ± 0.02	0.14 ± 0.03	W Africa F	E Europe M	0.34
20	0.36 ± 0.03	0.26 ± 0.02	0.20 ± 0.03	0.24 ± 0.02	0.30 ± 0.03	0.35 ± 0.04	0.21 ± 0.03	0.13 ± 0.01	0.06 ± 0.02	0.13 ± 0.02	0.13 ± 0.02	0.20 ± 0.04	E Africa F	E Europe M	0.26
21	0.47 ± 0.04	0.37 ± 0.02	0.28 ± 0.03	0.32 ± 0.02	0.42 ± 0.02	0.46 ± 0.04	0.34 ± 0.04	0.24 ± 0.02	0.10 ± 0.02	0.23 ± 0.02	0.26 ± 0.03	0.29 ± 0.04	E Africa F	E Europe M	0.20
22	0.53 ± 0.03	0.50 ± 0.02	0.39 ± 0.03	0.41 ± 0.02	0.51 ± 0.02	0.54 ± 0.04	0.53 ± 0.04	0.40 ± 0.02	0.22 ± 0.03	0.35 ± 0.02	0.36 ± 0.03	0.37 ± 0.03	W Africa F	E Europe M	0.13
23	0.65 ± 0.03	0.60 ± 0.02	0.51 ± 0.02	0.52 ± 0.02	0.64 ± 0.02	0.67 ± 0.03	0.62 ± 0.04	0.55 ± 0.02	0.36 ± 0.04	0.52 ± 0.02	0.54 ± 0.03	0.54 ± 0.04	W Africa F	E Europe M	0.09
24	0.73 ± 0.03	0.69 ± 0.01	0.62 ± 0.02	0.60 ± 0.02	0.72 ± 0.02	0.71 ± 0.03	0.75 ± 0.03	0.68 ± 0.02	0.53 ± 0.03	0.65 ± 0.02	0.67 ± 0.03	0.64 ± 0.03	E Africa M	E Europe M	0.05
25	0.77 ± 0.02	0.78 ± 0.01	0.72 ± 0.02	0.67 ± 0.01	0.80 ± 0.02	0.78 ± 0.03	0.83 ± 0.02	0.80 ± 0.01	0.70 ± 0.03	0.78 ± 0.02	0.80 ± 0.02	0.76 ± 0.03	E Africa M	S Asia F	0.04
26	0.85 ± 0.02	0.84 ± 0.01	0.82 ± 0.01	0.74 ± 0.01	0.86 ± 0.01	0.86 ± 0.02	0.87 ± 0.02	0.88 ± 0.01	0.81 ± 0.02	0.86 ± 0.01	0.87 ± 0.02	0.82 ± 0.02	E Asia M	S Asia F	0.03
27	0.89 ± 0.02	0.894 ± 0.008	0.89 ± 0.01	0.804 ± 0.010	0.913 ± 0.010	0.88 ± 0.02	0.92 ± 0.01	0.926 ± 0.010	0.90 ± 0.02	0.903 ± 0.009	0.93 ± 0.02	0.88 ± 0.02	S E Asia M	S Asia F	0.02
28	0.93 ± 0.01	0.932 ± 0.006	0.947 ± 0.008	0.852 ± 0.009	0.938 ± 0.008	0.92 ± 0.01	0.95 ± 0.01	0.957 ± 0.007	0.94 ± 0.01	0.944 ± 0.006	0.96 ± 0.01	0.93 ± 0.01	S E Asia M	S Asia F	0.01
29	0.95 ± 0.01	0.954 ± 0.005	0.962 ± 0.008	0.893 ± 0.008	0.965 ± 0.007	0.94 ± 0.01	0.971 ± 0.010	0.977 ± 0.005	0.974 ± 0.009	0.965 ± 0.005	0.972 ± 0.009	0.960 ± 0.010	E Asia M	S Asia F	0.01
30	0.969 ± 0.009	0.974 ± 0.004	0.979 ± 0.006	0.928 ± 0.007	0.980 ± 0.006	0.96 ± 0.01	0.984 ± 0.006	0.989 ± 0.004	0.989 ± 0.006	0.976 ± 0.004	0.985 ± 0.008	0.974 ± 0.008	E Europe M	S Asia F	0.01
31	0.976 ± 0.009	0.981 ± 0.004	0.992 ± 0.004	0.952 ± 0.005	0.986 ± 0.004	0.971 ± 0.009	0.993 ± 0.005	0.992 ± 0.003	0.996 ± 0.003	0.987 ± 0.003	0.989 ± 0.007	0.984 ± 0.006	E Europe M	S Asia F	0.01
32	0.984 ± 0.007	0.991 ± 0.003	0.998 ± 0.002	0.968 ± 0.005	0.987 ± 0.005	0.986 ± 0.007	0.996 ± 0.004	0.996 ± 0.002	0.997 ± 0.003	0.993 ± 0.002	0.991 ± 0.006	0.988 ± 0.006	E Europe F	S Asia F	0.00
33	0.989 ± 0.006	0.992 ± 0.002	0.995 ± 0.003	0.978 ± 0.004	0.994 ± 0.003	0.990 ± 0.005	0.998 ± 0.002	0.997 ± 0.002	0.998 ± 0.003	0.995 ± 0.002	0.997 ± 0.004	0.992 ± 0.005	E Africa M	S Asia F	0.00
34	0.987 ± 0.007	0.996 ± 0.002	0.997 ± 0.003	0.989 ± 0.003	0.995 ± 0.003	0.991 ± 0.005	0.998 ± 0.002	0.999 ± 0.001	0.999 ± 0.002	0.998 ± 0.001	0.995 ± 0.005	0.997 ± 0.003	E Asia M	E Africa F	0.00

Table 142. *For algorithm incode-001 with Border images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.28 ± 0.07	0.047 ± 0.009	0.12 ± 0.03	0.09 ± 0.02	0.05 ± 0.02	0.22 ± 0.06	0.17 ± 0.06	0.011 ± 0.004	0.02 ± 0.01	0.018 ± 0.007	0.02 ± 0.01	0.14 ± 0.06	E Africa F	E Asia M	0.51
15	0.29 ± 0.06	0.058 ± 0.010	0.17 ± 0.03	0.14 ± 0.02	0.07 ± 0.02	0.36 ± 0.07	0.30 ± 0.07	0.016 ± 0.005	0.02 ± 0.01	0.018 ± 0.007	0.007 ± 0.007	0.18 ± 0.06	W Africa F	S E Asia M	0.53
16	0.38 ± 0.06	0.075 ± 0.009	0.22 ± 0.03	0.16 ± 0.02	0.11 ± 0.02	0.37 ± 0.06	0.28 ± 0.06	0.026 ± 0.005	0.05 ± 0.02	0.029 ± 0.008	0.011 ± 0.006	0.19 ± 0.05	E Africa F	S E Asia M	0.48
17	0.48 ± 0.06	0.11 ± 0.01	0.29 ± 0.03	0.21 ± 0.02	0.13 ± 0.02	0.46 ± 0.06	0.38 ± 0.07	0.041 ± 0.006	0.07 ± 0.02	0.09 ± 0.01	0.04 ± 0.01	0.29 ± 0.05	E Africa F	S E Asia M	0.44
18	0.50 ± 0.05	0.148 ± 0.010	0.36 ± 0.03	0.24 ± 0.02	0.17 ± 0.02	0.46 ± 0.05	0.44 ± 0.06	0.063 ± 0.006	0.14 ± 0.03	0.13 ± 0.01	0.05 ± 0.01	0.30 ± 0.04	E Africa F	S E Asia M	0.38
19	0.55 ± 0.05	0.20 ± 0.01	0.39 ± 0.02	0.30 ± 0.02	0.23 ± 0.02	0.62 ± 0.05	0.55 ± 0.05	0.115 ± 0.008	0.20 ± 0.03	0.21 ± 0.02	0.09 ± 0.02	0.44 ± 0.04	W Africa F	S E Asia M	0.33
20	0.65 ± 0.04	0.26 ± 0.01	0.47 ± 0.02	0.36 ± 0.02	0.29 ± 0.02	0.68 ± 0.04	0.61 ± 0.04	0.18 ± 0.01	0.31 ± 0.03	0.33 ± 0.02	0.17 ± 0.02	0.53 ± 0.04	W Africa F	S E Asia M	0.26
21	0.68 ± 0.04	0.305 ± 0.009	0.56 ± 0.02	0.41 ± 0.02	0.35 ± 0.02	0.73 ± 0.03	0.70 ± 0.04	0.26 ± 0.01	0.44 ± 0.03	0.46 ± 0.02	0.26 ± 0.02	0.63 ± 0.04	W Africa F	E Asia M	0.21
22	0.76 ± 0.04	0.370 ± 0.008	0.63 ± 0.02	0.47 ± 0.01	0.42 ± 0.02	0.78 ± 0.03	0.80 ± 0.03	0.35 ± 0.01	0.56 ± 0.03	0.56 ± 0.02	0.36 ± 0.03	0.72 ± 0.03	E Africa M	E Asia M	0.18
23	0.76 ± 0.03	0.434 ± 0.009	0.69 ± 0.01	0.52 ± 0.01	0.50 ± 0.02	0.79 ± 0.03	0.86 ± 0.03	0.45 ± 0.01	0.70 ± 0.02	0.65 ± 0.01	0.47 ± 0.02	0.79 ± 0.03	E Africa M	E Asia F	0.14
24	0.81 ± 0.03	0.500 ± 0.010	0.76 ± 0.01	0.59 ± 0.01	0.56 ± 0.02	0.84 ± 0.02	0.89 ± 0.02	0.55 ± 0.01	0.80 ± 0.02	0.75 ± 0.01	0.55 ± 0.03	0.84 ± 0.02	E Africa M	E Asia F	0.12
25	0.83 ± 0.02	0.570 ± 0.008	0.817 ± 0.010	0.639 ± 0.010	0.62 ± 0.02	0.88 ± 0.02	0.93 ± 0.02	0.65 ± 0.01	0.86 ± 0.01	0.812 ± 0.010	0.65 ± 0.02	0.90 ± 0.02	E Africa M	E Asia F	0.10
26	0.89 ± 0.02	0.634 ± 0.008	0.851 ± 0.009	0.691 ± 0.010	0.69 ± 0.02	0.91 ± 0.01	0.95 ± 0.02	0.735 ± 0.010	0.91 ± 0.01	0.859 ± 0.008	0.75 ± 0.02	0.91 ± 0.01	E Africa M	E Asia F	0.08
27	0.90 ± 0.02	0.689 ± 0.007	0.895 ± 0.007	0.737 ± 0.008	0.73 ± 0.01	0.93 ± 0.01	0.97 ± 0.01	0.795 ± 0.008	0.942 ± 0.009	0.896 ± 0.006	0.82 ± 0.02	0.95 ± 0.01	E Africa M	E Asia F	0.07
28	0.91 ± 0.02	0.748 ± 0.007	0.929 ± 0.006	0.778 ± 0.008	0.79 ± 0.01	0.93 ± 0.01	0.982 ± 0.008	0.850 ± 0.008	0.970 ± 0.006	0.928 ± 0.005	0.87 ± 0.02	0.963 ± 0.008	E Africa M	E Asia F	0.05
29	0.94 ± 0.01	0.798 ± 0.006	0.952 ± 0.005	0.814 ± 0.007	0.83 ± 0.01	0.95 ± 0.01	0.985 ± 0.008	0.891 ± 0.006	0.979 ± 0.005	0.950 ± 0.004	0.90 ± 0.01	0.974 ± 0.007	E Africa M	E Asia F	0.04
30	0.95 ± 0.01	0.840 ± 0.005	0.964 ± 0.004	0.855 ± 0.006	0.870 ± 0.010	0.963 ± 0.008	0.992 ± 0.006	0.923 ± 0.006	0.987 ± 0.004	0.966 ± 0.003	0.93 ± 0.01	0.978 ± 0.006	E Africa M	E Asia F	0.03
31	0.96 ± 0.01	0.873 ± 0.005	0.975 ± 0.004	0.881 ± 0.005	0.894 ± 0.009	0.972 ± 0.008	0.992 ± 0.005	0.948 ± 0.004	0.994 ± 0.002	0.976 ± 0.002	0.95 ± 0.01	0.986 ± 0.005	E Europe M	E Asia F	0.03
32	0.979 ± 0.009	0.900 ± 0.004	0.983 ± 0.003	0.906 ± 0.005	0.923 ± 0.008	0.978 ± 0.007	0.996 ± 0.004	0.964 ± 0.004	0.995 ± 0.002	0.985 ± 0.002	0.967 ± 0.009	0.990 ± 0.004	E Africa M	E Asia F	0.02
33	0.978 ± 0.008	0.927 ± 0.004	0.988 ± 0.003	0.925 ± 0.005	0.938 ± 0.008	0.983 ± 0.007	0.995 ± 0.004	0.974 ± 0.003	0.996 ± 0.002	0.987 ± 0.002	0.981 ± 0.006	0.997 ± 0.002	W Africa M	S Asia F	0.01
34	0.987 ± 0.006	0.941 ± 0.003	0.990 ± 0.003	0.943 ± 0.004	0.954 ± 0.007	0.988 ± 0.006	0.998 ± 0.003	0.981 ± 0.002	0.999 ± 0.001	0.992 ± 0.001	0.987 ± 0.005	0.995 ± 0.003	E Europe M	E Asia F	0.01

Table 143. *For algorithm innovatrics-000 with Application images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.03 ± 0.02	0.001 ± 0.001	0.002 ± 0.002	0.006 ± 0.004	0.000 ± 0.000	0.04 ± 0.02	0.012 ± 0.008	0.002 ± 0.002	0.000 ± 0.000	0.002 ± 0.002	0.002 ± 0.002	0.000 ± 0.000	W Africa F	S E Asia F	0.77
15	0.05 ± 0.02	0.003 ± 0.002	0.000 ± 0.000	0.018 ± 0.009	0.003 ± 0.003	0.08 ± 0.04	0.008 ± 0.008	0.001 ± 0.001	0.000 ± 0.000	0.004 ± 0.003	0.000 ± 0.000	0.005 ± 0.005	W Africa F	E Europe F	0.79
16	0.11 ± 0.03	0.015 ± 0.006	0.005 ± 0.005	0.015 ± 0.008	0.02 ± 0.01	0.12 ± 0.04	0.03 ± 0.02	0.001 ± 0.001	0.003 ± 0.003	0.006 ± 0.004	0.000 ± 0.000	0.02 ± 0.01	W Africa F	S E Asia M	0.70
17	0.20 ± 0.04	0.020 ± 0.007	0.01 ± 0.01	0.07 ± 0.02	0.01 ± 0.01	0.22 ± 0.05	0.03 ± 0.01	0.006 ± 0.004	0.000 ± 0.000	0.020 ± 0.008	0.003 ± 0.003	0.07 ± 0.03	W Africa F	E Europe M	0.68
18	0.23 ± 0.03	0.029 ± 0.007	0.02 ± 0.01	0.08 ± 0.01	0.03 ± 0.01	0.25 ± 0.04	0.07 ± 0.02	0.015 ± 0.005	0.011 ± 0.007	0.043 ± 0.009	0.010 ± 0.007	0.10 ± 0.03	W Africa F	S E Asia M	0.58
19	0.34 ± 0.04	0.07 ± 0.01	0.06 ± 0.02	0.14 ± 0.02	0.05 ± 0.01	0.37 ± 0.04	0.17 ± 0.03	0.030 ± 0.007	0.03 ± 0.01	0.10 ± 0.01	0.02 ± 0.01	0.20 ± 0.04	W Africa F	S E Asia M	0.50
20	0.45 ± 0.04	0.12 ± 0.01	0.09 ± 0.02	0.20 ± 0.02	0.08 ± 0.01	0.48 ± 0.04	0.28 ± 0.04	0.057 ± 0.010	0.07 ± 0.02	0.19 ± 0.02	0.04 ± 0.01	0.27 ± 0.04	W Africa F	S E Asia M	0.44
21	0.53 ± 0.04	0.18 ± 0.02	0.15 ± 0.02	0.31 ± 0.02	0.15 ± 0.02	0.53 ± 0.04	0.37 ± 0.03	0.12 ± 0.01	0.15 ± 0.02	0.30 ± 0.02	0.09 ± 0.02	0.40 ± 0.04	W Africa F	S E Asia M	0.34
22	0.63 ± 0.03	0.25 ± 0.02	0.24 ± 0.02	0.39 ± 0.02	0.21 ± 0.02	0.63 ± 0.04	0.56 ± 0.04	0.19 ± 0.02	0.28 ± 0.03	0.43 ± 0.02	0.14 ± 0.02	0.51 ± 0.04	W Africa F	S E Asia M	0.28
23	0.71 ± 0.03	0.35 ± 0.02	0.32 ± 0.03	0.51 ± 0.02	0.29 ± 0.02	0.72 ± 0.03	0.65 ± 0.03	0.30 ± 0.02	0.40 ± 0.03	0.58 ± 0.02	0.23 ± 0.03	0.66 ± 0.03	W Africa F	S E Asia M	0.22
24	0.76 ± 0.03	0.43 ± 0.02	0.47 ± 0.02	0.59 ± 0.02	0.39 ± 0.02	0.75 ± 0.03	0.78 ± 0.03	0.40 ± 0.02	0.57 ± 0.03	0.72 ± 0.02	0.35 ± 0.03	0.74 ± 0.03	E Africa M	S E Asia M	0.17
25	0.81 ± 0.02	0.55 ± 0.02	0.56 ± 0.02	0.68 ± 0.01	0.49 ± 0.02	0.82 ± 0.02	0.84 ± 0.02	0.54 ± 0.02	0.71 ± 0.03	0.82 ± 0.01	0.47 ± 0.03	0.82 ± 0.02	E Africa M	S E Asia M	0.12
26	0.85 ± 0.02	0.63 ± 0.01	0.68 ± 0.02	0.74 ± 0.01	0.60 ± 0.02	0.90 ± 0.02	0.89 ± 0.02	0.66 ± 0.02	0.79 ± 0.02	0.88 ± 0.01	0.61 ± 0.03	0.89 ± 0.02	W Africa F	S E Asia F	0.09
27	0.89 ± 0.02	0.72 ± 0.01	0.76 ± 0.01	0.80 ± 0.01	0.67 ± 0.02	0.91 ± 0.01	0.92 ± 0.01	0.75 ± 0.02	0.89 ± 0.02	0.923 ± 0.008	0.72 ± 0.02	0.92 ± 0.01	S Asia M	S E Asia F	0.07
28	0.92 ± 0.01	0.79 ± 0.01	0.85 ± 0.01	0.848 ± 0.009	0.76 ± 0.02	0.94 ± 0.01	0.96 ± 0.01	0.84 ± 0.01	0.94 ± 0.01	0.949 ± 0.006	0.82 ± 0.02	0.96 ± 0.01	W Africa M	S E Asia F	0.05
29	0.95 ± 0.01	0.852 ± 0.010	0.91 ± 0.01	0.887 ± 0.008	0.82 ± 0.01	0.96 ± 0.01	0.972 ± 0.009	0.90 ± 0.01	0.968 ± 0.009	0.971 ± 0.005	0.87 ± 0.02	0.976 ± 0.008	W Africa M	S E Asia F	0.03
30	0.96 ± 0.01	0.901 ± 0.007	0.935 ± 0.009	0.919 ± 0.007	0.88 ± 0.01	0.96 ± 0.01	0.986 ± 0.006	0.939 ± 0.008	0.987 ± 0.006	0.981 ± 0.004	0.92 ± 0.02	0.985 ± 0.006	E Europe M	S E Asia F	0.02
31	0.980 ± 0.007	0.929 ± 0.006	0.958 ± 0.008	0.936 ± 0.007	0.91 ± 0.01	0.985 ± 0.007	0.987 ± 0.006	0.966 ± 0.007	0.994 ± 0.004	0.989 ± 0.003	0.95 ± 0.01	0.992 ± 0.004	E Europe M	S E Asia F	0.02
32	0.984 ± 0.007	0.957 ± 0.005	0.980 ± 0.006	0.961 ± 0.005	0.944 ± 0.010	0.986 ± 0.007	0.993 ± 0.004	0.977 ± 0.005	0.994 ± 0.004	0.995 ± 0.002	0.972 ± 0.010	0.994 ± 0.004	S Asia M	S E Asia F	0.01
33	0.987 ± 0.006	0.976 ± 0.004	0.987 ± 0.005	0.975 ± 0.004	0.961 ± 0.009	0.996 ± 0.004	0.999 ± 0.002	0.988 ± 0.004	0.997 ± 0.003	0.998 ± 0.001	0.984 ± 0.008	0.998 ± 0.002	E Africa M	S E Asia F	0.01
34	0.987 ± 0.006	0.982 ± 0.004	0.991 ± 0.004	0.984 ± 0.004	0.974 ± 0.006	0.993 ± 0.005	0.998 ± 0.003	0.993 ± 0.003	0.999 ± 0.002	0.998 ± 0.001	0.990 ± 0.007	0.999 ± 0.002	W Africa M	S E Asia F	0.00

Table 144. *For algorithm innovatrics-000 with Border images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.12 ± 0.05	0.002 ± 0.001	0.004 ± 0.004	0.024 ± 0.009	0.000 ± 0.000	0.11 ± 0.05	0.07 ± 0.04	0.000 ± 0.000	0.000 ± 0.000	0.001 ± 0.001	0.004 ± 0.004	0.04 ± 0.03	E Africa F	S E Asia F	0.75
15	0.16 ± 0.05	0.002 ± 0.001	0.004 ± 0.004	0.04 ± 0.01	0.000 ± 0.000	0.22 ± 0.06	0.11 ± 0.04	0.002 ± 0.002	0.000 ± 0.000	0.004 ± 0.003	0.004 ± 0.004	0.12 ± 0.04	W Africa F	S E Asia F	0.73
16	0.30 ± 0.06	0.007 ± 0.003	0.012 ± 0.008	0.07 ± 0.01	0.007 ± 0.005	0.25 ± 0.05	0.16 ± 0.05	0.004 ± 0.002	0.007 ± 0.005	0.009 ± 0.004	0.000 ± 0.000	0.11 ± 0.04	E Africa F	S E Asia M	0.71
17	0.35 ± 0.06	0.019 ± 0.004	0.03 ± 0.01	0.10 ± 0.01	0.008 ± 0.005	0.38 ± 0.06	0.20 ± 0.05	0.011 ± 0.003	0.005 ± 0.005	0.05 ± 0.01	0.005 ± 0.004	0.21 ± 0.05	W Africa F	S E Asia M	0.65
18	0.43 ± 0.05	0.028 ± 0.004	0.07 ± 0.01	0.15 ± 0.02	0.014 ± 0.006	0.37 ± 0.05	0.29 ± 0.05	0.019 ± 0.004	0.03 ± 0.01	0.09 ± 0.01	0.011 ± 0.006	0.27 ± 0.04	E Africa F	S E Asia M	0.58
19	0.48 ± 0.05	0.045 ± 0.005	0.10 ± 0.01	0.22 ± 0.01	0.033 ± 0.008	0.52 ± 0.04	0.46 ± 0.05	0.041 ± 0.005	0.06 ± 0.02	0.20 ± 0.02	0.025 ± 0.009	0.36 ± 0.04	W Africa F	S E Asia M	0.52
20	0.61 ± 0.04	0.080 ± 0.006	0.14 ± 0.02	0.29 ± 0.02	0.06 ± 0.01	0.62 ± 0.04	0.53 ± 0.05	0.077 ± 0.006	0.12 ± 0.02	0.32 ± 0.02	0.06 ± 0.01	0.48 ± 0.04	W Africa F	S E Asia M	0.46
21	0.67 ± 0.03	0.112 ± 0.007	0.19 ± 0.01	0.35 ± 0.02	0.08 ± 0.01	0.69 ± 0.03	0.62 ± 0.04	0.125 ± 0.008	0.23 ± 0.02	0.45 ± 0.02	0.10 ± 0.01	0.64 ± 0.04	W Africa F	S E Asia F	0.40
22	0.77 ± 0.03	0.157 ± 0.007	0.28 ± 0.01	0.44 ± 0.01	0.14 ± 0.01	0.77 ± 0.03	0.75 ± 0.03	0.206 ± 0.010	0.35 ± 0.03	0.58 ± 0.02	0.16 ± 0.02	0.73 ± 0.03	E Africa F	S E Asia F	0.35
23	0.81 ± 0.03	0.217 ± 0.008	0.36 ± 0.01	0.51 ± 0.01	0.22 ± 0.01	0.81 ± 0.02	0.81 ± 0.03	0.30 ± 0.01	0.49 ± 0.02	0.68 ± 0.01	0.24 ± 0.02	0.81 ± 0.02	W Africa F	E Asia F	0.28
24	0.85 ± 0.02	0.286 ± 0.008	0.45 ± 0.01	0.60 ± 0.01	0.28 ± 0.02	0.85 ± 0.02	0.88 ± 0.02	0.40 ± 0.01	0.63 ± 0.02	0.78 ± 0.01	0.34 ± 0.02	0.86 ± 0.02	E Africa M	S E Asia F	0.24
25	0.89 ± 0.02	0.365 ± 0.008	0.56 ± 0.01	0.656 ± 0.010	0.37 ± 0.02	0.89 ± 0.02	0.92 ± 0.02	0.49 ± 0.01	0.73 ± 0.02	0.850 ± 0.008	0.44 ± 0.02	0.91 ± 0.02	E Africa M	E Asia F	0.19
26	0.91 ± 0.02	0.454 ± 0.008	0.64 ± 0.01	0.714 ± 0.009	0.46 ± 0.02	0.91 ± 0.01	0.96 ± 0.01	0.59 ± 0.01	0.81 ± 0.01	0.896 ± 0.007	0.55 ± 0.02	0.93 ± 0.01	E Africa M	E Asia F	0.15
27	0.92 ± 0.02	0.525 ± 0.007	0.73 ± 0.01	0.766 ± 0.008	0.54 ± 0.02	0.94 ± 0.01	0.96 ± 0.01	0.67 ± 0.01	0.89 ± 0.01	0.932 ± 0.005	0.66 ± 0.02	0.967 ± 0.009	W Africa M	E Asia F	0.12
28	0.95 ± 0.01	0.608 ± 0.007	0.798 ± 0.009	0.817 ± 0.007	0.62 ± 0.02	0.947 ± 0.010	0.977 ± 0.009	0.748 ± 0.009	0.934 ± 0.009	0.956 ± 0.004	0.73 ± 0.02	0.977 ± 0.007	W Africa M	E Asia F	0.09
29	0.966 ± 0.010	0.682 ± 0.007	0.860 ± 0.008	0.848 ± 0.006	0.69 ± 0.01	0.969 ± 0.008	0.991 ± 0.005	0.817 ± 0.008	0.951 ± 0.008	0.966 ± 0.003	0.80 ± 0.02	0.988 ± 0.005	E Africa M	E Asia F	0.07
30	0.970 ± 0.009	0.743 ± 0.006	0.905 ± 0.007	0.886 ± 0.005	0.75 ± 0.01	0.975 ± 0.008	0.994 ± 0.005	0.867 ± 0.007	0.980 ± 0.005	0.980 ± 0.002	0.86 ± 0.02	0.990 ± 0.004	E Africa M	E Asia F	0.06
31	0.979 ± 0.008	0.802 ± 0.006	0.936 ± 0.006	0.915 ± 0.005	0.80 ± 0.01	0.980 ± 0.007	0.997 ± 0.004	0.908 ± 0.005	0.988 ± 0.004	0.988 ± 0.002	0.89 ± 0.01	0.993 ± 0.004	E Africa M	S E Asia F	0.04
32	0.987 ± 0.006	0.852 ± 0.005	0.962 ± 0.005	0.934 ± 0.004	0.85 ± 0.01	0.989 ± 0.005	0.997 ± 0.003	0.940 ± 0.004	0.992 ± 0.003	0.992 ± 0.001	0.92 ± 0.01	0.995 ± 0.003	E Africa M	S E Asia F	0.03
33	0.987 ± 0.007	0.887 ± 0.004	0.974 ± 0.004	0.953 ± 0.004	0.895 ± 0.009	0.993 ± 0.004	0.999 ± 0.002	0.956 ± 0.004	0.998 ± 0.001	0.995 ± 0.001	0.956 ± 0.009	0.997 ± 0.002	E Africa M	E Asia F	0.02
34	0.990 ± 0.006	0.920 ± 0.004	0.982 ± 0.004	0.967 ± 0.003	0.920 ± 0.009	0.994 ± 0.004	0.999 ± 0.002	0.969 ± 0.003	0.998 ± 0.001	0.997 ± 0.001	0.963 ± 0.009	0.998 ± 0.002	E Africa M	S E Asia F	0.02

Table 145. *For algorithm innovatrics-001 with Application images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.02 ± 0.01	0.000 ± 0.000	0.000 ± 0.000	0.005 ± 0.003	0.000 ± 0.000	0.04 ± 0.02	0.010 ± 0.008	0.001 ± 0.001	0.000 ± 0.000	0.003 ± 0.002	0.000 ± 0.000	0.000 ± 0.000	W Africa F	E Asia F	0.84
15	0.04 ± 0.02	0.002 ± 0.002	0.000 ± 0.000	0.011 ± 0.006	0.003 ± 0.003	0.07 ± 0.03	0.005 ± 0.005	0.000 ± 0.000	0.000 ± 0.000	0.003 ± 0.003	0.000 ± 0.000	0.005 ± 0.005	W Africa F	E Europe F	0.82
16	0.09 ± 0.03	0.008 ± 0.005	0.005 ± 0.005	0.011 ± 0.006	0.005 ± 0.005	0.13 ± 0.03	0.03 ± 0.02	0.000 ± 0.000	0.003 ± 0.003	0.006 ± 0.004	0.000 ± 0.000	0.01 ± 0.01	W Africa F	E Asia M	0.75
17	0.17 ± 0.04	0.014 ± 0.005	0.02 ± 0.01	0.04 ± 0.01	0.01 ± 0.01	0.22 ± 0.04	0.02 ± 0.01	0.004 ± 0.003	0.000 ± 0.000	0.012 ± 0.006	0.003 ± 0.003	0.06 ± 0.02	W Africa F	E Europe M	0.71
18	0.20 ± 0.03	0.024 ± 0.006	0.02 ± 0.01	0.051 ± 0.009	0.020 ± 0.009	0.25 ± 0.04	0.06 ± 0.02	0.011 ± 0.004	0.007 ± 0.005	0.026 ± 0.007	0.006 ± 0.004	0.11 ± 0.03	W Africa F	S E Asia M	0.63
19	0.29 ± 0.03	0.051 ± 0.009	0.05 ± 0.02	0.10 ± 0.01	0.04 ± 0.01	0.37 ± 0.04	0.17 ± 0.03	0.019 ± 0.006	0.02 ± 0.01	0.06 ± 0.01	0.011 ± 0.007	0.19 ± 0.04	W Africa F	S E Asia M	0.56
20	0.40 ± 0.04	0.08 ± 0.01	0.06 ± 0.02	0.15 ± 0.02	0.06 ± 0.01	0.49 ± 0.04	0.26 ± 0.04	0.034 ± 0.007	0.05 ± 0.02	0.15 ± 0.02	0.022 ± 0.010	0.26 ± 0.04	W Africa F	S E Asia M	0.51
21	0.49 ± 0.04	0.14 ± 0.01	0.11 ± 0.02	0.24 ± 0.02	0.10 ± 0.01	0.55 ± 0.04	0.36 ± 0.03	0.08 ± 0.01	0.11 ± 0.02	0.25 ± 0.02	0.07 ± 0.02	0.37 ± 0.04	W Africa F	S E Asia M	0.40
22	0.59 ± 0.03	0.19 ± 0.02	0.19 ± 0.02	0.32 ± 0.02	0.16 ± 0.02	0.65 ± 0.03	0.53 ± 0.03	0.14 ± 0.01	0.22 ± 0.03	0.36 ± 0.02	0.10 ± 0.02	0.50 ± 0.04	W Africa F	S E Asia M	0.34
23	0.66 ± 0.03	0.28 ± 0.02	0.27 ± 0.02	0.44 ± 0.02	0.24 ± 0.02	0.75 ± 0.03	0.63 ± 0.03	0.22 ± 0.02	0.34 ± 0.03	0.53 ± 0.02	0.20 ± 0.02	0.63 ± 0.03	W Africa F	S E Asia M	0.27
24	0.72 ± 0.03	0.35 ± 0.01	0.40 ± 0.02	0.52 ± 0.02	0.34 ± 0.02	0.77 ± 0.03	0.73 ± 0.03	0.34 ± 0.02	0.49 ± 0.03	0.67 ± 0.02	0.30 ± 0.03	0.73 ± 0.03	W Africa F	S E Asia M	0.20
25	0.77 ± 0.02	0.48 ± 0.01	0.51 ± 0.02	0.61 ± 0.01	0.44 ± 0.02	0.84 ± 0.02	0.82 ± 0.02	0.47 ± 0.02	0.66 ± 0.03	0.77 ± 0.01	0.41 ± 0.03	0.80 ± 0.02	W Africa F	S E Asia M	0.15
26	0.82 ± 0.02	0.56 ± 0.01	0.63 ± 0.02	0.68 ± 0.01	0.55 ± 0.02	0.90 ± 0.02	0.88 ± 0.02	0.59 ± 0.02	0.76 ± 0.02	0.85 ± 0.01	0.56 ± 0.03	0.88 ± 0.02	W Africa F	S E Asia F	0.11
27	0.88 ± 0.02	0.66 ± 0.01	0.73 ± 0.02	0.74 ± 0.01	0.62 ± 0.02	0.92 ± 0.01	0.91 ± 0.01	0.70 ± 0.02	0.87 ± 0.02	0.898 ± 0.009	0.68 ± 0.03	0.91 ± 0.02	W Africa F	S E Asia F	0.08
28	0.91 ± 0.01	0.75 ± 0.01	0.82 ± 0.01	0.803 ± 0.010	0.72 ± 0.02	0.95 ± 0.01	0.95 ± 0.01	0.80 ± 0.01	0.93 ± 0.01	0.938 ± 0.007	0.79 ± 0.02	0.95 ± 0.01	E Africa M	S E Asia F	0.06
29	0.94 ± 0.01	0.81 ± 0.01	0.90 ± 0.01	0.855 ± 0.009	0.79 ± 0.01	0.96 ± 0.01	0.964 ± 0.010	0.89 ± 0.01	0.957 ± 0.010	0.962 ± 0.005	0.85 ± 0.02	0.973 ± 0.008	W Africa M	S E Asia F	0.04
30	0.95 ± 0.01	0.869 ± 0.008	0.92 ± 0.01	0.891 ± 0.008	0.85 ± 0.01	0.969 ± 0.009	0.982 ± 0.007	0.923 ± 0.009	0.982 ± 0.007	0.975 ± 0.004	0.90 ± 0.02	0.983 ± 0.006	W Africa M	S E Asia F	0.03
31	0.971 ± 0.010	0.911 ± 0.007	0.953 ± 0.008	0.919 ± 0.007	0.90 ± 0.01	0.984 ± 0.007	0.987 ± 0.007	0.957 ± 0.007	0.989 ± 0.006	0.984 ± 0.003	0.94 ± 0.01	0.991 ± 0.004	W Africa M	S E Asia F	0.02
32	0.981 ± 0.007	0.943 ± 0.006	0.976 ± 0.006	0.949 ± 0.005	0.932 ± 0.010	0.982 ± 0.007	0.993 ± 0.005	0.974 ± 0.006	0.994 ± 0.004	0.992 ± 0.002	0.97 ± 0.01	0.994 ± 0.004	E Europe M	S E Asia F	0.01
33	0.988 ± 0.006	0.963 ± 0.005	0.985 ± 0.005	0.965 ± 0.004	0.951 ± 0.009	0.995 ± 0.004	0.997 ± 0.004	0.985 ± 0.004	0.998 ± 0.002	0.996 ± 0.001	0.986 ± 0.007	0.996 ± 0.003	E Europe M	S E Asia F	0.01
34	0.985 ± 0.008	0.976 ± 0.004	0.990 ± 0.004	0.979 ± 0.004	0.971 ± 0.007	0.993 ± 0.004	0.999 ± 0.002	0.993 ± 0.003	0.999 ± 0.002	0.997 ± 0.002	0.986 ± 0.007	0.996 ± 0.004	E Africa M	S E Asia F	0.01

Table 146. *For algorithm innovatrics-001 with Border images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.12 ± 0.05	0.001 ± 0.001	0.004 ± 0.004	0.021 ± 0.008	0.000 ± 0.000	0.09 ± 0.04	0.06 ± 0.04	0.000 ± 0.000	0.000 ± 0.000	0.002 ± 0.002	0.002 ± 0.002	0.03 ± 0.02	E Africa F	S E Asia F	0.76
15	0.12 ± 0.04	0.001 ± 0.001	0.004 ± 0.004	0.03 ± 0.01	0.002 ± 0.002	0.19 ± 0.06	0.07 ± 0.04	0.002 ± 0.001	0.000 ± 0.000	0.003 ± 0.002	0.000 ± 0.000	0.10 ± 0.04	W Africa F	E Europe M	0.75
16	0.23 ± 0.06	0.004 ± 0.002	0.008 ± 0.006	0.06 ± 0.01	0.003 ± 0.003	0.21 ± 0.05	0.12 ± 0.05	0.002 ± 0.002	0.002 ± 0.002	0.007 ± 0.004	0.000 ± 0.000	0.10 ± 0.04	E Africa F	S E Asia M	0.72
17	0.29 ± 0.05	0.012 ± 0.004	0.03 ± 0.01	0.09 ± 0.01	0.007 ± 0.005	0.33 ± 0.05	0.18 ± 0.05	0.005 ± 0.002	0.003 ± 0.003	0.040 ± 0.009	0.003 ± 0.003	0.20 ± 0.04	W Africa F	S E Asia M	0.66
18	0.40 ± 0.05	0.021 ± 0.004	0.06 ± 0.01	0.12 ± 0.01	0.011 ± 0.006	0.33 ± 0.05	0.30 ± 0.05	0.011 ± 0.003	0.019 ± 0.009	0.068 ± 0.010	0.006 ± 0.004	0.26 ± 0.04	E Africa F	S E Asia M	0.61
19	0.45 ± 0.05	0.028 ± 0.004	0.08 ± 0.01	0.18 ± 0.01	0.022 ± 0.007	0.51 ± 0.04	0.44 ± 0.05	0.023 ± 0.004	0.05 ± 0.01	0.15 ± 0.01	0.015 ± 0.006	0.34 ± 0.05	W Africa F	S E Asia M	0.56
20	0.57 ± 0.04	0.054 ± 0.005	0.13 ± 0.01	0.23 ± 0.01	0.041 ± 0.009	0.60 ± 0.04	0.54 ± 0.05	0.044 ± 0.005	0.10 ± 0.02	0.26 ± 0.02	0.04 ± 0.01	0.47 ± 0.04	W Africa F	S E Asia M	0.50
21	0.65 ± 0.04	0.078 ± 0.005	0.17 ± 0.01	0.30 ± 0.01	0.064 ± 0.009	0.67 ± 0.04	0.61 ± 0.04	0.081 ± 0.008	0.21 ± 0.02	0.38 ± 0.02	0.07 ± 0.01	0.61 ± 0.04	W Africa F	S E Asia F	0.44
22	0.72 ± 0.03	0.110 ± 0.006	0.26 ± 0.02	0.38 ± 0.01	0.11 ± 0.01	0.76 ± 0.03	0.73 ± 0.04	0.141 ± 0.008	0.33 ± 0.02	0.51 ± 0.02	0.12 ± 0.02	0.73 ± 0.03	W Africa F	S E Asia F	0.39
23	0.77 ± 0.03	0.156 ± 0.007	0.33 ± 0.01	0.44 ± 0.01	0.16 ± 0.01	0.79 ± 0.02	0.80 ± 0.03	0.219 ± 0.010	0.48 ± 0.02	0.62 ± 0.01	0.19 ± 0.02	0.80 ± 0.03	E Africa M	E Asia F	0.33
24	0.81 ± 0.02	0.214 ± 0.007	0.43 ± 0.01	0.53 ± 0.01	0.22 ± 0.01	0.84 ± 0.02	0.87 ± 0.02	0.31 ± 0.01	0.61 ± 0.02	0.73 ± 0.01	0.27 ± 0.02	0.86 ± 0.02	E Africa M	E Asia F	0.28
25	0.86 ± 0.02	0.284 ± 0.008	0.53 ± 0.01	0.60 ± 0.01	0.30 ± 0.02	0.89 ± 0.02	0.92 ± 0.02	0.40 ± 0.01	0.72 ± 0.02	0.809 ± 0.009	0.37 ± 0.02	0.91 ± 0.02	E Africa M	E Asia F	0.23
26	0.90 ± 0.02	0.364 ± 0.007	0.62 ± 0.01	0.66 ± 0.01	0.38 ± 0.02	0.91 ± 0.01	0.95 ± 0.01	0.51 ± 0.01	0.81 ± 0.02	0.859 ± 0.008	0.48 ± 0.02	0.93 ± 0.01	E Africa M	E Asia F	0.19
27	0.90 ± 0.02	0.433 ± 0.008	0.710 ± 0.010	0.713 ± 0.008	0.47 ± 0.02	0.94 ± 0.01	0.96 ± 0.01	0.58 ± 0.01	0.88 ± 0.01	0.906 ± 0.006	0.59 ± 0.02	0.969 ± 0.008	W Africa M	E Asia F	0.15
28	0.93 ± 0.01	0.522 ± 0.007	0.782 ± 0.009	0.766 ± 0.008	0.55 ± 0.02	0.95 ± 0.01	0.974 ± 0.010	0.680 ± 0.009	0.936 ± 0.008	0.935 ± 0.005	0.66 ± 0.02	0.975 ± 0.007	W Africa M	E Asia F	0.12
29	0.95 ± 0.01	0.601 ± 0.007	0.852 ± 0.008	0.803 ± 0.007	0.62 ± 0.02	0.967 ± 0.009	0.989 ± 0.006	0.761 ± 0.009	0.951 ± 0.008	0.951 ± 0.004	0.75 ± 0.02	0.986 ± 0.005	E Africa M	E Asia F	0.10
30	0.96 ± 0.01	0.671 ± 0.007	0.897 ± 0.007	0.847 ± 0.006	0.69 ± 0.01	0.972 ± 0.008	0.990 ± 0.006	0.823 ± 0.008	0.976 ± 0.005	0.969 ± 0.003	0.82 ± 0.02	0.987 ± 0.004	E Africa M	E Asia F	0.07
31	0.97 ± 0.01	0.741 ± 0.006	0.933 ± 0.006	0.885 ± 0.005	0.75 ± 0.01	0.982 ± 0.007	0.995 ± 0.004	0.878 ± 0.006	0.983 ± 0.004	0.979 ± 0.002	0.87 ± 0.02	0.993 ± 0.004	E Africa M	E Asia F	0.06
32	0.987 ± 0.006	0.805 ± 0.005	0.959 ± 0.005	0.910 ± 0.005	0.81 ± 0.01	0.990 ± 0.005	0.997 ± 0.004	0.916 ± 0.006	0.991 ± 0.003	0.987 ± 0.002	0.91 ± 0.01	0.995 ± 0.003	E Africa M	E Asia F	0.04
33	0.990 ± 0.007	0.849 ± 0.005	0.973 ± 0.004	0.936 ± 0.004	0.85 ± 0.01	0.990 ± 0.005	0.999 ± 0.002	0.940 ± 0.005	0.997 ± 0.001	0.993 ± 0.001	0.94 ± 0.01	0.998 ± 0.002	E Africa M	E Asia F	0.03
34	0.990 ± 0.006	0.887 ± 0.005	0.982 ± 0.004	0.955 ± 0.003	0.89 ± 0.01	0.993 ± 0.004	1.000 ± 0.000	0.961 ± 0.004	0.998 ± 0.001	0.995 ± 0.001	0.959 ± 0.008	0.998 ± 0.002	E Africa M	E Asia F	0.02

Table 147. *For algorithm innovatrics-002 with Application images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.03 ± 0.02	0.000 ± 0.000	0.000 ± 0.000	0.004 ± 0.003	0.000 ± 0.000	0.06 ± 0.03	0.008 ± 0.006	0.001 ± 0.001	0.000 ± 0.000	0.003 ± 0.002	0.002 ± 0.002	0.009 ± 0.009	W Africa F	E Asia F	0.81
15	0.05 ± 0.02	0.005 ± 0.004	0.003 ± 0.003	0.016 ± 0.008	0.003 ± 0.003	0.10 ± 0.04	0.01 ± 0.01	0.000 ± 0.000	0.000 ± 0.000	0.002 ± 0.002	0.000 ± 0.000	0.009 ± 0.009	W Africa F	E Asia M	0.79
16	0.15 ± 0.03	0.011 ± 0.005	0.01 ± 0.01	0.018 ± 0.009	0.010 ± 0.008	0.18 ± 0.05	0.03 ± 0.02	0.001 ± 0.001	0.003 ± 0.003	0.006 ± 0.004	0.003 ± 0.003	0.03 ± 0.02	W Africa F	E Asia M	0.73
17	0.22 ± 0.04	0.024 ± 0.007	0.04 ± 0.02	0.05 ± 0.01	0.02 ± 0.01	0.31 ± 0.05	0.05 ± 0.02	0.008 ± 0.004	0.003 ± 0.003	0.021 ± 0.009	0.003 ± 0.003	0.09 ± 0.03	W Africa F	S E Asia M	0.68
18	0.26 ± 0.03	0.032 ± 0.007	0.03 ± 0.01	0.07 ± 0.01	0.04 ± 0.01	0.33 ± 0.04	0.09 ± 0.02	0.018 ± 0.005	0.015 ± 0.009	0.044 ± 0.009	0.010 ± 0.006	0.13 ± 0.03	W Africa F	S E Asia M	0.59
19	0.37 ± 0.04	0.07 ± 0.01	0.08 ± 0.02	0.12 ± 0.01	0.07 ± 0.02	0.48 ± 0.04	0.21 ± 0.03	0.035 ± 0.007	0.03 ± 0.01	0.11 ± 0.01	0.03 ± 0.01	0.26 ± 0.04	W Africa F	S E Asia M	0.51
20	0.47 ± 0.04	0.12 ± 0.01	0.11 ± 0.02	0.18 ± 0.02	0.10 ± 0.02	0.60 ± 0.04	0.32 ± 0.04	0.07 ± 0.01	0.07 ± 0.02	0.20 ± 0.02	0.06 ± 0.02	0.34 ± 0.04	W Africa F	S E Asia M	0.44
21	0.53 ± 0.04	0.20 ± 0.02	0.18 ± 0.03	0.27 ± 0.02	0.15 ± 0.02	0.64 ± 0.04	0.44 ± 0.04	0.14 ± 0.01	0.15 ± 0.03	0.31 ± 0.02	0.11 ± 0.02	0.44 ± 0.04	W Africa F	S E Asia M	0.34
22	0.64 ± 0.03	0.26 ± 0.02	0.27 ± 0.02	0.34 ± 0.02	0.23 ± 0.02	0.73 ± 0.04	0.62 ± 0.03	0.22 ± 0.02	0.30 ± 0.03	0.44 ± 0.02	0.16 ± 0.02	0.60 ± 0.04	W Africa F	S E Asia M	0.28
23	0.71 ± 0.03	0.36 ± 0.02	0.34 ± 0.02	0.44 ± 0.02	0.32 ± 0.02	0.82 ± 0.03	0.69 ± 0.03	0.34 ± 0.02	0.39 ± 0.03	0.61 ± 0.02	0.26 ± 0.03	0.70 ± 0.03	W Africa F	S E Asia M	0.22
24	0.76 ± 0.03	0.43 ± 0.02	0.48 ± 0.02	0.53 ± 0.02	0.40 ± 0.02	0.84 ± 0.02	0.79 ± 0.03	0.44 ± 0.02	0.56 ± 0.03	0.71 ± 0.02	0.39 ± 0.03	0.78 ± 0.03	W Africa F	S E Asia M	0.17
25	0.81 ± 0.02	0.54 ± 0.02	0.60 ± 0.02	0.60 ± 0.01	0.50 ± 0.02	0.88 ± 0.02	0.85 ± 0.02	0.57 ± 0.02	0.72 ± 0.03	0.81 ± 0.01	0.51 ± 0.03	0.85 ± 0.02	W Africa F	S E Asia F	0.13
26	0.84 ± 0.02	0.61 ± 0.01	0.69 ± 0.02	0.67 ± 0.01	0.59 ± 0.02	0.93 ± 0.02	0.91 ± 0.02	0.69 ± 0.02	0.78 ± 0.02	0.88 ± 0.01	0.64 ± 0.03	0.92 ± 0.02	W Africa F	S E Asia F	0.10
27	0.90 ± 0.01	0.71 ± 0.01	0.76 ± 0.02	0.72 ± 0.01	0.66 ± 0.02	0.95 ± 0.01	0.93 ± 0.01	0.78 ± 0.01	0.88 ± 0.02	0.916 ± 0.009	0.75 ± 0.03	0.94 ± 0.01	W Africa F	S E Asia F	0.07
28	0.92 ± 0.01	0.78 ± 0.01	0.84 ± 0.01	0.78 ± 0.01	0.74 ± 0.02	0.96 ± 0.01	0.96 ± 0.01	0.86 ± 0.01	0.94 ± 0.01	0.946 ± 0.007	0.83 ± 0.02	0.96 ± 0.01	W Africa F	S E Asia F	0.05
29	0.95 ± 0.01	0.835 ± 0.010	0.90 ± 0.01	0.84 ± 0.01	0.80 ± 0.02	0.967 ± 0.009	0.969 ± 0.009	0.913 ± 0.010	0.96 ± 0.01	0.966 ± 0.005	0.87 ± 0.02	0.982 ± 0.007	W Africa M	S E Asia F	0.04
30	0.96 ± 0.01	0.883 ± 0.008	0.92 ± 0.01	0.871 ± 0.009	0.86 ± 0.01	0.978 ± 0.008	0.987 ± 0.006	0.943 ± 0.008	0.982 ± 0.008	0.976 ± 0.004	0.92 ± 0.02	0.988 ± 0.005	W Africa M	S E Asia F	0.03
31	0.97 ± 0.01	0.919 ± 0.007	0.953 ± 0.009	0.896 ± 0.008	0.89 ± 0.01	0.991 ± 0.005	0.988 ± 0.007	0.968 ± 0.006	0.988 ± 0.006	0.987 ± 0.003	0.95 ± 0.01	0.995 ± 0.003	W Africa M	S E Asia F	0.02
32	0.981 ± 0.007	0.941 ± 0.006	0.975 ± 0.006	0.932 ± 0.007	0.92 ± 0.01	0.986 ± 0.005	0.996 ± 0.004	0.979 ± 0.005	0.994 ± 0.004	0.992 ± 0.002	0.970 ± 0.010	0.996 ± 0.003	W Africa M	S E Asia F	0.01
33	0.988 ± 0.006	0.962 ± 0.005	0.979 ± 0.006	0.947 ± 0.006	0.952 ± 0.009	0.997 ± 0.003	0.997 ± 0.003	0.988 ± 0.004	0.999 ± 0.002	0.996 ± 0.002	0.986 ± 0.008	0.998 ± 0.002	E Europe M	S Asia F	0.01
34	0.988 ± 0.006	0.975 ± 0.004	0.988 ± 0.005	0.965 ± 0.005	0.970 ± 0.007	0.994 ± 0.004	0.998 ± 0.002	0.995 ± 0.002	0.998 ± 0.002	0.996 ± 0.002	0.989 ± 0.006	0.999 ± 0.001	W Africa M	S Asia F	0.01

Table 148. *For algorithm innovatrics-002 with Border images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.07 ± 0.04	0.001 ± 0.001	0.000 ± 0.000	0.010 ± 0.006	0.000 ± 0.000	0.05 ± 0.03	0.03 ± 0.02	0.000 ± 0.000	0.000 ± 0.000	0.000 ± 0.000	0.000 ± 0.000	0.04 ± 0.03	E Africa F	E Europe F	0.77
15	0.10 ± 0.04	0.000 ± 0.000	0.000 ± 0.000	0.009 ± 0.005	0.002 ± 0.002	0.16 ± 0.05	0.03 ± 0.02	0.001 ± 0.001	0.002 ± 0.002	0.001 ± 0.001	0.000 ± 0.000	0.07 ± 0.04	W Africa F	E Asia F	0.81
16	0.18 ± 0.05	0.002 ± 0.001	0.005 ± 0.005	0.026 ± 0.008	0.000 ± 0.000	0.17 ± 0.04	0.07 ± 0.04	0.001 ± 0.001	0.002 ± 0.002	0.003 ± 0.003	0.000 ± 0.000	0.09 ± 0.04	E Africa F	S E Asia F	0.75
17	0.19 ± 0.04	0.007 ± 0.003	0.018 ± 0.009	0.031 ± 0.009	0.003 ± 0.003	0.24 ± 0.05	0.15 ± 0.05	0.003 ± 0.002	0.002 ± 0.002	0.020 ± 0.006	0.003 ± 0.003	0.19 ± 0.04	W Africa F	E Europe M	0.68
18	0.32 ± 0.05	0.010 ± 0.003	0.031 ± 0.010	0.061 ± 0.010	0.003 ± 0.003	0.26 ± 0.04	0.22 ± 0.04	0.005 ± 0.002	0.008 ± 0.006	0.030 ± 0.007	0.003 ± 0.003	0.20 ± 0.04	E Africa F	S E Asia F	0.67
19	0.38 ± 0.05	0.018 ± 0.003	0.043 ± 0.009	0.10 ± 0.01	0.011 ± 0.005	0.40 ± 0.04	0.35 ± 0.05	0.014 ± 0.003	0.019 ± 0.008	0.087 ± 0.010	0.009 ± 0.005	0.29 ± 0.04	W Africa F	S E Asia M	0.61
20	0.49 ± 0.04	0.031 ± 0.004	0.08 ± 0.01	0.13 ± 0.01	0.022 ± 0.006	0.49 ± 0.04	0.48 ± 0.05	0.027 ± 0.004	0.05 ± 0.01	0.17 ± 0.01	0.025 ± 0.008	0.39 ± 0.04	W Africa F	S E Asia F	0.56
21	0.57 ± 0.04	0.047 ± 0.004	0.11 ± 0.01	0.18 ± 0.01	0.038 ± 0.008	0.57 ± 0.04	0.53 ± 0.04	0.052 ± 0.005	0.12 ± 0.02	0.25 ± 0.01	0.05 ± 0.01	0.52 ± 0.04	W Africa F	S E Asia F	0.50
22	0.65 ± 0.04	0.074 ± 0.005	0.17 ± 0.01	0.24 ± 0.01	0.068 ± 0.010	0.66 ± 0.03	0.68 ± 0.04	0.098 ± 0.007	0.19 ± 0.02	0.36 ± 0.02	0.09 ± 0.01	0.64 ± 0.03	E Africa M	S E Asia F	0.45
23	0.69 ± 0.03	0.110 ± 0.006	0.24 ± 0.01	0.29 ± 0.01	0.12 ± 0.01	0.72 ± 0.03	0.75 ± 0.03	0.164 ± 0.009	0.32 ± 0.02	0.47 ± 0.01	0.15 ± 0.02	0.73 ± 0.03	E Africa M	E Asia F	0.38
24	0.76 ± 0.03	0.154 ± 0.006	0.30 ± 0.01	0.37 ± 0.01	0.15 ± 0.01	0.77 ± 0.02	0.82 ± 0.03	0.24 ± 0.01	0.46 ± 0.02	0.59 ± 0.01	0.21 ± 0.02	0.81 ± 0.02	E Africa M	S E Asia F	0.34
25	0.81 ± 0.02	0.213 ± 0.007	0.41 ± 0.01	0.423 ± 0.010	0.22 ± 0.01	0.82 ± 0.02	0.87 ± 0.02	0.32 ± 0.01	0.57 ± 0.02	0.68 ± 0.01	0.30 ± 0.02	0.86 ± 0.02	E Africa M	E Asia F	0.28
26	0.84 ± 0.02	0.280 ± 0.007	0.48 ± 0.01	0.491 ± 0.010	0.29 ± 0.01	0.85 ± 0.02	0.92 ± 0.02	0.42 ± 0.01	0.68 ± 0.02	0.757 ± 0.010	0.40 ± 0.02	0.89 ± 0.01	E Africa M	E Asia F	0.23
27	0.84 ± 0.02	0.345 ± 0.007	0.59 ± 0.01	0.551 ± 0.009	0.36 ± 0.01	0.90 ± 0.01	0.94 ± 0.02	0.50 ± 0.01	0.76 ± 0.02	0.817 ± 0.008	0.51 ± 0.02	0.95 ± 0.01	W Africa M	E Asia F	0.19
28	0.90 ± 0.02	0.428 ± 0.007	0.67 ± 0.01	0.609 ± 0.008	0.44 ± 0.01	0.91 ± 0.01	0.96 ± 0.01	0.60 ± 0.01	0.84 ± 0.01	0.874 ± 0.006	0.58 ± 0.02	0.958 ± 0.009	W Africa M	E Asia F	0.16
29	0.92 ± 0.01	0.502 ± 0.007	0.761 ± 0.010	0.666 ± 0.008	0.51 ± 0.01	0.94 ± 0.01	0.975 ± 0.010	0.684 ± 0.009	0.88 ± 0.01	0.904 ± 0.006	0.68 ± 0.02	0.975 ± 0.007	E Africa M	E Asia F	0.13
30	0.93 ± 0.01	0.576 ± 0.007	0.815 ± 0.009	0.724 ± 0.007	0.58 ± 0.01	0.94 ± 0.01	0.984 ± 0.007	0.756 ± 0.008	0.931 ± 0.008	0.934 ± 0.004	0.77 ± 0.02	0.981 ± 0.005	E Africa M	E Asia F	0.10
31	0.96 ± 0.01	0.648 ± 0.007	0.865 ± 0.008	0.776 ± 0.007	0.65 ± 0.01	0.970 ± 0.008	0.987 ± 0.007	0.823 ± 0.008	0.954 ± 0.007	0.953 ± 0.003	0.82 ± 0.02	0.990 ± 0.004	W Africa M	E Asia F	0.08
32	0.975 ± 0.010	0.722 ± 0.006	0.917 ± 0.007	0.817 ± 0.006	0.72 ± 0.01	0.974 ± 0.008	0.995 ± 0.005	0.875 ± 0.007	0.978 ± 0.005	0.967 ± 0.003	0.85 ± 0.02	0.991 ± 0.004	E Africa M	S E Asia F	0.06
33	0.973 ± 0.009	0.777 ± 0.006	0.938 ± 0.006	0.862 ± 0.006	0.77 ± 0.01	0.981 ± 0.007	0.998 ± 0.002	0.906 ± 0.006	0.987 ± 0.004	0.979 ± 0.002	0.91 ± 0.01	0.995 ± 0.003	E Africa M	S E Asia F	0.05
34	0.983 ± 0.008	0.826 ± 0.006	0.956 ± 0.006	0.896 ± 0.005	0.83 ± 0.01	0.986 ± 0.006	0.996 ± 0.004	0.936 ± 0.005	0.994 ± 0.002	0.987 ± 0.002	0.93 ± 0.01	0.997 ± 0.002	W Africa M	E Asia F	0.04

Table 149. *For algorithm jumio-000 with Application images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.07 ± 0.02	0.022 ± 0.007	0.06 ± 0.02	0.029 ± 0.009	0.04 ± 0.02	0.07 ± 0.03	0.04 ± 0.02	0.003 ± 0.002	0.08 ± 0.02	0.012 ± 0.005	0.005 ± 0.005	0.02 ± 0.01	E Europe M	E Asia M	0.42
15	0.11 ± 0.03	0.041 ± 0.010	0.08 ± 0.02	0.06 ± 0.02	0.07 ± 0.02	0.13 ± 0.04	0.03 ± 0.01	0.002 ± 0.002	0.08 ± 0.03	0.016 ± 0.007	0.005 ± 0.005	0.01 ± 0.01	W Africa F	E Asia M	0.47
16	0.18 ± 0.04	0.06 ± 0.01	0.11 ± 0.03	0.10 ± 0.02	0.12 ± 0.03	0.22 ± 0.05	0.04 ± 0.02	0.009 ± 0.005	0.08 ± 0.03	0.006 ± 0.004	0.011 ± 0.008	0.02 ± 0.01	W Africa F	S Asia M	0.50
17	0.25 ± 0.05	0.10 ± 0.01	0.16 ± 0.04	0.16 ± 0.02	0.15 ± 0.03	0.29 ± 0.05	0.04 ± 0.02	0.019 ± 0.006	0.11 ± 0.03	0.017 ± 0.008	0.03 ± 0.02	0.06 ± 0.03	W Africa F	S Asia M	0.45
18	0.28 ± 0.04	0.15 ± 0.01	0.18 ± 0.03	0.18 ± 0.02	0.20 ± 0.03	0.37 ± 0.04	0.07 ± 0.02	0.039 ± 0.008	0.13 ± 0.03	0.041 ± 0.009	0.03 ± 0.01	0.10 ± 0.03	W Africa F	S E Asia M	0.40
19	0.41 ± 0.04	0.23 ± 0.02	0.23 ± 0.03	0.28 ± 0.02	0.30 ± 0.03	0.47 ± 0.05	0.16 ± 0.03	0.09 ± 0.01	0.11 ± 0.02	0.08 ± 0.01	0.06 ± 0.02	0.21 ± 0.04	W Africa F	S E Asia M	0.34
20	0.51 ± 0.04	0.31 ± 0.02	0.31 ± 0.03	0.36 ± 0.02	0.41 ± 0.03	0.54 ± 0.04	0.27 ± 0.04	0.14 ± 0.01	0.16 ± 0.03	0.17 ± 0.02	0.17 ± 0.03	0.27 ± 0.04	W Africa F	E Asia M	0.26
21	0.59 ± 0.04	0.41 ± 0.02	0.39 ± 0.03	0.44 ± 0.02	0.50 ± 0.02	0.65 ± 0.04	0.36 ± 0.04	0.27 ± 0.02	0.23 ± 0.03	0.26 ± 0.02	0.27 ± 0.03	0.41 ± 0.04	W Africa F	E Europe M	0.20
22	0.65 ± 0.03	0.52 ± 0.02	0.49 ± 0.03	0.54 ± 0.02	0.60 ± 0.02	0.70 ± 0.03	0.54 ± 0.04	0.40 ± 0.02	0.37 ± 0.04	0.38 ± 0.02	0.39 ± 0.03	0.49 ± 0.04	W Africa F	E Europe M	0.13
23	0.73 ± 0.03	0.61 ± 0.02	0.58 ± 0.02	0.64 ± 0.02	0.68 ± 0.02	0.81 ± 0.03	0.62 ± 0.03	0.52 ± 0.02	0.47 ± 0.03	0.52 ± 0.02	0.54 ± 0.03	0.65 ± 0.03	W Africa F	E Europe M	0.09
24	0.80 ± 0.02	0.69 ± 0.01	0.70 ± 0.02	0.71 ± 0.01	0.78 ± 0.02	0.80 ± 0.03	0.76 ± 0.03	0.67 ± 0.02	0.63 ± 0.03	0.66 ± 0.02	0.67 ± 0.03	0.76 ± 0.03	W Africa F	E Europe M	0.05
25	0.83 ± 0.02	0.78 ± 0.01	0.78 ± 0.02	0.77 ± 0.01	0.83 ± 0.01	0.86 ± 0.02	0.83 ± 0.02	0.77 ± 0.02	0.76 ± 0.03	0.78 ± 0.02	0.77 ± 0.02	0.82 ± 0.02	W Africa F	E Europe M	0.02
26	0.88 ± 0.02	0.84 ± 0.01	0.83 ± 0.01	0.82 ± 0.01	0.88 ± 0.01	0.89 ± 0.02	0.89 ± 0.02	0.85 ± 0.01	0.84 ± 0.02	0.84 ± 0.01	0.86 ± 0.02	0.88 ± 0.02	W Africa F	S Asia F	0.02
27	0.90 ± 0.01	0.883 ± 0.009	0.90 ± 0.01	0.868 ± 0.009	0.92 ± 0.01	0.93 ± 0.01	0.91 ± 0.02	0.90 ± 0.01	0.93 ± 0.01	0.890 ± 0.009	0.92 ± 0.02	0.92 ± 0.01	E Europe M	S Asia F	0.01
28	0.93 ± 0.01	0.917 ± 0.007	0.937 ± 0.009	0.909 ± 0.007	0.943 ± 0.008	0.95 ± 0.01	0.95 ± 0.01	0.943 ± 0.008	0.95 ± 0.01	0.928 ± 0.007	0.94 ± 0.01	0.95 ± 0.01	E Europe M	S Asia F	0.01
29	0.95 ± 0.01	0.946 ± 0.005	0.956 ± 0.008	0.934 ± 0.007	0.963 ± 0.007	0.966 ± 0.010	0.972 ± 0.009	0.966 ± 0.007	0.969 ± 0.010	0.951 ± 0.006	0.97 ± 0.01	0.970 ± 0.009	E Africa M	S Asia F	0.01
30	0.966 ± 0.009	0.969 ± 0.005	0.972 ± 0.007	0.951 ± 0.005	0.978 ± 0.006	0.973 ± 0.009	0.980 ± 0.008	0.977 ± 0.005	0.985 ± 0.007	0.964 ± 0.005	0.981 ± 0.009	0.976 ± 0.008	E Europe M	S Asia F	0.01
31	0.968 ± 0.010	0.976 ± 0.004	0.985 ± 0.005	0.966 ± 0.004	0.986 ± 0.004	0.978 ± 0.007	0.990 ± 0.005	0.990 ± 0.004	0.992 ± 0.005	0.980 ± 0.004	0.981 ± 0.008	0.989 ± 0.005	E Europe M	S Asia F	0.01
32	0.978 ± 0.008	0.987 ± 0.003	0.989 ± 0.005	0.976 ± 0.004	0.988 ± 0.004	0.982 ± 0.007	0.993 ± 0.004	0.995 ± 0.003	0.996 ± 0.004	0.989 ± 0.003	0.989 ± 0.006	0.991 ± 0.005	E Europe M	S Asia F	0.00
33	0.993 ± 0.005	0.992 ± 0.002	0.994 ± 0.003	0.988 ± 0.003	0.996 ± 0.003	0.994 ± 0.005	0.998 ± 0.003	0.995 ± 0.003	0.999 ± 0.002	0.991 ± 0.003	0.997 ± 0.003	0.995 ± 0.004	E Europe M	S Asia F	0.00
34	0.990 ± 0.006	0.995 ± 0.002	0.997 ± 0.002	0.993 ± 0.002	0.998 ± 0.002	0.993 ± 0.004	0.995 ± 0.005	0.997 ± 0.002	0.999 ± 0.002	0.995 ± 0.002	0.996 ± 0.004	0.997 ± 0.003	E Europe M	E Africa F	0.00

Table 150. *For algorithm jumio-000 with Border images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.58 ± 0.08	0.26 ± 0.02	0.42 ± 0.05	0.41 ± 0.03	0.33 ± 0.04	0.42 ± 0.08	0.52 ± 0.08	0.15 ± 0.01	0.26 ± 0.04	0.29 ± 0.03	0.18 ± 0.04	0.45 ± 0.09	E Africa F	E Asia M	0.22
15	0.57 ± 0.07	0.28 ± 0.02	0.48 ± 0.05	0.44 ± 0.03	0.34 ± 0.04	0.60 ± 0.07	0.44 ± 0.08	0.15 ± 0.01	0.22 ± 0.04	0.22 ± 0.02	0.17 ± 0.03	0.33 ± 0.08	W Africa F	E Asia M	0.26
16	0.66 ± 0.06	0.32 ± 0.02	0.55 ± 0.04	0.50 ± 0.03	0.41 ± 0.04	0.65 ± 0.06	0.41 ± 0.07	0.16 ± 0.01	0.22 ± 0.03	0.20 ± 0.02	0.15 ± 0.03	0.35 ± 0.06	E Africa F	S E Asia M	0.28
17	0.69 ± 0.05	0.38 ± 0.02	0.65 ± 0.03	0.54 ± 0.03	0.45 ± 0.03	0.70 ± 0.06	0.47 ± 0.07	0.20 ± 0.01	0.22 ± 0.03	0.27 ± 0.02	0.20 ± 0.03	0.40 ± 0.05	W Africa F	S E Asia M	0.25
18	0.73 ± 0.05	0.42 ± 0.01	0.65 ± 0.03	0.60 ± 0.02	0.48 ± 0.03	0.66 ± 0.05	0.49 ± 0.05	0.24 ± 0.01	0.25 ± 0.03	0.29 ± 0.02	0.22 ± 0.02	0.43 ± 0.05	E Africa F	S E Asia M	0.24
19	0.77 ± 0.04	0.48 ± 0.01	0.71 ± 0.02	0.67 ± 0.02	0.53 ± 0.02	0.79 ± 0.04	0.50 ± 0.05	0.30 ± 0.01	0.32 ± 0.03	0.36 ± 0.02	0.30 ± 0.03	0.51 ± 0.05	W Africa F	E Asia M	0.20
20	0.80 ± 0.04	0.55 ± 0.01	0.76 ± 0.02	0.72 ± 0.02	0.59 ± 0.02	0.83 ± 0.03	0.65 ± 0.04	0.37 ± 0.01	0.42 ± 0.03	0.45 ± 0.02	0.39 ± 0.03	0.57 ± 0.04	W Africa F	E Asia M	0.16
21	0.85 ± 0.03	0.59 ± 0.01	0.80 ± 0.02	0.75 ± 0.01	0.65 ± 0.02	0.88 ± 0.03	0.67 ± 0.04	0.46 ± 0.01	0.50 ± 0.03	0.56 ± 0.02	0.46 ± 0.03	0.68 ± 0.04	W Africa F	S E Asia M	0.13
22	0.88 ± 0.03	0.661 ± 0.010	0.85 ± 0.01	0.81 ± 0.01	0.72 ± 0.02	0.89 ± 0.02	0.79 ± 0.03	0.56 ± 0.01	0.59 ± 0.02	0.65 ± 0.01	0.56 ± 0.03	0.76 ± 0.03	W Africa F	S E Asia M	0.10
23	0.91 ± 0.02	0.706 ± 0.009	0.88 ± 0.01	0.84 ± 0.01	0.78 ± 0.02	0.90 ± 0.02	0.81 ± 0.03	0.65 ± 0.01	0.71 ± 0.02	0.74 ± 0.01	0.63 ± 0.02	0.83 ± 0.03	E Africa F	S E Asia M	0.07
24	0.92 ± 0.02	0.750 ± 0.008	0.914 ± 0.008	0.874 ± 0.007	0.81 ± 0.01	0.92 ± 0.02	0.88 ± 0.02	0.729 ± 0.010	0.80 ± 0.02	0.81 ± 0.01	0.73 ± 0.02	0.88 ± 0.02	E Africa F	E Asia M	0.05
25	0.93 ± 0.01	0.800 ± 0.007	0.939 ± 0.006	0.884 ± 0.006	0.85 ± 0.01	0.93 ± 0.01	0.91 ± 0.02	0.801 ± 0.009	0.86 ± 0.01	0.865 ± 0.009	0.80 ± 0.02	0.89 ± 0.02	E Europe F	E Asia F	0.04
26	0.96 ± 0.01	0.840 ± 0.006	0.954 ± 0.005	0.910 ± 0.006	0.89 ± 0.01	0.95 ± 0.01	0.93 ± 0.02	0.851 ± 0.008	0.90 ± 0.01	0.898 ± 0.007	0.85 ± 0.02	0.93 ± 0.01	E Africa F	E Asia F	0.03
27	0.96 ± 0.01	0.870 ± 0.005	0.968 ± 0.005	0.928 ± 0.005	0.910 ± 0.009	0.96 ± 0.01	0.95 ± 0.01	0.901 ± 0.006	0.939 ± 0.009	0.924 ± 0.006	0.89 ± 0.01	0.95 ± 0.01	E Europe F	E Asia F	0.02
28	0.970 ± 0.009	0.900 ± 0.004	0.981 ± 0.003	0.943 ± 0.005	0.931 ± 0.008	0.964 ± 0.009	0.975 ± 0.009	0.931 ± 0.005	0.971 ± 0.006	0.948 ± 0.004	0.93 ± 0.01	0.963 ± 0.008	E Europe F	E Asia F	0.01
29	0.976 ± 0.009	0.923 ± 0.004	0.987 ± 0.002	0.957 ± 0.004	0.944 ± 0.007	0.975 ± 0.007	0.988 ± 0.006	0.953 ± 0.005	0.970 ± 0.006	0.963 ± 0.004	0.95 ± 0.01	0.975 ± 0.007	E Africa M	E Asia F	0.01
30	0.981 ± 0.008	0.942 ± 0.003	0.991 ± 0.002	0.968 ± 0.003	0.961 ± 0.006	0.982 ± 0.006	0.979 ± 0.009	0.967 ± 0.004	0.985 ± 0.004	0.976 ± 0.003	0.969 ± 0.009	0.981 ± 0.006	E Europe F	E Asia F	0.01
31	0.991 ± 0.006	0.958 ± 0.003	0.994 ± 0.002	0.973 ± 0.003	0.968 ± 0.006	0.981 ± 0.007	0.989 ± 0.006	0.979 ± 0.003	0.992 ± 0.003	0.983 ± 0.002	0.977 ± 0.008	0.984 ± 0.005	E Europe F	E Asia F	0.01
32	0.987 ± 0.007	0.970 ± 0.002	0.996 ± 0.001	0.981 ± 0.002	0.972 ± 0.005	0.990 ± 0.005	0.991 ± 0.005	0.985 ± 0.002	0.994 ± 0.003	0.988 ± 0.002	0.984 ± 0.006	0.992 ± 0.004	E Europe F	E Asia F	0.00
33	0.991 ± 0.006	0.977 ± 0.002	0.998 ± 0.001	0.985 ± 0.002	0.978 ± 0.005	0.992 ± 0.004	0.998 ± 0.003	0.989 ± 0.002	0.995 ± 0.002	0.991 ± 0.001	0.991 ± 0.005	0.993 ± 0.003	E Europe F	E Asia F	0.00
34	0.992 ± 0.006	0.982 ± 0.002	0.999 ± 0.001	0.990 ± 0.002	0.988 ± 0.004	0.995 ± 0.004	0.994 ± 0.005	0.990 ± 0.002	0.996 ± 0.002	0.994 ± 0.001	0.994 ± 0.004	0.993 ± 0.003	E Europe F	E Asia F	0.00

Table 151. *For algorithm neurotechnology-000 with Application images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.21 ± 0.04	0.12 ± 0.02	0.03 ± 0.01	0.04 ± 0.01	0.06 ± 0.02	0.53 ± 0.06	0.42 ± 0.04	0.16 ± 0.02	0.013 ± 0.009	0.05 ± 0.01	0.12 ± 0.03	0.65 ± 0.06	W Africa M	E Europe M	0.57
15	0.20 ± 0.04	0.19 ± 0.02	0.04 ± 0.02	0.07 ± 0.02	0.12 ± 0.03	0.49 ± 0.06	0.49 ± 0.05	0.22 ± 0.02	0.02 ± 0.01	0.10 ± 0.02	0.16 ± 0.04	0.67 ± 0.06	W Africa M	E Europe M	0.49
16	0.31 ± 0.05	0.20 ± 0.02	0.08 ± 0.03	0.10 ± 0.02	0.16 ± 0.03	0.59 ± 0.06	0.66 ± 0.05	0.29 ± 0.02	0.03 ± 0.01	0.14 ± 0.02	0.19 ± 0.04	0.76 ± 0.05	W Africa M	E Europe M	0.47
17	0.39 ± 0.05	0.24 ± 0.02	0.12 ± 0.03	0.13 ± 0.02	0.21 ± 0.04	0.64 ± 0.05	0.76 ± 0.05	0.36 ± 0.03	0.06 ± 0.02	0.20 ± 0.02	0.28 ± 0.04	0.84 ± 0.05	W Africa M	E Europe M	0.41
18	0.40 ± 0.04	0.26 ± 0.02	0.13 ± 0.03	0.14 ± 0.02	0.23 ± 0.03	0.66 ± 0.04	0.77 ± 0.04	0.41 ± 0.02	0.10 ± 0.03	0.27 ± 0.02	0.34 ± 0.03	0.85 ± 0.03	W Africa M	E Europe M	0.38
19	0.43 ± 0.04	0.28 ± 0.02	0.16 ± 0.03	0.18 ± 0.02	0.23 ± 0.03	0.74 ± 0.04	0.86 ± 0.03	0.46 ± 0.02	0.11 ± 0.02	0.36 ± 0.02	0.37 ± 0.03	0.91 ± 0.03	W Africa M	E Europe M	0.37
20	0.47 ± 0.03	0.30 ± 0.02	0.20 ± 0.03	0.22 ± 0.02	0.26 ± 0.03	0.75 ± 0.04	0.88 ± 0.03	0.51 ± 0.02	0.19 ± 0.03	0.44 ± 0.02	0.42 ± 0.03	0.95 ± 0.02	W Africa M	E Europe M	0.33
21	0.51 ± 0.04	0.33 ± 0.02	0.26 ± 0.03	0.26 ± 0.02	0.31 ± 0.02	0.79 ± 0.03	0.91 ± 0.02	0.55 ± 0.02	0.28 ± 0.04	0.51 ± 0.02	0.49 ± 0.04	0.95 ± 0.02	W Africa M	S Asia F	0.28
22	0.59 ± 0.03	0.35 ± 0.02	0.32 ± 0.02	0.28 ± 0.02	0.31 ± 0.02	0.83 ± 0.03	0.94 ± 0.02	0.59 ± 0.02	0.38 ± 0.04	0.58 ± 0.02	0.54 ± 0.03	0.96 ± 0.02	W Africa M	S Asia F	0.25
23	0.61 ± 0.03	0.40 ± 0.02	0.38 ± 0.02	0.34 ± 0.02	0.38 ± 0.02	0.84 ± 0.02	0.94 ± 0.02	0.66 ± 0.02	0.41 ± 0.03	0.64 ± 0.02	0.59 ± 0.03	0.98 ± 0.01	W Africa M	S Asia F	0.22
24	0.63 ± 0.03	0.42 ± 0.01	0.44 ± 0.02	0.38 ± 0.02	0.42 ± 0.02	0.86 ± 0.02	0.96 ± 0.01	0.69 ± 0.02	0.52 ± 0.03	0.71 ± 0.02	0.65 ± 0.03	0.987 ± 0.008	W Africa M	S Asia F	0.19
25	0.66 ± 0.02	0.47 ± 0.01	0.51 ± 0.02	0.42 ± 0.01	0.45 ± 0.02	0.85 ± 0.02	0.97 ± 0.01	0.73 ± 0.02	0.61 ± 0.03	0.76 ± 0.02	0.68 ± 0.03	0.986 ± 0.008	W Africa M	S Asia F	0.17
26	0.69 ± 0.02	0.50 ± 0.01	0.57 ± 0.02	0.45 ± 0.01	0.51 ± 0.02	0.89 ± 0.02	0.977 ± 0.008	0.78 ± 0.02	0.68 ± 0.03	0.79 ± 0.01	0.74 ± 0.03	0.991 ± 0.006	W Africa M	S Asia F	0.15
27	0.75 ± 0.02	0.53 ± 0.01	0.62 ± 0.02	0.48 ± 0.01	0.56 ± 0.02	0.91 ± 0.02	0.984 ± 0.007	0.81 ± 0.02	0.75 ± 0.02	0.82 ± 0.01	0.79 ± 0.02	0.990 ± 0.006	W Africa M	S Asia F	0.13
28	0.75 ± 0.02	0.59 ± 0.01	0.68 ± 0.02	0.52 ± 0.01	0.60 ± 0.02	0.92 ± 0.02	0.986 ± 0.007	0.85 ± 0.01	0.82 ± 0.02	0.83 ± 0.01	0.82 ± 0.02	0.991 ± 0.005	W Africa M	S Asia F	0.12
29	0.80 ± 0.02	0.63 ± 0.01	0.73 ± 0.02	0.56 ± 0.01	0.64 ± 0.02	0.93 ± 0.01	0.989 ± 0.006	0.90 ± 0.01	0.84 ± 0.02	0.857 ± 0.009	0.87 ± 0.02	0.997 ± 0.003	W Africa M	S Asia F	0.10
30	0.82 ± 0.02	0.68 ± 0.01	0.77 ± 0.02	0.59 ± 0.01	0.69 ± 0.02	0.93 ± 0.01	0.994 ± 0.004	0.924 ± 0.010	0.90 ± 0.01	0.878 ± 0.008	0.89 ± 0.02	0.996 ± 0.003	W Africa M	S Asia F	0.09
31	0.84 ± 0.02	0.71 ± 0.01	0.81 ± 0.01	0.63 ± 0.01	0.73 ± 0.02	0.95 ± 0.01	0.996 ± 0.004	0.937 ± 0.009	0.91 ± 0.02	0.899 ± 0.008	0.91 ± 0.02	0.995 ± 0.003	E Africa M	S Asia F	0.08
32	0.89 ± 0.02	0.76 ± 0.01	0.85 ± 0.01	0.66 ± 0.01	0.76 ± 0.02	0.94 ± 0.01	0.993 ± 0.004	0.947 ± 0.007	0.93 ± 0.02	0.917 ± 0.007	0.92 ± 0.02	0.999 ± 0.002	W Africa M	S Asia F	0.07
33	0.88 ± 0.02	0.78 ± 0.01	0.87 ± 0.01	0.69 ± 0.01	0.79 ± 0.02	0.95 ± 0.01	0.993 ± 0.005	0.964 ± 0.006	0.968 ± 0.009	0.936 ± 0.006	0.95 ± 0.01	0.999 ± 0.001	W Africa M	S Asia F	0.06
34	0.90 ± 0.02	0.83 ± 0.01	0.89 ± 0.01	0.73 ± 0.01	0.83 ± 0.01	0.96 ± 0.01	0.997 ± 0.003	0.970 ± 0.006	0.968 ± 0.009	0.948 ± 0.005	0.96 ± 0.01	0.999 ± 0.002	W Africa M	S Asia F	0.05

Table 152. *For algorithm neurotechnology-000 with Border images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.26 ± 0.07	0.06 ± 0.01	0.07 ± 0.02	0.09 ± 0.02	0.05 ± 0.02	0.47 ± 0.08	0.36 ± 0.07	0.10 ± 0.01	0.04 ± 0.02	0.08 ± 0.01	0.08 ± 0.02	0.52 ± 0.09	W Africa M	E Europe M	0.51
15	0.24 ± 0.06	0.083 ± 0.010	0.10 ± 0.02	0.12 ± 0.02	0.08 ± 0.02	0.49 ± 0.07	0.60 ± 0.07	0.14 ± 0.01	0.05 ± 0.02	0.12 ± 0.02	0.10 ± 0.02	0.65 ± 0.07	W Africa M	E Europe M	0.49
16	0.37 ± 0.06	0.10 ± 0.01	0.11 ± 0.02	0.14 ± 0.02	0.08 ± 0.02	0.51 ± 0.07	0.60 ± 0.07	0.19 ± 0.01	0.07 ± 0.02	0.14 ± 0.02	0.13 ± 0.03	0.70 ± 0.06	W Africa M	E Europe M	0.46
17	0.36 ± 0.05	0.12 ± 0.01	0.17 ± 0.03	0.17 ± 0.02	0.09 ± 0.02	0.60 ± 0.06	0.72 ± 0.06	0.24 ± 0.01	0.08 ± 0.02	0.22 ± 0.02	0.16 ± 0.02	0.74 ± 0.05	W Africa M	E Europe M	0.43
18	0.42 ± 0.05	0.131 ± 0.009	0.19 ± 0.02	0.19 ± 0.02	0.13 ± 0.02	0.63 ± 0.05	0.75 ± 0.06	0.27 ± 0.01	0.16 ± 0.03	0.26 ± 0.02	0.18 ± 0.02	0.82 ± 0.04	W Africa M	S E Asia F	0.40
19	0.45 ± 0.05	0.153 ± 0.009	0.25 ± 0.02	0.22 ± 0.02	0.13 ± 0.02	0.66 ± 0.04	0.82 ± 0.04	0.31 ± 0.01	0.18 ± 0.03	0.32 ± 0.02	0.23 ± 0.02	0.86 ± 0.03	W Africa M	S E Asia F	0.37
20	0.51 ± 0.04	0.180 ± 0.008	0.30 ± 0.02	0.25 ± 0.01	0.18 ± 0.02	0.67 ± 0.04	0.87 ± 0.03	0.35 ± 0.01	0.21 ± 0.03	0.43 ± 0.02	0.29 ± 0.02	0.84 ± 0.03	E Africa M	E Asia F	0.33
21	0.56 ± 0.04	0.195 ± 0.008	0.33 ± 0.02	0.28 ± 0.01	0.18 ± 0.01	0.69 ± 0.03	0.85 ± 0.03	0.40 ± 0.01	0.34 ± 0.03	0.49 ± 0.02	0.32 ± 0.02	0.89 ± 0.02	W Africa M	S E Asia F	0.30
22	0.60 ± 0.03	0.228 ± 0.008	0.38 ± 0.02	0.32 ± 0.01	0.22 ± 0.02	0.75 ± 0.03	0.88 ± 0.03	0.45 ± 0.01	0.38 ± 0.02	0.56 ± 0.02	0.38 ± 0.02	0.91 ± 0.02	W Africa M	S E Asia F	0.27
23	0.60 ± 0.04	0.237 ± 0.008	0.44 ± 0.02	0.34 ± 0.01	0.27 ± 0.02	0.76 ± 0.03	0.92 ± 0.02	0.49 ± 0.01	0.48 ± 0.02	0.61 ± 0.01	0.43 ± 0.03	0.94 ± 0.02	W Africa M	E Asia F	0.25
24	0.65 ± 0.03	0.276 ± 0.008	0.47 ± 0.01	0.38 ± 0.01	0.29 ± 0.02	0.80 ± 0.02	0.94 ± 0.02	0.55 ± 0.01	0.57 ± 0.02	0.67 ± 0.01	0.49 ± 0.03	0.95 ± 0.01	W Africa M	E Asia F	0.23
25	0.70 ± 0.03	0.321 ± 0.008	0.55 ± 0.01	0.410 ± 0.010	0.34 ± 0.02	0.84 ± 0.02	0.96 ± 0.01	0.60 ± 0.01	0.62 ± 0.02	0.71 ± 0.01	0.54 ± 0.02	0.96 ± 0.01	W Africa M	E Asia F	0.20
26	0.73 ± 0.02	0.350 ± 0.007	0.58 ± 0.01	0.444 ± 0.010	0.37 ± 0.01	0.84 ± 0.02	0.97 ± 0.01	0.64 ± 0.01	0.68 ± 0.02	0.738 ± 0.010	0.62 ± 0.02	0.975 ± 0.008	W Africa M	E Asia F	0.19
27	0.74 ± 0.03	0.379 ± 0.007	0.63 ± 0.01	0.473 ± 0.009	0.43 ± 0.02	0.85 ± 0.02	0.96 ± 0.01	0.68 ± 0.01	0.74 ± 0.02	0.779 ± 0.008	0.65 ± 0.02	0.973 ± 0.008	W Africa M	E Asia F	0.16
28	0.79 ± 0.02	0.422 ± 0.007	0.671 ± 0.010	0.513 ± 0.009	0.48 ± 0.01	0.87 ± 0.02	0.96 ± 0.01	0.725 ± 0.010	0.80 ± 0.01	0.811 ± 0.007	0.71 ± 0.02	0.982 ± 0.006	W Africa M	E Asia F	0.15
29	0.80 ± 0.02	0.460 ± 0.007	0.71 ± 0.01	0.537 ± 0.009	0.51 ± 0.02	0.87 ± 0.02	0.97 ± 0.01	0.767 ± 0.009	0.82 ± 0.01	0.834 ± 0.007	0.76 ± 0.02	0.988 ± 0.005	W Africa M	E Asia F	0.13
30	0.81 ± 0.02	0.506 ± 0.008	0.76 ± 0.01	0.570 ± 0.008	0.56 ± 0.02	0.89 ± 0.01	0.978 ± 0.009	0.798 ± 0.008	0.88 ± 0.01	0.856 ± 0.006	0.78 ± 0.02	0.983 ± 0.005	W Africa M	E Asia F	0.12
31	0.85 ± 0.02	0.553 ± 0.007	0.793 ± 0.010	0.594 ± 0.008	0.61 ± 0.01	0.90 ± 0.01	0.978 ± 0.008	0.832 ± 0.007	0.899 ± 0.009	0.879 ± 0.005	0.80 ± 0.02	0.990 ± 0.004	W Africa M	E Asia F	0.10
32	0.87 ± 0.02	0.595 ± 0.007	0.826 ± 0.010	0.642 ± 0.008	0.64 ± 0.01	0.92 ± 0.01	0.986 ± 0.006	0.858 ± 0.007	0.925 ± 0.008	0.902 ± 0.005	0.83 ± 0.02	0.991 ± 0.004	W Africa M	E Asia F	0.09
33	0.88 ± 0.02	0.631 ± 0.007	0.843 ± 0.009	0.674 ± 0.008	0.68 ± 0.02	0.92 ± 0.01	0.991 ± 0.005	0.890 ± 0.006	0.940 ± 0.007	0.921 ± 0.004	0.87 ± 0.02	0.990 ± 0.004	E Africa M	E Asia F	0.08
34	0.87 ± 0.02	0.677 ± 0.007	0.867 ± 0.009	0.711 ± 0.008	0.71 ± 0.01	0.94 ± 0.01	0.987 ± 0.007	0.896 ± 0.007	0.964 ± 0.006	0.930 ± 0.004	0.90 ± 0.01	0.990 ± 0.004	W Africa M	E Asia F	0.07

Table 153. *For algorithm neurotechnology-001 with Application images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.04 ± 0.02	0.13 ± 0.02	0.03 ± 0.02	0.04 ± 0.01	0.06 ± 0.02	0.02 ± 0.02	0.04 ± 0.02	0.16 ± 0.01	0.011 ± 0.009	0.05 ± 0.01	0.10 ± 0.03	0.01 ± 0.01	E Asia M	E Europe M	0.45
15	0.04 ± 0.02	0.19 ± 0.02	0.04 ± 0.02	0.07 ± 0.02	0.12 ± 0.03	0.04 ± 0.02	0.04 ± 0.02	0.23 ± 0.02	0.02 ± 0.01	0.09 ± 0.02	0.17 ± 0.03	0.04 ± 0.02	E Asia M	E Europe M	0.44
16	0.07 ± 0.02	0.21 ± 0.02	0.08 ± 0.03	0.10 ± 0.02	0.17 ± 0.04	0.06 ± 0.03	0.05 ± 0.02	0.30 ± 0.02	0.03 ± 0.01	0.12 ± 0.02	0.21 ± 0.04	0.03 ± 0.02	E Asia M	E Europe M	0.41
17	0.08 ± 0.03	0.26 ± 0.02	0.14 ± 0.03	0.13 ± 0.02	0.23 ± 0.04	0.09 ± 0.03	0.12 ± 0.03	0.37 ± 0.02	0.06 ± 0.02	0.20 ± 0.03	0.26 ± 0.04	0.10 ± 0.03	E Asia M	E Europe M	0.32
18	0.12 ± 0.02	0.26 ± 0.02	0.13 ± 0.03	0.14 ± 0.02	0.23 ± 0.03	0.11 ± 0.03	0.16 ± 0.03	0.41 ± 0.02	0.10 ± 0.02	0.25 ± 0.02	0.35 ± 0.04	0.15 ± 0.03	E Asia M	E Europe M	0.28
19	0.16 ± 0.03	0.29 ± 0.02	0.18 ± 0.03	0.18 ± 0.02	0.23 ± 0.03	0.15 ± 0.03	0.24 ± 0.03	0.46 ± 0.02	0.12 ± 0.03	0.34 ± 0.02	0.37 ± 0.04	0.21 ± 0.04	E Asia M	E Europe M	0.24
20	0.20 ± 0.03	0.31 ± 0.02	0.21 ± 0.03	0.21 ± 0.02	0.27 ± 0.03	0.20 ± 0.03	0.35 ± 0.04	0.52 ± 0.02	0.20 ± 0.03	0.42 ± 0.02	0.42 ± 0.03	0.31 ± 0.04	E Asia M	E Europe M	0.20
21	0.20 ± 0.03	0.34 ± 0.02	0.27 ± 0.03	0.26 ± 0.02	0.31 ± 0.03	0.23 ± 0.03	0.47 ± 0.04	0.55 ± 0.02	0.30 ± 0.04	0.49 ± 0.02	0.49 ± 0.04	0.38 ± 0.04	E Asia M	E Africa F	0.19
22	0.29 ± 0.03	0.35 ± 0.02	0.33 ± 0.03	0.28 ± 0.02	0.32 ± 0.02	0.28 ± 0.03	0.57 ± 0.03	0.60 ± 0.02	0.38 ± 0.04	0.56 ± 0.02	0.54 ± 0.03	0.47 ± 0.04	E Asia M	S Asia F	0.17
23	0.32 ± 0.03	0.41 ± 0.02	0.39 ± 0.03	0.35 ± 0.02	0.39 ± 0.02	0.34 ± 0.03	0.61 ± 0.03	0.66 ± 0.02	0.42 ± 0.04	0.61 ± 0.02	0.60 ± 0.03	0.57 ± 0.03	E Asia M	E Africa F	0.15
24	0.39 ± 0.03	0.43 ± 0.02	0.45 ± 0.02	0.39 ± 0.02	0.43 ± 0.02	0.36 ± 0.03	0.71 ± 0.03	0.69 ± 0.02	0.52 ± 0.03	0.69 ± 0.02	0.66 ± 0.03	0.64 ± 0.03	E Africa M	W Africa F	0.15
25	0.42 ± 0.03	0.48 ± 0.01	0.53 ± 0.02	0.42 ± 0.01	0.45 ± 0.02	0.42 ± 0.03	0.76 ± 0.03	0.74 ± 0.02	0.61 ± 0.03	0.74 ± 0.02	0.70 ± 0.03	0.70 ± 0.03	E Africa M	W Africa F	0.14
26	0.47 ± 0.03	0.51 ± 0.02	0.58 ± 0.02	0.45 ± 0.01	0.52 ± 0.02	0.48 ± 0.03	0.79 ± 0.02	0.79 ± 0.02	0.68 ± 0.03	0.77 ± 0.01	0.73 ± 0.02	0.76 ± 0.02	E Asia M	S Asia F	0.13
27	0.53 ± 0.02	0.55 ± 0.01	0.63 ± 0.02	0.48 ± 0.01	0.57 ± 0.02	0.51 ± 0.03	0.84 ± 0.02	0.82 ± 0.02	0.76 ± 0.02	0.81 ± 0.01	0.80 ± 0.02	0.82 ± 0.02	E Africa M	S Asia F	0.12
28	0.56 ± 0.03	0.60 ± 0.01	0.69 ± 0.02	0.52 ± 0.01	0.60 ± 0.02	0.56 ± 0.03	0.86 ± 0.02	0.86 ± 0.01	0.82 ± 0.02	0.83 ± 0.01	0.82 ± 0.02	0.84 ± 0.02	E Asia M	S Asia F	0.11
29	0.63 ± 0.03	0.64 ± 0.01	0.75 ± 0.02	0.57 ± 0.01	0.64 ± 0.02	0.62 ± 0.02	0.89 ± 0.02	0.89 ± 0.01	0.84 ± 0.02	0.851 ± 0.009	0.87 ± 0.02	0.88 ± 0.02	E Asia M	S Asia F	0.10
30	0.66 ± 0.02	0.68 ± 0.01	0.77 ± 0.02	0.60 ± 0.01	0.69 ± 0.02	0.66 ± 0.02	0.93 ± 0.01	0.924 ± 0.010	0.90 ± 0.02	0.868 ± 0.009	0.90 ± 0.02	0.90 ± 0.01	E Africa M	S Asia F	0.09
31	0.68 ± 0.02	0.72 ± 0.01	0.81 ± 0.02	0.63 ± 0.01	0.74 ± 0.02	0.70 ± 0.02	0.94 ± 0.01	0.942 ± 0.009	0.92 ± 0.01	0.894 ± 0.008	0.90 ± 0.02	0.93 ± 0.01	E Asia M	S Asia F	0.08
32	0.76 ± 0.02	0.76 ± 0.01	0.86 ± 0.01	0.66 ± 0.01	0.77 ± 0.02	0.75 ± 0.02	0.96 ± 0.01	0.948 ± 0.007	0.93 ± 0.01	0.910 ± 0.007	0.93 ± 0.02	0.93 ± 0.01	E Africa M	S Asia F	0.07
33	0.77 ± 0.02	0.79 ± 0.01	0.87 ± 0.02	0.69 ± 0.01	0.79 ± 0.02	0.78 ± 0.02	0.96 ± 0.01	0.964 ± 0.006	0.97 ± 0.01	0.927 ± 0.006	0.95 ± 0.01	0.961 ± 0.010	E Europe M	S Asia F	0.07
34	0.80 ± 0.02	0.831 ± 0.010	0.89 ± 0.01	0.74 ± 0.01	0.83 ± 0.02	0.82 ± 0.02	0.96 ± 0.01	0.972 ± 0.006	0.97 ± 0.01	0.940 ± 0.006	0.95 ± 0.01	0.96 ± 0.01	E Asia M	S Asia F	0.05

Table 154. *For algorithm neurotechnology-001 with Border images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.06 ± 0.03	0.06 ± 0.01	0.07 ± 0.02	0.09 ± 0.02	0.05 ± 0.02	0.007 ± 0.007	0.04 ± 0.02	0.10 ± 0.01	0.03 ± 0.01	0.08 ± 0.01	0.08 ± 0.02	0.04 ± 0.03	E Asia M	W Africa F	0.28
15	0.08 ± 0.04	0.083 ± 0.010	0.10 ± 0.03	0.12 ± 0.02	0.07 ± 0.02	0.06 ± 0.03	0.11 ± 0.04	0.14 ± 0.01	0.05 ± 0.02	0.11 ± 0.02	0.10 ± 0.02	0.06 ± 0.03	E Asia M	E Europe M	0.19
16	0.11 ± 0.04	0.10 ± 0.01	0.11 ± 0.02	0.14 ± 0.02	0.07 ± 0.02	0.09 ± 0.04	0.12 ± 0.05	0.19 ± 0.01	0.07 ± 0.02	0.14 ± 0.02	0.13 ± 0.03	0.11 ± 0.04	E Asia M	E Europe M	0.17
17	0.14 ± 0.04	0.12 ± 0.01	0.16 ± 0.03	0.16 ± 0.02	0.09 ± 0.02	0.10 ± 0.03	0.26 ± 0.06	0.24 ± 0.01	0.09 ± 0.02	0.23 ± 0.02	0.16 ± 0.03	0.19 ± 0.04	E Africa M	E Europe M	0.21
18	0.19 ± 0.04	0.136 ± 0.009	0.19 ± 0.02	0.19 ± 0.02	0.12 ± 0.02	0.12 ± 0.03	0.32 ± 0.05	0.27 ± 0.01	0.14 ± 0.03	0.26 ± 0.02	0.20 ± 0.03	0.25 ± 0.04	E Africa M	W Africa F	0.19
19	0.23 ± 0.04	0.154 ± 0.009	0.25 ± 0.02	0.21 ± 0.02	0.14 ± 0.02	0.17 ± 0.03	0.38 ± 0.05	0.30 ± 0.01	0.18 ± 0.02	0.32 ± 0.02	0.24 ± 0.02	0.31 ± 0.04	E Africa M	S E Asia F	0.18
20	0.24 ± 0.04	0.185 ± 0.009	0.29 ± 0.02	0.25 ± 0.01	0.18 ± 0.02	0.20 ± 0.03	0.47 ± 0.04	0.36 ± 0.01	0.21 ± 0.02	0.43 ± 0.02	0.30 ± 0.02	0.33 ± 0.04	E Africa M	S E Asia F	0.19
21	0.32 ± 0.03	0.197 ± 0.008	0.34 ± 0.02	0.28 ± 0.01	0.19 ± 0.02	0.25 ± 0.03	0.53 ± 0.04	0.40 ± 0.01	0.33 ± 0.03	0.48 ± 0.02	0.33 ± 0.02	0.44 ± 0.04	E Africa M	S E Asia F	0.18
22	0.38 ± 0.04	0.236 ± 0.008	0.39 ± 0.02	0.32 ± 0.01	0.22 ± 0.02	0.30 ± 0.03	0.58 ± 0.04	0.45 ± 0.01	0.38 ± 0.02	0.55 ± 0.02	0.39 ± 0.02	0.49 ± 0.04	E Africa M	S E Asia F	0.17
23	0.36 ± 0.03	0.248 ± 0.008	0.45 ± 0.02	0.34 ± 0.01	0.27 ± 0.01	0.33 ± 0.03	0.64 ± 0.04	0.50 ± 0.01	0.49 ± 0.02	0.60 ± 0.01	0.44 ± 0.03	0.58 ± 0.03	E Africa M	E Asia F	0.18
24	0.43 ± 0.03	0.281 ± 0.008	0.48 ± 0.01	0.39 ± 0.01	0.30 ± 0.02	0.36 ± 0.03	0.71 ± 0.03	0.55 ± 0.01	0.57 ± 0.02	0.66 ± 0.01	0.50 ± 0.02	0.62 ± 0.03	E Africa M	E Asia F	0.17
25	0.47 ± 0.03	0.322 ± 0.008	0.55 ± 0.01	0.41 ± 0.01	0.35 ± 0.01	0.40 ± 0.02	0.77 ± 0.03	0.60 ± 0.01	0.63 ± 0.02	0.70 ± 0.01	0.54 ± 0.02	0.67 ± 0.03	E Africa M	E Asia F	0.16
26	0.49 ± 0.03	0.354 ± 0.007	0.58 ± 0.01	0.446 ± 0.009	0.38 ± 0.02	0.43 ± 0.03	0.80 ± 0.03	0.650 ± 0.010	0.68 ± 0.02	0.727 ± 0.010	0.62 ± 0.02	0.71 ± 0.02	E Africa M	E Asia F	0.15
27	0.56 ± 0.03	0.386 ± 0.008	0.63 ± 0.01	0.475 ± 0.009	0.43 ± 0.02	0.48 ± 0.02	0.83 ± 0.02	0.68 ± 0.01	0.74 ± 0.01	0.772 ± 0.009	0.65 ± 0.02	0.76 ± 0.02	E Africa M	E Asia F	0.14
28	0.58 ± 0.03	0.425 ± 0.007	0.67 ± 0.01	0.513 ± 0.008	0.48 ± 0.02	0.50 ± 0.02	0.85 ± 0.02	0.731 ± 0.009	0.80 ± 0.01	0.801 ± 0.008	0.71 ± 0.02	0.81 ± 0.02	E Africa M	E Asia F	0.14
29	0.62 ± 0.03	0.465 ± 0.007	0.71 ± 0.01	0.541 ± 0.008	0.52 ± 0.01	0.54 ± 0.02	0.86 ± 0.02	0.769 ± 0.009	0.82 ± 0.01	0.824 ± 0.007	0.75 ± 0.02	0.82 ± 0.02	E Africa M	E Asia F	0.12
30	0.62 ± 0.03	0.511 ± 0.008	0.75 ± 0.01	0.570 ± 0.009	0.56 ± 0.02	0.60 ± 0.02	0.87 ± 0.02	0.800 ± 0.008	0.88 ± 0.01	0.846 ± 0.006	0.78 ± 0.02	0.84 ± 0.02	E Europe M	E Asia F	0.11
31	0.67 ± 0.03	0.559 ± 0.007	0.794 ± 0.009	0.599 ± 0.008	0.60 ± 0.01	0.64 ± 0.02	0.89 ± 0.02	0.836 ± 0.008	0.902 ± 0.010	0.867 ± 0.006	0.80 ± 0.02	0.85 ± 0.01	E Europe M	E Asia F	0.10
32	0.69 ± 0.03	0.600 ± 0.007	0.830 ± 0.009	0.644 ± 0.008	0.64 ± 0.01	0.65 ± 0.02	0.92 ± 0.02	0.859 ± 0.007	0.923 ± 0.008	0.892 ± 0.005	0.83 ± 0.02	0.86 ± 0.01	E Europe M	E Asia F	0.09
33	0.74 ± 0.02	0.637 ± 0.006	0.847 ± 0.010	0.675 ± 0.008	0.68 ± 0.01	0.70 ± 0.02	0.92 ± 0.01	0.890 ± 0.006	0.940 ± 0.008	0.910 ± 0.004	0.88 ± 0.02	0.88 ± 0.01	E Europe M	E Asia F	0.08
34	0.75 ± 0.03	0.682 ± 0.007	0.871 ± 0.009	0.710 ± 0.007	0.72 ± 0.01	0.75 ± 0.02	0.92 ± 0.01	0.899 ± 0.006	0.963 ± 0.006	0.921 ± 0.004	0.90 ± 0.01	0.90 ± 0.01	E Europe M	E Asia F	0.07

Table 155. *For algorithm nominder-000 with Application images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.04 ± 0.02	0.007 ± 0.004	0.005 ± 0.005	0.008 ± 0.005	0.009 ± 0.007	0.09 ± 0.03	0.006 ± 0.006	0.007 ± 0.003	0.004 ± 0.004	0.006 ± 0.003	0.007 ± 0.007	0.01 ± 0.01	W Africa F	E Europe M	0.61
15	0.05 ± 0.02	0.018 ± 0.007	0.01 ± 0.01	0.019 ± 0.009	0.01 ± 0.01	0.11 ± 0.04	0.02 ± 0.01	0.007 ± 0.004	0.012 ± 0.009	0.006 ± 0.004	0.012 ± 0.010	0.02 ± 0.01	W Africa F	S Asia M	0.51
16	0.08 ± 0.03	0.028 ± 0.009	0.01 ± 0.01	0.03 ± 0.01	0.05 ± 0.02	0.18 ± 0.04	0.03 ± 0.01	0.026 ± 0.008	0.009 ± 0.009	0.013 ± 0.007	0.01 ± 0.01	0.02 ± 0.02	W Africa F	E Europe M	0.52
17	0.14 ± 0.03	0.06 ± 0.01	0.04 ± 0.02	0.04 ± 0.01	0.06 ± 0.02	0.27 ± 0.05	0.04 ± 0.02	0.05 ± 0.01	0.008 ± 0.008	0.04 ± 0.01	0.03 ± 0.01	0.10 ± 0.03	W Africa F	E Europe M	0.47
18	0.17 ± 0.03	0.10 ± 0.01	0.05 ± 0.02	0.05 ± 0.01	0.07 ± 0.02	0.31 ± 0.04	0.09 ± 0.02	0.07 ± 0.01	0.03 ± 0.01	0.08 ± 0.01	0.06 ± 0.02	0.12 ± 0.03	W Africa F	E Europe M	0.37
19	0.23 ± 0.03	0.12 ± 0.01	0.09 ± 0.03	0.09 ± 0.01	0.11 ± 0.02	0.44 ± 0.05	0.17 ± 0.03	0.13 ± 0.01	0.07 ± 0.02	0.15 ± 0.02	0.10 ± 0.02	0.24 ± 0.04	W Africa F	E Europe M	0.32
20	0.29 ± 0.03	0.18 ± 0.02	0.12 ± 0.02	0.15 ± 0.02	0.16 ± 0.02	0.49 ± 0.04	0.29 ± 0.04	0.19 ± 0.02	0.11 ± 0.03	0.26 ± 0.02	0.18 ± 0.02	0.32 ± 0.04	W Africa F	E Europe M	0.26
21	0.37 ± 0.04	0.23 ± 0.02	0.18 ± 0.02	0.19 ± 0.02	0.21 ± 0.02	0.56 ± 0.04	0.38 ± 0.04	0.26 ± 0.02	0.17 ± 0.03	0.34 ± 0.02	0.23 ± 0.03	0.45 ± 0.04	W Africa F	E Europe M	0.23
22	0.45 ± 0.03	0.30 ± 0.02	0.26 ± 0.02	0.25 ± 0.02	0.27 ± 0.02	0.60 ± 0.04	0.52 ± 0.04	0.35 ± 0.02	0.31 ± 0.03	0.47 ± 0.02	0.29 ± 0.03	0.50 ± 0.04	W Africa F	S Asia F	0.18
23	0.50 ± 0.03	0.38 ± 0.02	0.35 ± 0.02	0.33 ± 0.02	0.33 ± 0.02	0.70 ± 0.03	0.57 ± 0.04	0.45 ± 0.02	0.40 ± 0.04	0.57 ± 0.02	0.38 ± 0.03	0.61 ± 0.03	W Africa F	S Asia F	0.16
24	0.58 ± 0.03	0.45 ± 0.02	0.45 ± 0.02	0.37 ± 0.02	0.42 ± 0.02	0.71 ± 0.03	0.69 ± 0.03	0.54 ± 0.02	0.54 ± 0.03	0.69 ± 0.02	0.50 ± 0.03	0.71 ± 0.03	W Africa F	S Asia F	0.13
25	0.61 ± 0.03	0.54 ± 0.01	0.55 ± 0.02	0.45 ± 0.01	0.49 ± 0.02	0.79 ± 0.02	0.76 ± 0.03	0.63 ± 0.02	0.68 ± 0.03	0.77 ± 0.01	0.60 ± 0.03	0.76 ± 0.03	W Africa F	S Asia F	0.11
26	0.69 ± 0.02	0.61 ± 0.01	0.65 ± 0.02	0.49 ± 0.01	0.59 ± 0.02	0.83 ± 0.02	0.81 ± 0.02	0.72 ± 0.02	0.76 ± 0.02	0.83 ± 0.01	0.69 ± 0.02	0.83 ± 0.02	W Africa M	S Asia F	0.09
27	0.73 ± 0.02	0.67 ± 0.01	0.74 ± 0.02	0.55 ± 0.01	0.66 ± 0.02	0.86 ± 0.02	0.87 ± 0.02	0.79 ± 0.02	0.86 ± 0.02	0.88 ± 0.01	0.78 ± 0.02	0.86 ± 0.02	S Asia M	S Asia F	0.08
28	0.79 ± 0.02	0.74 ± 0.01	0.81 ± 0.01	0.62 ± 0.01	0.72 ± 0.02	0.89 ± 0.02	0.89 ± 0.02	0.84 ± 0.01	0.91 ± 0.02	0.904 ± 0.009	0.82 ± 0.02	0.90 ± 0.02	E Europe M	S Asia F	0.06
29	0.83 ± 0.02	0.81 ± 0.01	0.87 ± 0.01	0.69 ± 0.01	0.78 ± 0.02	0.92 ± 0.01	0.93 ± 0.01	0.90 ± 0.01	0.94 ± 0.01	0.937 ± 0.007	0.87 ± 0.02	0.94 ± 0.01	E Europe M	S Asia F	0.05
30	0.86 ± 0.02	0.846 ± 0.009	0.93 ± 0.01	0.73 ± 0.01	0.84 ± 0.01	0.93 ± 0.01	0.95 ± 0.01	0.925 ± 0.009	0.969 ± 0.008	0.949 ± 0.005	0.91 ± 0.02	0.949 ± 0.010	E Europe M	S Asia F	0.04
31	0.89 ± 0.02	0.886 ± 0.008	0.948 ± 0.009	0.778 ± 0.010	0.88 ± 0.01	0.95 ± 0.01	0.964 ± 0.010	0.946 ± 0.008	0.981 ± 0.008	0.967 ± 0.004	0.94 ± 0.01	0.968 ± 0.009	E Europe M	S Asia F	0.03
32	0.92 ± 0.02	0.919 ± 0.008	0.965 ± 0.008	0.830 ± 0.009	0.91 ± 0.01	0.96 ± 0.01	0.981 ± 0.008	0.966 ± 0.006	0.991 ± 0.005	0.981 ± 0.003	0.96 ± 0.01	0.979 ± 0.007	E Europe M	S Asia F	0.03
33	0.93 ± 0.01	0.950 ± 0.006	0.975 ± 0.007	0.869 ± 0.009	0.94 ± 0.01	0.97 ± 0.01	0.984 ± 0.007	0.977 ± 0.005	0.996 ± 0.004	0.987 ± 0.003	0.977 ± 0.009	0.982 ± 0.007	E Europe M	S Asia F	0.02
34	0.96 ± 0.01	0.963 ± 0.005	0.981 ± 0.006	0.897 ± 0.008	0.948 ± 0.009	0.972 ± 0.009	0.990 ± 0.006	0.984 ± 0.004	0.998 ± 0.003	0.990 ± 0.003	0.979 ± 0.009	0.992 ± 0.005	E Europe M	S Asia F	0.01

Table 156. *For algorithm nominder-000 with Border images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.14 ± 0.05	0.015 ± 0.005	0.03 ± 0.02	0.04 ± 0.01	0.03 ± 0.01	0.17 ± 0.06	0.15 ± 0.05	0.011 ± 0.004	0.03 ± 0.01	0.024 ± 0.008	0.03 ± 0.01	0.18 ± 0.06	W Africa M	E Asia M	0.50
15	0.17 ± 0.05	0.023 ± 0.005	0.04 ± 0.01	0.08 ± 0.02	0.04 ± 0.02	0.26 ± 0.06	0.27 ± 0.07	0.023 ± 0.005	0.04 ± 0.02	0.07 ± 0.01	0.04 ± 0.01	0.21 ± 0.06	E Africa M	E Asia M	0.50
16	0.33 ± 0.06	0.032 ± 0.006	0.07 ± 0.02	0.11 ± 0.02	0.05 ± 0.02	0.33 ± 0.06	0.28 ± 0.06	0.038 ± 0.006	0.05 ± 0.02	0.10 ± 0.01	0.08 ± 0.02	0.26 ± 0.05	W Africa F	E Asia F	0.45
17	0.30 ± 0.05	0.063 ± 0.008	0.12 ± 0.02	0.16 ± 0.02	0.08 ± 0.01	0.41 ± 0.06	0.38 ± 0.06	0.068 ± 0.008	0.08 ± 0.02	0.20 ± 0.02	0.08 ± 0.02	0.43 ± 0.06	W Africa M	E Asia F	0.41
18	0.40 ± 0.05	0.086 ± 0.007	0.16 ± 0.02	0.19 ± 0.02	0.10 ± 0.02	0.44 ± 0.05	0.56 ± 0.06	0.108 ± 0.008	0.15 ± 0.02	0.29 ± 0.02	0.18 ± 0.02	0.48 ± 0.05	E Africa M	E Asia F	0.36
19	0.48 ± 0.05	0.134 ± 0.009	0.20 ± 0.02	0.25 ± 0.01	0.16 ± 0.02	0.56 ± 0.04	0.58 ± 0.05	0.158 ± 0.010	0.21 ± 0.03	0.40 ± 0.02	0.24 ± 0.02	0.54 ± 0.05	E Africa M	E Asia F	0.31
20	0.54 ± 0.04	0.169 ± 0.009	0.23 ± 0.02	0.30 ± 0.01	0.22 ± 0.02	0.61 ± 0.04	0.68 ± 0.04	0.23 ± 0.01	0.30 ± 0.02	0.52 ± 0.02	0.32 ± 0.02	0.60 ± 0.04	E Africa M	E Asia F	0.27
21	0.60 ± 0.04	0.220 ± 0.009	0.29 ± 0.02	0.35 ± 0.02	0.27 ± 0.02	0.65 ± 0.04	0.74 ± 0.04	0.32 ± 0.01	0.43 ± 0.03	0.63 ± 0.02	0.45 ± 0.03	0.69 ± 0.03	E Africa M	E Asia F	0.23
22	0.66 ± 0.04	0.276 ± 0.009	0.35 ± 0.02	0.40 ± 0.01	0.34 ± 0.02	0.74 ± 0.03	0.79 ± 0.03	0.40 ± 0.01	0.52 ± 0.03	0.72 ± 0.01	0.51 ± 0.03	0.75 ± 0.03	E Africa M	E Asia F	0.20
23	0.70 ± 0.04	0.325 ± 0.009	0.43 ± 0.02	0.44 ± 0.01	0.44 ± 0.02	0.76 ± 0.03	0.85 ± 0.03	0.48 ± 0.01	0.64 ± 0.02	0.78 ± 0.01	0.57 ± 0.02	0.83 ± 0.02	E Africa M	E Asia F	0.18
24	0.74 ± 0.03	0.393 ± 0.009	0.50 ± 0.01	0.51 ± 0.01	0.50 ± 0.02	0.78 ± 0.02	0.91 ± 0.02	0.57 ± 0.01	0.72 ± 0.02	0.839 ± 0.009	0.68 ± 0.02	0.84 ± 0.02	E Africa M	E Asia F	0.15
25	0.80 ± 0.03	0.469 ± 0.009	0.57 ± 0.01	0.55 ± 0.01	0.56 ± 0.02	0.83 ± 0.02	0.94 ± 0.02	0.65 ± 0.01	0.79 ± 0.02	0.875 ± 0.008	0.74 ± 0.02	0.90 ± 0.02	E Africa M	E Asia F	0.13
26	0.82 ± 0.02	0.531 ± 0.009	0.63 ± 0.01	0.59 ± 0.01	0.63 ± 0.02	0.84 ± 0.02	0.95 ± 0.01	0.721 ± 0.009	0.84 ± 0.01	0.894 ± 0.006	0.80 ± 0.02	0.92 ± 0.01	E Africa M	E Asia F	0.11
27	0.85 ± 0.02	0.592 ± 0.008	0.70 ± 0.01	0.631 ± 0.009	0.70 ± 0.01	0.88 ± 0.01	0.96 ± 0.01	0.771 ± 0.010	0.89 ± 0.01	0.920 ± 0.006	0.84 ± 0.02	0.94 ± 0.01	E Africa M	E Asia F	0.09
28	0.87 ± 0.02	0.658 ± 0.007	0.757 ± 0.009	0.671 ± 0.008	0.74 ± 0.01	0.88 ± 0.02	0.969 ± 0.010	0.831 ± 0.008	0.924 ± 0.009	0.942 ± 0.005	0.88 ± 0.01	0.959 ± 0.010	E Africa M	E Asia F	0.08
29	0.90 ± 0.02	0.707 ± 0.006	0.814 ± 0.010	0.721 ± 0.007	0.78 ± 0.01	0.91 ± 0.01	0.984 ± 0.008	0.864 ± 0.007	0.947 ± 0.007	0.957 ± 0.004	0.91 ± 0.01	0.965 ± 0.008	E Africa M	E Asia F	0.06
30	0.90 ± 0.02	0.761 ± 0.006	0.865 ± 0.008	0.754 ± 0.007	0.83 ± 0.01	0.93 ± 0.01	0.989 ± 0.007	0.899 ± 0.006	0.964 ± 0.006	0.969 ± 0.003	0.94 ± 0.01	0.976 ± 0.006	E Africa M	S Asia F	0.05
31	0.93 ± 0.01	0.805 ± 0.006	0.883 ± 0.008	0.793 ± 0.007	0.85 ± 0.01	0.947 ± 0.010	0.989 ± 0.007	0.925 ± 0.005	0.977 ± 0.005	0.978 ± 0.002	0.94 ± 0.01	0.983 ± 0.006	E Africa M	S Asia F	0.04
32	0.93 ± 0.01	0.847 ± 0.005	0.925 ± 0.006	0.832 ± 0.006	0.881 ± 0.009	0.95 ± 0.01	0.990 ± 0.005	0.946 ± 0.005	0.984 ± 0.004	0.982 ± 0.002	0.95 ± 0.01	0.979 ± 0.006	E Africa M	S Asia F	0.03
33	0.94 ± 0.01	0.880 ± 0.005	0.934 ± 0.006	0.861 ± 0.006	0.902 ± 0.009	0.965 ± 0.009	0.991 ± 0.005	0.957 ± 0.004	0.989 ± 0.003	0.986 ± 0.002	0.967 ± 0.008	0.986 ± 0.005	E Africa M	S Asia F	0.03
34	0.96 ± 0.01	0.907 ± 0.004	0.955 ± 0.006	0.884 ± 0.005	0.925 ± 0.009	0.965 ± 0.010	0.993 ± 0.005	0.969 ± 0.004	0.993 ± 0.003	0.991 ± 0.001	0.978 ± 0.007	0.989 ± 0.004	E Africa M	S Asia F	0.02

Table 157. *For algorithm nominder-001 with Application images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.002 ± 0.002	0.000 ± 0.000	0.007 ± 0.007	0.002 ± 0.002	0.004 ± 0.004	0.02 ± 0.02	0.004 ± 0.004	0.003 ± 0.002	0.004 ± 0.004	0.001 ± 0.001	0.000 ± 0.000	0.000 ± 0.000	W Africa F	E Asia F	0.65
15	0.006 ± 0.006	0.003 ± 0.002	0.010 ± 0.008	0.010 ± 0.005	0.005 ± 0.005	0.04 ± 0.02	0.003 ± 0.003	0.004 ± 0.003	0.003 ± 0.003	0.002 ± 0.002	0.000 ± 0.000	0.009 ± 0.009	W Africa F	S E Asia M	0.56
16	0.04 ± 0.02	0.015 ± 0.006	0.02 ± 0.01	0.010 ± 0.006	0.03 ± 0.02	0.12 ± 0.04	0.01 ± 0.01	0.009 ± 0.005	0.003 ± 0.003	0.004 ± 0.003	0.008 ± 0.008	0.005 ± 0.005	W Africa F	E Europe M	0.61
17	0.08 ± 0.03	0.024 ± 0.007	0.03 ± 0.01	0.03 ± 0.01	0.03 ± 0.02	0.18 ± 0.04	0.01 ± 0.01	0.016 ± 0.006	0.008 ± 0.008	0.016 ± 0.007	0.03 ± 0.01	0.04 ± 0.02	W Africa F	E Europe M	0.51
18	0.10 ± 0.02	0.033 ± 0.008	0.04 ± 0.02	0.033 ± 0.009	0.05 ± 0.01	0.24 ± 0.04	0.04 ± 0.02	0.039 ± 0.008	0.016 ± 0.009	0.031 ± 0.008	0.03 ± 0.01	0.07 ± 0.02	W Africa F	E Europe M	0.43
19	0.17 ± 0.03	0.050 ± 0.009	0.06 ± 0.02	0.07 ± 0.01	0.07 ± 0.02	0.34 ± 0.04	0.08 ± 0.02	0.07 ± 0.01	0.02 ± 0.01	0.049 ± 0.010	0.06 ± 0.02	0.12 ± 0.03	W Africa F	E Europe M	0.40
20	0.25 ± 0.04	0.09 ± 0.01	0.08 ± 0.02	0.10 ± 0.01	0.12 ± 0.02	0.40 ± 0.04	0.20 ± 0.03	0.10 ± 0.01	0.04 ± 0.02	0.12 ± 0.01	0.09 ± 0.02	0.20 ± 0.04	W Africa F	E Europe M	0.34
21	0.31 ± 0.03	0.14 ± 0.01	0.14 ± 0.02	0.17 ± 0.02	0.16 ± 0.02	0.47 ± 0.04	0.26 ± 0.03	0.18 ± 0.02	0.10 ± 0.02	0.19 ± 0.02	0.17 ± 0.03	0.29 ± 0.04	W Africa F	E Europe M	0.25
22	0.43 ± 0.03	0.18 ± 0.02	0.20 ± 0.02	0.22 ± 0.02	0.23 ± 0.02	0.53 ± 0.04	0.42 ± 0.03	0.27 ± 0.02	0.19 ± 0.03	0.30 ± 0.02	0.21 ± 0.03	0.36 ± 0.04	W Africa F	E Asia F	0.22
23	0.49 ± 0.03	0.28 ± 0.02	0.28 ± 0.02	0.30 ± 0.02	0.29 ± 0.02	0.64 ± 0.03	0.50 ± 0.03	0.38 ± 0.02	0.27 ± 0.03	0.45 ± 0.02	0.33 ± 0.03	0.51 ± 0.03	W Africa F	E Europe M	0.18
24	0.58 ± 0.03	0.34 ± 0.01	0.38 ± 0.02	0.38 ± 0.02	0.39 ± 0.02	0.69 ± 0.03	0.64 ± 0.03	0.50 ± 0.02	0.42 ± 0.03	0.57 ± 0.02	0.42 ± 0.03	0.59 ± 0.03	W Africa F	E Asia F	0.14
25	0.63 ± 0.03	0.45 ± 0.01	0.45 ± 0.02	0.45 ± 0.01	0.46 ± 0.02	0.75 ± 0.03	0.72 ± 0.03	0.59 ± 0.02	0.58 ± 0.03	0.70 ± 0.02	0.57 ± 0.03	0.70 ± 0.03	W Africa F	E Europe F	0.12
26	0.72 ± 0.03	0.53 ± 0.01	0.57 ± 0.02	0.51 ± 0.01	0.57 ± 0.02	0.84 ± 0.02	0.80 ± 0.02	0.70 ± 0.02	0.70 ± 0.03	0.78 ± 0.01	0.68 ± 0.03	0.79 ± 0.02	W Africa F	S Asia F	0.10
27	0.77 ± 0.02	0.62 ± 0.01	0.67 ± 0.02	0.59 ± 0.01	0.65 ± 0.02	0.86 ± 0.02	0.86 ± 0.02	0.79 ± 0.02	0.82 ± 0.02	0.85 ± 0.01	0.78 ± 0.02	0.85 ± 0.02	E Africa M	S Asia F	0.07
28	0.83 ± 0.02	0.70 ± 0.01	0.75 ± 0.02	0.67 ± 0.01	0.73 ± 0.02	0.91 ± 0.02	0.89 ± 0.02	0.85 ± 0.01	0.88 ± 0.02	0.889 ± 0.009	0.85 ± 0.02	0.88 ± 0.02	W Africa F	S Asia F	0.06
29	0.89 ± 0.02	0.78 ± 0.01	0.84 ± 0.01	0.73 ± 0.01	0.80 ± 0.01	0.93 ± 0.01	0.94 ± 0.01	0.91 ± 0.01	0.93 ± 0.01	0.927 ± 0.007	0.89 ± 0.02	0.94 ± 0.01	E Africa M	S Asia F	0.05
30	0.92 ± 0.02	0.833 ± 0.010	0.90 ± 0.01	0.79 ± 0.01	0.85 ± 0.01	0.94 ± 0.01	0.969 ± 0.010	0.942 ± 0.008	0.95 ± 0.01	0.946 ± 0.006	0.94 ± 0.01	0.955 ± 0.010	E Africa M	S Asia F	0.03
31	0.93 ± 0.01	0.878 ± 0.008	0.935 ± 0.009	0.835 ± 0.009	0.89 ± 0.01	0.96 ± 0.01	0.987 ± 0.007	0.969 ± 0.007	0.979 ± 0.007	0.968 ± 0.005	0.97 ± 0.01	0.967 ± 0.009	E Africa M	S Asia F	0.03
32	0.96 ± 0.01	0.916 ± 0.007	0.960 ± 0.007	0.875 ± 0.009	0.931 ± 0.010	0.97 ± 0.01	0.990 ± 0.006	0.979 ± 0.005	0.989 ± 0.006	0.982 ± 0.003	0.971 ± 0.010	0.982 ± 0.006	E Africa M	S Asia F	0.02
33	0.967 ± 0.009	0.940 ± 0.007	0.976 ± 0.007	0.918 ± 0.007	0.954 ± 0.009	0.981 ± 0.008	0.992 ± 0.005	0.988 ± 0.004	0.996 ± 0.004	0.992 ± 0.002	0.987 ± 0.007	0.984 ± 0.006	E Europe M	S Asia F	0.01
34	0.97 ± 0.01	0.960 ± 0.005	0.983 ± 0.006	0.949 ± 0.005	0.974 ± 0.006	0.980 ± 0.007	0.995 ± 0.004	0.993 ± 0.003	0.996 ± 0.003	0.992 ± 0.003	0.983 ± 0.009	0.992 ± 0.004	E Europe M	S Asia F	0.01

Table 158. *For algorithm nominder-001 with Border images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.05 ± 0.03	0.007 ± 0.003	0.02 ± 0.01	0.018 ± 0.007	0.02 ± 0.01	0.09 ± 0.04	0.02 ± 0.02	0.005 ± 0.003	0.002 ± 0.002	0.003 ± 0.002	0.013 ± 0.008	0.04 ± 0.03	W Africa F	E Europe M	0.54
15	0.08 ± 0.04	0.009 ± 0.003	0.02 ± 0.01	0.034 ± 0.010	0.02 ± 0.01	0.13 ± 0.05	0.04 ± 0.02	0.009 ± 0.004	0.007 ± 0.007	0.013 ± 0.006	0.011 ± 0.007	0.06 ± 0.04	W Africa F	E Europe M	0.53
16	0.12 ± 0.05	0.019 ± 0.005	0.03 ± 0.01	0.05 ± 0.01	0.022 ± 0.010	0.19 ± 0.05	0.07 ± 0.04	0.019 ± 0.004	0.008 ± 0.007	0.025 ± 0.008	0.03 ± 0.01	0.09 ± 0.04	W Africa F	E Europe M	0.51
17	0.15 ± 0.04	0.031 ± 0.006	0.04 ± 0.01	0.06 ± 0.01	0.03 ± 0.01	0.30 ± 0.05	0.13 ± 0.04	0.038 ± 0.006	0.008 ± 0.007	0.07 ± 0.01	0.05 ± 0.02	0.17 ± 0.04	W Africa F	E Europe M	0.48
18	0.27 ± 0.04	0.047 ± 0.005	0.08 ± 0.02	0.11 ± 0.01	0.06 ± 0.01	0.31 ± 0.05	0.17 ± 0.04	0.065 ± 0.007	0.03 ± 0.01	0.10 ± 0.01	0.07 ± 0.02	0.23 ± 0.04	W Africa F	E Europe M	0.40
19	0.31 ± 0.05	0.071 ± 0.006	0.11 ± 0.01	0.13 ± 0.01	0.09 ± 0.01	0.39 ± 0.04	0.23 ± 0.04	0.109 ± 0.008	0.05 ± 0.01	0.18 ± 0.02	0.15 ± 0.02	0.27 ± 0.04	W Africa F	E Europe M	0.35
20	0.36 ± 0.04	0.103 ± 0.007	0.14 ± 0.01	0.17 ± 0.01	0.14 ± 0.02	0.47 ± 0.04	0.40 ± 0.04	0.16 ± 0.01	0.10 ± 0.02	0.26 ± 0.02	0.22 ± 0.02	0.31 ± 0.04	W Africa F	E Europe M	0.31
21	0.44 ± 0.04	0.139 ± 0.007	0.19 ± 0.01	0.21 ± 0.01	0.17 ± 0.02	0.55 ± 0.04	0.44 ± 0.04	0.24 ± 0.01	0.15 ± 0.02	0.35 ± 0.02	0.29 ± 0.02	0.39 ± 0.04	W Africa F	E Asia F	0.27
22	0.49 ± 0.04	0.184 ± 0.007	0.26 ± 0.02	0.25 ± 0.01	0.24 ± 0.02	0.64 ± 0.03	0.51 ± 0.04	0.33 ± 0.01	0.24 ± 0.02	0.45 ± 0.02	0.36 ± 0.03	0.48 ± 0.03	W Africa F	E Asia F	0.22
23	0.58 ± 0.04	0.229 ± 0.007	0.31 ± 0.01	0.29 ± 0.01	0.32 ± 0.02	0.66 ± 0.03	0.59 ± 0.04	0.42 ± 0.01	0.35 ± 0.02	0.55 ± 0.01	0.46 ± 0.03	0.56 ± 0.03	W Africa F	E Asia F	0.19
24	0.64 ± 0.03	0.291 ± 0.008	0.38 ± 0.01	0.35 ± 0.01	0.38 ± 0.02	0.72 ± 0.03	0.67 ± 0.03	0.52 ± 0.01	0.47 ± 0.02	0.65 ± 0.01	0.56 ± 0.02	0.62 ± 0.03	W Africa F	E Asia F	0.16
25	0.70 ± 0.03	0.364 ± 0.008	0.48 ± 0.01	0.40 ± 0.01	0.46 ± 0.01	0.78 ± 0.02	0.74 ± 0.03	0.61 ± 0.01	0.57 ± 0.02	0.72 ± 0.01	0.66 ± 0.03	0.72 ± 0.02	W Africa F	E Asia F	0.14
26	0.74 ± 0.03	0.430 ± 0.008	0.54 ± 0.01	0.443 ± 0.009	0.53 ± 0.02	0.78 ± 0.02	0.81 ± 0.03	0.676 ± 0.010	0.66 ± 0.02	0.780 ± 0.010	0.72 ± 0.02	0.78 ± 0.02	E Africa M	E Asia F	0.12
27	0.77 ± 0.02	0.494 ± 0.007	0.63 ± 0.01	0.497 ± 0.010	0.61 ± 0.02	0.84 ± 0.02	0.84 ± 0.02	0.738 ± 0.009	0.76 ± 0.01	0.824 ± 0.008	0.79 ± 0.02	0.84 ± 0.02	E Africa M	E Asia F	0.10
28	0.82 ± 0.02	0.574 ± 0.007	0.71 ± 0.01	0.553 ± 0.009	0.66 ± 0.02	0.85 ± 0.02	0.89 ± 0.02	0.803 ± 0.008	0.83 ± 0.01	0.874 ± 0.006	0.84 ± 0.01	0.87 ± 0.02	E Africa M	S Asia F	0.09
29	0.84 ± 0.02	0.631 ± 0.007	0.78 ± 0.01	0.604 ± 0.008	0.71 ± 0.01	0.87 ± 0.01	0.93 ± 0.01	0.854 ± 0.007	0.88 ± 0.01	0.907 ± 0.005	0.87 ± 0.02	0.91 ± 0.01	E Africa M	S Asia F	0.07
30	0.86 ± 0.02	0.699 ± 0.007	0.831 ± 0.009	0.660 ± 0.008	0.77 ± 0.01	0.91 ± 0.01	0.95 ± 0.01	0.891 ± 0.006	0.919 ± 0.009	0.927 ± 0.005	0.91 ± 0.01	0.94 ± 0.01	E Africa M	S Asia F	0.06
31	0.89 ± 0.02	0.756 ± 0.007	0.865 ± 0.008	0.707 ± 0.008	0.81 ± 0.01	0.93 ± 0.01	0.96 ± 0.01	0.921 ± 0.005	0.953 ± 0.006	0.949 ± 0.003	0.93 ± 0.01	0.943 ± 0.009	E Africa M	S Asia F	0.05
32	0.92 ± 0.01	0.805 ± 0.005	0.909 ± 0.007	0.761 ± 0.007	0.84 ± 0.01	0.94 ± 0.01	0.980 ± 0.008	0.949 ± 0.004	0.976 ± 0.005	0.963 ± 0.003	0.94 ± 0.01	0.950 ± 0.008	E Africa M	S Asia F	0.04
33	0.92 ± 0.01	0.843 ± 0.005	0.936 ± 0.006	0.807 ± 0.007	0.88 ± 0.01	0.962 ± 0.009	0.979 ± 0.008	0.962 ± 0.004	0.982 ± 0.004	0.974 ± 0.002	0.964 ± 0.008	0.968 ± 0.007	E Europe M	S Asia F	0.03
34	0.94 ± 0.01	0.884 ± 0.005	0.957 ± 0.005	0.848 ± 0.006	0.906 ± 0.009	0.96 ± 0.01	0.983 ± 0.007	0.968 ± 0.003	0.989 ± 0.003	0.983 ± 0.002	0.980 ± 0.006	0.980 ± 0.006	E Europe M	S Asia F	0.03

Table 159. *For algorithm ondato-000 with Application images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.08 ± 0.02	0.027 ± 0.007	0.005 ± 0.005	0.023 ± 0.008	0.03 ± 0.02	0.09 ± 0.03	0.03 ± 0.02	0.011 ± 0.004	0.004 ± 0.004	0.007 ± 0.004	0.005 ± 0.005	0.03 ± 0.02	W Africa F	E Europe M	0.54
15	0.10 ± 0.03	0.04 ± 0.01	0.02 ± 0.01	0.04 ± 0.01	0.06 ± 0.02	0.15 ± 0.04	0.04 ± 0.02	0.013 ± 0.005	0.009 ± 0.009	0.009 ± 0.005	0.010 ± 0.007	0.04 ± 0.02	W Africa F	S Asia M	0.50
16	0.14 ± 0.03	0.06 ± 0.01	0.05 ± 0.02	0.05 ± 0.01	0.08 ± 0.03	0.23 ± 0.05	0.07 ± 0.02	0.026 ± 0.007	0.009 ± 0.009	0.017 ± 0.008	0.03 ± 0.01	0.05 ± 0.03	W Africa F	E Europe M	0.47
17	0.23 ± 0.04	0.11 ± 0.02	0.05 ± 0.02	0.10 ± 0.02	0.10 ± 0.03	0.30 ± 0.05	0.10 ± 0.03	0.045 ± 0.010	0.011 ± 0.008	0.05 ± 0.01	0.05 ± 0.02	0.16 ± 0.04	W Africa F	E Europe M	0.43
18	0.24 ± 0.03	0.14 ± 0.01	0.07 ± 0.02	0.12 ± 0.01	0.13 ± 0.02	0.34 ± 0.04	0.14 ± 0.03	0.06 ± 0.01	0.02 ± 0.01	0.07 ± 0.01	0.06 ± 0.02	0.16 ± 0.03	W Africa F	E Europe M	0.38
19	0.33 ± 0.04	0.19 ± 0.02	0.13 ± 0.03	0.17 ± 0.02	0.19 ± 0.02	0.43 ± 0.04	0.26 ± 0.04	0.11 ± 0.01	0.05 ± 0.02	0.13 ± 0.02	0.14 ± 0.02	0.26 ± 0.04	W Africa F	E Europe M	0.30
20	0.40 ± 0.04	0.26 ± 0.02	0.18 ± 0.03	0.23 ± 0.02	0.26 ± 0.02	0.52 ± 0.04	0.36 ± 0.04	0.17 ± 0.02	0.10 ± 0.02	0.24 ± 0.02	0.20 ± 0.03	0.38 ± 0.04	W Africa F	E Europe M	0.25
21	0.47 ± 0.04	0.32 ± 0.02	0.24 ± 0.03	0.30 ± 0.02	0.34 ± 0.02	0.58 ± 0.04	0.49 ± 0.04	0.26 ± 0.02	0.13 ± 0.02	0.33 ± 0.02	0.33 ± 0.03	0.48 ± 0.04	W Africa F	E Europe M	0.21
22	0.56 ± 0.03	0.42 ± 0.02	0.35 ± 0.03	0.37 ± 0.02	0.43 ± 0.02	0.63 ± 0.04	0.62 ± 0.03	0.37 ± 0.02	0.26 ± 0.03	0.46 ± 0.02	0.41 ± 0.03	0.56 ± 0.04	W Africa F	E Europe M	0.15
23	0.63 ± 0.03	0.51 ± 0.02	0.44 ± 0.02	0.47 ± 0.02	0.50 ± 0.02	0.72 ± 0.03	0.67 ± 0.03	0.49 ± 0.02	0.36 ± 0.03	0.59 ± 0.02	0.53 ± 0.03	0.70 ± 0.03	W Africa F	E Europe M	0.12
24	0.69 ± 0.03	0.58 ± 0.02	0.55 ± 0.02	0.53 ± 0.02	0.60 ± 0.02	0.74 ± 0.03	0.77 ± 0.03	0.60 ± 0.02	0.51 ± 0.03	0.70 ± 0.02	0.64 ± 0.03	0.77 ± 0.03	E Africa M	E Europe M	0.09
25	0.74 ± 0.02	0.67 ± 0.01	0.63 ± 0.02	0.60 ± 0.01	0.67 ± 0.02	0.79 ± 0.03	0.84 ± 0.02	0.71 ± 0.02	0.66 ± 0.03	0.80 ± 0.01	0.75 ± 0.02	0.84 ± 0.02	W Africa M	S Asia F	0.07
26	0.80 ± 0.02	0.74 ± 0.01	0.73 ± 0.02	0.66 ± 0.01	0.75 ± 0.02	0.82 ± 0.02	0.89 ± 0.02	0.81 ± 0.02	0.74 ± 0.02	0.86 ± 0.01	0.82 ± 0.02	0.89 ± 0.02	E Africa M	S Asia F	0.05
27	0.85 ± 0.02	0.79 ± 0.01	0.79 ± 0.02	0.72 ± 0.01	0.81 ± 0.01	0.88 ± 0.02	0.91 ± 0.01	0.87 ± 0.01	0.86 ± 0.02	0.902 ± 0.010	0.89 ± 0.02	0.92 ± 0.01	W Africa M	S Asia F	0.04
28	0.88 ± 0.02	0.851 ± 0.009	0.86 ± 0.01	0.77 ± 0.01	0.86 ± 0.01	0.90 ± 0.02	0.96 ± 0.01	0.92 ± 0.01	0.92 ± 0.02	0.936 ± 0.007	0.93 ± 0.01	0.94 ± 0.01	E Africa M	S Asia F	0.03
29	0.91 ± 0.02	0.885 ± 0.008	0.90 ± 0.01	0.821 ± 0.010	0.89 ± 0.01	0.92 ± 0.01	0.972 ± 0.009	0.949 ± 0.008	0.94 ± 0.01	0.957 ± 0.006	0.96 ± 0.01	0.970 ± 0.009	E Africa M	S Asia F	0.03
30	0.93 ± 0.01	0.925 ± 0.006	0.938 ± 0.009	0.858 ± 0.009	0.922 ± 0.010	0.94 ± 0.01	0.978 ± 0.009	0.974 ± 0.005	0.972 ± 0.009	0.972 ± 0.004	0.974 ± 0.009	0.975 ± 0.008	E Africa M	S Asia F	0.02
31	0.95 ± 0.01	0.955 ± 0.005	0.964 ± 0.007	0.895 ± 0.008	0.945 ± 0.009	0.94 ± 0.01	0.985 ± 0.007	0.984 ± 0.005	0.981 ± 0.007	0.981 ± 0.003	0.984 ± 0.008	0.988 ± 0.006	W Africa M	S Asia F	0.02
32	0.95 ± 0.01	0.964 ± 0.005	0.974 ± 0.007	0.927 ± 0.007	0.965 ± 0.007	0.95 ± 0.01	0.991 ± 0.005	0.990 ± 0.004	0.991 ± 0.005	0.988 ± 0.003	0.989 ± 0.006	0.990 ± 0.005	E Africa M	S Asia F	0.01
33	0.96 ± 0.01	0.977 ± 0.004	0.983 ± 0.005	0.943 ± 0.007	0.978 ± 0.006	0.969 ± 0.008	0.995 ± 0.005	0.995 ± 0.003	0.994 ± 0.004	0.993 ± 0.002	0.994 ± 0.006	0.991 ± 0.005	E Africa M	S Asia F	0.01
34	0.978 ± 0.008	0.984 ± 0.004	0.987 ± 0.005	0.965 ± 0.006	0.986 ± 0.005	0.973 ± 0.009	0.997 ± 0.004	0.998 ± 0.002	0.997 ± 0.004	0.997 ± 0.001	0.997 ± 0.003	0.997 ± 0.003	E Asia M	S Asia F	0.01

Table 160. *For algorithm ondato-000 with Border images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.19 ± 0.05	0.015 ± 0.005	0.02 ± 0.01	0.06 ± 0.01	0.02 ± 0.01	0.17 ± 0.05	0.16 ± 0.06	0.010 ± 0.004	0.010 ± 0.007	0.031 ± 0.009	0.01 ± 0.01	0.15 ± 0.06	E Africa F	E Asia M	0.56
15	0.17 ± 0.06	0.018 ± 0.005	0.04 ± 0.02	0.08 ± 0.02	0.02 ± 0.01	0.26 ± 0.06	0.29 ± 0.07	0.014 ± 0.004	0.02 ± 0.01	0.06 ± 0.01	0.016 ± 0.009	0.23 ± 0.07	E Africa M	E Asia M	0.57
16	0.23 ± 0.05	0.025 ± 0.005	0.03 ± 0.01	0.10 ± 0.02	0.04 ± 0.01	0.25 ± 0.06	0.28 ± 0.07	0.022 ± 0.005	0.04 ± 0.01	0.08 ± 0.01	0.02 ± 0.01	0.22 ± 0.05	E Africa M	E Asia M	0.51
17	0.25 ± 0.05	0.042 ± 0.006	0.07 ± 0.02	0.12 ± 0.02	0.04 ± 0.01	0.24 ± 0.05	0.41 ± 0.06	0.040 ± 0.006	0.05 ± 0.02	0.16 ± 0.02	0.05 ± 0.01	0.38 ± 0.06	E Africa M	S E Asia F	0.49
18	0.33 ± 0.05	0.051 ± 0.006	0.10 ± 0.02	0.15 ± 0.02	0.06 ± 0.01	0.32 ± 0.04	0.43 ± 0.06	0.061 ± 0.006	0.10 ± 0.02	0.22 ± 0.02	0.06 ± 0.01	0.41 ± 0.05	E Africa M	E Asia F	0.44
19	0.37 ± 0.05	0.070 ± 0.006	0.13 ± 0.02	0.18 ± 0.01	0.06 ± 0.01	0.44 ± 0.04	0.47 ± 0.05	0.088 ± 0.007	0.11 ± 0.02	0.29 ± 0.02	0.14 ± 0.02	0.46 ± 0.05	E Africa M	S E Asia F	0.40
20	0.43 ± 0.04	0.093 ± 0.006	0.15 ± 0.02	0.22 ± 0.01	0.10 ± 0.01	0.44 ± 0.04	0.60 ± 0.04	0.126 ± 0.008	0.18 ± 0.02	0.41 ± 0.02	0.19 ± 0.02	0.53 ± 0.04	E Africa M	E Asia F	0.36
21	0.43 ± 0.04	0.109 ± 0.007	0.19 ± 0.01	0.26 ± 0.01	0.12 ± 0.01	0.53 ± 0.04	0.69 ± 0.04	0.194 ± 0.010	0.27 ± 0.03	0.51 ± 0.02	0.24 ± 0.02	0.62 ± 0.03	E Africa M	E Asia F	0.34
22	0.57 ± 0.04	0.142 ± 0.007	0.24 ± 0.01	0.31 ± 0.01	0.16 ± 0.01	0.62 ± 0.03	0.75 ± 0.04	0.25 ± 0.01	0.39 ± 0.03	0.59 ± 0.02	0.33 ± 0.02	0.67 ± 0.03	E Africa M	E Asia F	0.30
23	0.58 ± 0.04	0.178 ± 0.007	0.31 ± 0.01	0.35 ± 0.01	0.21 ± 0.01	0.64 ± 0.03	0.80 ± 0.03	0.32 ± 0.01	0.46 ± 0.02	0.67 ± 0.01	0.39 ± 0.03	0.76 ± 0.03	E Africa M	E Asia F	0.27
24	0.63 ± 0.03	0.227 ± 0.008	0.36 ± 0.01	0.41 ± 0.01	0.25 ± 0.02	0.65 ± 0.03	0.86 ± 0.03	0.40 ± 0.01	0.58 ± 0.02	0.74 ± 0.01	0.46 ± 0.03	0.79 ± 0.03	E Africa M	E Asia F	0.24
25	0.64 ± 0.03	0.269 ± 0.008	0.43 ± 0.01	0.45 ± 0.01	0.31 ± 0.01	0.72 ± 0.02	0.89 ± 0.02	0.48 ± 0.01	0.67 ± 0.02	0.799 ± 0.010	0.56 ± 0.03	0.83 ± 0.02	E Africa M	E Asia F	0.21
26	0.70 ± 0.03	0.322 ± 0.007	0.49 ± 0.01	0.498 ± 0.009	0.36 ± 0.01	0.73 ± 0.02	0.92 ± 0.02	0.57 ± 0.01	0.72 ± 0.02	0.833 ± 0.008	0.63 ± 0.02	0.88 ± 0.02	E Africa M	E Asia F	0.18
27	0.71 ± 0.03	0.378 ± 0.007	0.57 ± 0.01	0.538 ± 0.009	0.42 ± 0.01	0.78 ± 0.02	0.91 ± 0.02	0.63 ± 0.01	0.79 ± 0.01	0.868 ± 0.007	0.70 ± 0.02	0.90 ± 0.01	E Africa M	E Asia F	0.16
28	0.77 ± 0.02	0.445 ± 0.007	0.64 ± 0.01	0.582 ± 0.009	0.49 ± 0.02	0.81 ± 0.02	0.94 ± 0.02	0.70 ± 0.01	0.85 ± 0.01	0.900 ± 0.006	0.74 ± 0.02	0.92 ± 0.01	E Africa M	E Asia F	0.13
29	0.79 ± 0.02	0.498 ± 0.008	0.70 ± 0.01	0.625 ± 0.008	0.53 ± 0.02	0.83 ± 0.02	0.96 ± 0.01	0.754 ± 0.009	0.88 ± 0.01	0.920 ± 0.005	0.79 ± 0.02	0.94 ± 0.01	E Africa M	E Asia F	0.12
30	0.83 ± 0.02	0.563 ± 0.007	0.758 ± 0.010	0.672 ± 0.008	0.60 ± 0.01	0.86 ± 0.02	0.97 ± 0.01	0.801 ± 0.008	0.916 ± 0.009	0.933 ± 0.004	0.84 ± 0.02	0.944 ± 0.009	E Africa M	E Asia F	0.10
31	0.84 ± 0.02	0.619 ± 0.006	0.811 ± 0.009	0.722 ± 0.007	0.66 ± 0.01	0.89 ± 0.02	0.971 ± 0.010	0.853 ± 0.007	0.950 ± 0.007	0.952 ± 0.003	0.87 ± 0.01	0.946 ± 0.009	E Africa M	E Asia F	0.08
32	0.90 ± 0.02	0.671 ± 0.007	0.848 ± 0.009	0.757 ± 0.007	0.70 ± 0.01	0.89 ± 0.02	0.980 ± 0.008	0.879 ± 0.007	0.954 ± 0.007	0.958 ± 0.003	0.89 ± 0.02	0.964 ± 0.007	E Africa M	E Asia F	0.07
33	0.91 ± 0.02	0.724 ± 0.007	0.877 ± 0.008	0.796 ± 0.007	0.74 ± 0.01	0.91 ± 0.01	0.984 ± 0.007	0.907 ± 0.006	0.968 ± 0.005	0.967 ± 0.003	0.92 ± 0.01	0.973 ± 0.007	E Africa M	E Asia F	0.06
34	0.91 ± 0.02	0.769 ± 0.006	0.901 ± 0.007	0.834 ± 0.007	0.79 ± 0.01	0.93 ± 0.01	0.989 ± 0.005	0.926 ± 0.005	0.980 ± 0.004	0.973 ± 0.003	0.94 ± 0.01	0.976 ± 0.006	E Africa M	E Asia F	0.05

Table 161. *For algorithm ondato-001 with Application images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.04 ± 0.02	0.010 ± 0.005	0.005 ± 0.005	0.011 ± 0.005	0.013 ± 0.009	0.05 ± 0.02	0.02 ± 0.01	0.004 ± 0.003	0.004 ± 0.004	0.004 ± 0.003	0.002 ± 0.002	0.01 ± 0.01	W Africa F	S E Asia M	0.52
15	0.08 ± 0.03	0.025 ± 0.008	0.010 ± 0.008	0.028 ± 0.010	0.04 ± 0.02	0.10 ± 0.04	0.03 ± 0.01	0.004 ± 0.003	0.000 ± 0.000	0.007 ± 0.005	0.002 ± 0.002	0.03 ± 0.02	W Africa F	E Europe M	0.57
16	0.10 ± 0.03	0.04 ± 0.01	0.04 ± 0.02	0.05 ± 0.01	0.05 ± 0.02	0.16 ± 0.05	0.05 ± 0.02	0.014 ± 0.005	0.003 ± 0.003	0.007 ± 0.004	0.008 ± 0.008	0.04 ± 0.02	W Africa F	E Europe M	0.50
17	0.16 ± 0.04	0.07 ± 0.01	0.04 ± 0.02	0.10 ± 0.02	0.11 ± 0.03	0.22 ± 0.04	0.06 ± 0.02	0.018 ± 0.006	0.006 ± 0.006	0.024 ± 0.008	0.04 ± 0.02	0.09 ± 0.03	W Africa F	E Europe M	0.46
18	0.20 ± 0.03	0.12 ± 0.01	0.07 ± 0.02	0.12 ± 0.01	0.14 ± 0.02	0.26 ± 0.04	0.11 ± 0.03	0.036 ± 0.007	0.013 ± 0.009	0.05 ± 0.01	0.04 ± 0.01	0.12 ± 0.03	W Africa F	E Europe M	0.39
19	0.29 ± 0.03	0.18 ± 0.02	0.12 ± 0.03	0.18 ± 0.02	0.21 ± 0.02	0.36 ± 0.04	0.20 ± 0.03	0.06 ± 0.01	0.04 ± 0.02	0.09 ± 0.01	0.08 ± 0.02	0.21 ± 0.04	W Africa F	E Europe M	0.33
20	0.38 ± 0.03	0.27 ± 0.02	0.19 ± 0.03	0.26 ± 0.02	0.30 ± 0.02	0.42 ± 0.04	0.31 ± 0.04	0.12 ± 0.01	0.09 ± 0.02	0.19 ± 0.02	0.15 ± 0.02	0.30 ± 0.04	W Africa F	E Europe M	0.24
21	0.45 ± 0.04	0.36 ± 0.02	0.24 ± 0.03	0.34 ± 0.02	0.41 ± 0.02	0.51 ± 0.04	0.39 ± 0.04	0.19 ± 0.02	0.13 ± 0.03	0.29 ± 0.02	0.26 ± 0.03	0.36 ± 0.04	W Africa F	E Europe M	0.20
22	0.52 ± 0.03	0.46 ± 0.02	0.36 ± 0.03	0.40 ± 0.02	0.49 ± 0.02	0.55 ± 0.04	0.57 ± 0.03	0.30 ± 0.02	0.26 ± 0.03	0.41 ± 0.02	0.35 ± 0.03	0.48 ± 0.04	E Africa M	E Europe M	0.14
23	0.62 ± 0.03	0.56 ± 0.02	0.47 ± 0.02	0.50 ± 0.02	0.58 ± 0.02	0.66 ± 0.03	0.65 ± 0.03	0.43 ± 0.02	0.34 ± 0.03	0.55 ± 0.02	0.48 ± 0.03	0.63 ± 0.03	W Africa F	E Europe M	0.10
24	0.68 ± 0.03	0.64 ± 0.02	0.58 ± 0.02	0.55 ± 0.02	0.66 ± 0.02	0.70 ± 0.03	0.73 ± 0.03	0.56 ± 0.02	0.53 ± 0.03	0.67 ± 0.02	0.62 ± 0.03	0.73 ± 0.03	E Africa M	E Europe M	0.07
25	0.73 ± 0.02	0.73 ± 0.01	0.68 ± 0.02	0.64 ± 0.01	0.75 ± 0.02	0.77 ± 0.02	0.83 ± 0.02	0.68 ± 0.02	0.67 ± 0.03	0.79 ± 0.01	0.73 ± 0.02	0.79 ± 0.02	E Africa M	S Asia F	0.05
26	0.79 ± 0.02	0.79 ± 0.01	0.77 ± 0.02	0.70 ± 0.01	0.82 ± 0.01	0.81 ± 0.02	0.87 ± 0.02	0.78 ± 0.02	0.77 ± 0.02	0.84 ± 0.01	0.83 ± 0.02	0.86 ± 0.02	E Africa M	S Asia F	0.03
27	0.84 ± 0.02	0.85 ± 0.01	0.84 ± 0.01	0.76 ± 0.01	0.86 ± 0.01	0.85 ± 0.02	0.91 ± 0.01	0.85 ± 0.01	0.88 ± 0.02	0.893 ± 0.009	0.88 ± 0.02	0.90 ± 0.01	E Africa M	S Asia F	0.03
28	0.88 ± 0.02	0.890 ± 0.008	0.90 ± 0.01	0.807 ± 0.009	0.89 ± 0.01	0.89 ± 0.02	0.94 ± 0.01	0.91 ± 0.01	0.92 ± 0.01	0.931 ± 0.007	0.93 ± 0.02	0.92 ± 0.01	E Africa M	S Asia F	0.02
29	0.91 ± 0.01	0.921 ± 0.007	0.931 ± 0.009	0.857 ± 0.008	0.927 ± 0.010	0.91 ± 0.01	0.96 ± 0.01	0.945 ± 0.009	0.968 ± 0.010	0.951 ± 0.006	0.95 ± 0.01	0.95 ± 0.01	E Europe M	S Asia F	0.02
30	0.93 ± 0.01	0.945 ± 0.006	0.955 ± 0.008	0.887 ± 0.008	0.947 ± 0.010	0.93 ± 0.01	0.975 ± 0.009	0.976 ± 0.005	0.978 ± 0.008	0.968 ± 0.004	0.979 ± 0.009	0.965 ± 0.009	S E Asia M	S Asia F	0.02
31	0.95 ± 0.01	0.963 ± 0.005	0.974 ± 0.006	0.920 ± 0.007	0.963 ± 0.007	0.95 ± 0.01	0.982 ± 0.008	0.984 ± 0.004	0.987 ± 0.006	0.981 ± 0.004	0.981 ± 0.008	0.980 ± 0.006	E Europe M	S Asia F	0.01
32	0.96 ± 0.01	0.978 ± 0.004	0.984 ± 0.005	0.942 ± 0.006	0.973 ± 0.006	0.958 ± 0.010	0.991 ± 0.005	0.988 ± 0.004	0.995 ± 0.004	0.989 ± 0.003	0.988 ± 0.007	0.984 ± 0.007	E Europe M	S Asia F	0.01
33	0.971 ± 0.009	0.985 ± 0.003	0.989 ± 0.005	0.960 ± 0.005	0.983 ± 0.006	0.97 ± 0.01	0.992 ± 0.005	0.994 ± 0.003	0.998 ± 0.003	0.992 ± 0.002	0.993 ± 0.006	0.991 ± 0.005	E Europe M	S Asia F	0.01
34	0.981 ± 0.008	0.989 ± 0.003	0.988 ± 0.005	0.974 ± 0.004	0.991 ± 0.004	0.978 ± 0.008	0.998 ± 0.003	0.996 ± 0.002	0.996 ± 0.004	0.995 ± 0.002	0.996 ± 0.005	0.994 ± 0.004	E Africa M	S Asia F	0.00

Table 162. *For algorithm ondato-001 with Border images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.11 ± 0.05	0.013 ± 0.004	0.03 ± 0.01	0.04 ± 0.01	0.014 ± 0.009	0.09 ± 0.04	0.09 ± 0.04	0.006 ± 0.003	0.007 ± 0.007	0.020 ± 0.008	0.011 ± 0.008	0.08 ± 0.04	E Africa F	E Asia M	0.51
15	0.12 ± 0.05	0.012 ± 0.004	0.04 ± 0.01	0.07 ± 0.01	0.012 ± 0.009	0.18 ± 0.05	0.20 ± 0.06	0.008 ± 0.003	0.02 ± 0.01	0.031 ± 0.009	0.016 ± 0.009	0.13 ± 0.05	E Africa M	E Asia M	0.56
16	0.18 ± 0.05	0.018 ± 0.005	0.04 ± 0.01	0.07 ± 0.01	0.03 ± 0.01	0.18 ± 0.04	0.19 ± 0.05	0.016 ± 0.004	0.02 ± 0.01	0.05 ± 0.01	0.03 ± 0.01	0.13 ± 0.04	E Africa M	E Asia M	0.49
17	0.21 ± 0.05	0.031 ± 0.006	0.09 ± 0.02	0.11 ± 0.02	0.024 ± 0.010	0.21 ± 0.05	0.30 ± 0.06	0.031 ± 0.006	0.05 ± 0.02	0.12 ± 0.02	0.05 ± 0.02	0.29 ± 0.05	E Africa M	S E Asia F	0.47
18	0.28 ± 0.05	0.039 ± 0.005	0.11 ± 0.02	0.13 ± 0.01	0.05 ± 0.01	0.29 ± 0.05	0.39 ± 0.06	0.051 ± 0.006	0.09 ± 0.02	0.17 ± 0.02	0.06 ± 0.01	0.33 ± 0.04	E Africa M	E Asia F	0.43
19	0.34 ± 0.05	0.061 ± 0.006	0.13 ± 0.02	0.18 ± 0.01	0.05 ± 0.01	0.36 ± 0.04	0.46 ± 0.05	0.078 ± 0.007	0.14 ± 0.02	0.25 ± 0.02	0.12 ± 0.02	0.38 ± 0.04	E Africa M	S E Asia F	0.38
20	0.40 ± 0.04	0.086 ± 0.006	0.17 ± 0.01	0.21 ± 0.01	0.09 ± 0.01	0.38 ± 0.04	0.55 ± 0.05	0.122 ± 0.008	0.20 ± 0.02	0.37 ± 0.02	0.18 ± 0.02	0.43 ± 0.04	E Africa M	E Asia F	0.34
21	0.44 ± 0.04	0.115 ± 0.007	0.21 ± 0.02	0.25 ± 0.01	0.11 ± 0.01	0.47 ± 0.04	0.62 ± 0.04	0.188 ± 0.009	0.31 ± 0.02	0.48 ± 0.02	0.24 ± 0.02	0.55 ± 0.04	E Africa M	S E Asia F	0.31
22	0.54 ± 0.04	0.147 ± 0.007	0.27 ± 0.02	0.31 ± 0.01	0.15 ± 0.01	0.56 ± 0.03	0.73 ± 0.04	0.26 ± 0.01	0.44 ± 0.03	0.57 ± 0.02	0.34 ± 0.02	0.61 ± 0.03	E Africa M	E Asia F	0.28
23	0.58 ± 0.03	0.186 ± 0.007	0.34 ± 0.02	0.35 ± 0.01	0.21 ± 0.01	0.59 ± 0.03	0.78 ± 0.03	0.34 ± 0.01	0.50 ± 0.02	0.65 ± 0.01	0.42 ± 0.03	0.70 ± 0.03	E Africa M	E Asia F	0.24
24	0.59 ± 0.03	0.236 ± 0.007	0.41 ± 0.01	0.41 ± 0.01	0.25 ± 0.02	0.63 ± 0.03	0.84 ± 0.03	0.43 ± 0.01	0.63 ± 0.02	0.73 ± 0.01	0.50 ± 0.02	0.74 ± 0.03	E Africa M	E Asia F	0.22
25	0.64 ± 0.03	0.294 ± 0.008	0.49 ± 0.01	0.46 ± 0.01	0.32 ± 0.01	0.70 ± 0.02	0.88 ± 0.02	0.51 ± 0.01	0.72 ± 0.02	0.796 ± 0.010	0.58 ± 0.02	0.81 ± 0.02	E Africa M	E Asia F	0.19
26	0.69 ± 0.03	0.359 ± 0.008	0.55 ± 0.01	0.506 ± 0.010	0.39 ± 0.02	0.71 ± 0.02	0.91 ± 0.02	0.60 ± 0.01	0.78 ± 0.02	0.832 ± 0.008	0.66 ± 0.02	0.85 ± 0.02	E Africa M	E Asia F	0.16
27	0.72 ± 0.03	0.410 ± 0.008	0.64 ± 0.01	0.552 ± 0.009	0.43 ± 0.02	0.75 ± 0.02	0.92 ± 0.02	0.67 ± 0.01	0.85 ± 0.01	0.867 ± 0.008	0.73 ± 0.02	0.88 ± 0.01	E Africa M	E Asia F	0.14
28	0.77 ± 0.02	0.482 ± 0.008	0.70 ± 0.01	0.599 ± 0.008	0.51 ± 0.01	0.77 ± 0.02	0.95 ± 0.01	0.744 ± 0.010	0.90 ± 0.01	0.902 ± 0.006	0.78 ± 0.02	0.90 ± 0.01	E Africa M	E Asia F	0.12
29	0.78 ± 0.02	0.535 ± 0.007	0.758 ± 0.009	0.646 ± 0.008	0.56 ± 0.02	0.82 ± 0.02	0.96 ± 0.01	0.795 ± 0.008	0.918 ± 0.009	0.921 ± 0.005	0.83 ± 0.02	0.93 ± 0.01	E Africa M	E Asia F	0.10
30	0.82 ± 0.02	0.597 ± 0.007	0.814 ± 0.009	0.694 ± 0.007	0.63 ± 0.01	0.83 ± 0.02	0.968 ± 0.010	0.836 ± 0.008	0.939 ± 0.008	0.935 ± 0.004	0.86 ± 0.01	0.945 ± 0.009	E Africa M	E Asia F	0.09
31	0.86 ± 0.02	0.657 ± 0.007	0.858 ± 0.008	0.737 ± 0.007	0.68 ± 0.01	0.86 ± 0.02	0.970 ± 0.010	0.882 ± 0.006	0.967 ± 0.006	0.957 ± 0.003	0.90 ± 0.01	0.946 ± 0.009	E Africa M	E Asia F	0.07
32	0.89 ± 0.02	0.705 ± 0.007	0.898 ± 0.008	0.774 ± 0.007	0.71 ± 0.01	0.89 ± 0.02	0.977 ± 0.009	0.902 ± 0.006	0.972 ± 0.005	0.963 ± 0.003	0.92 ± 0.01	0.954 ± 0.008	E Africa M	E Asia F	0.06
33	0.91 ± 0.02	0.753 ± 0.006	0.915 ± 0.007	0.809 ± 0.007	0.77 ± 0.01	0.90 ± 0.02	0.985 ± 0.007	0.929 ± 0.005	0.982 ± 0.004	0.971 ± 0.002	0.93 ± 0.01	0.970 ± 0.007	E Africa M	E Asia F	0.05
34	0.92 ± 0.02	0.791 ± 0.006	0.934 ± 0.006	0.845 ± 0.006	0.81 ± 0.01	0.93 ± 0.01	0.992 ± 0.005	0.940 ± 0.005	0.989 ± 0.003	0.978 ± 0.002	0.95 ± 0.01	0.974 ± 0.006	E Africa M	E Asia F	0.04

Table 163. *For algorithm privately-000 with Application images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.02 ± 0.01	0.030 ± 0.008	0.005 ± 0.005	0.014 ± 0.006	0.05 ± 0.02	0.02 ± 0.02	0.006 ± 0.006	0.015 ± 0.005	0.002 ± 0.002	0.005 ± 0.003	0.005 ± 0.005	0.000 ± 0.000	S E Asia F	W Africa M	0.54
15	0.02 ± 0.01	0.07 ± 0.01	0.02 ± 0.01	0.04 ± 0.01	0.09 ± 0.03	0.04 ± 0.02	0.005 ± 0.005	0.015 ± 0.006	0.000 ± 0.000	0.005 ± 0.004	0.007 ± 0.007	0.009 ± 0.009	S E Asia F	E Europe M	0.57
16	0.06 ± 0.02	0.11 ± 0.02	0.03 ± 0.02	0.06 ± 0.01	0.13 ± 0.03	0.08 ± 0.03	0.02 ± 0.01	0.026 ± 0.008	0.01 ± 0.01	0.006 ± 0.004	0.03 ± 0.01	0.005 ± 0.005	S E Asia F	W Africa M	0.49
17	0.08 ± 0.03	0.14 ± 0.02	0.07 ± 0.03	0.08 ± 0.02	0.12 ± 0.03	0.11 ± 0.03	0.01 ± 0.01	0.037 ± 0.009	0.003 ± 0.003	0.015 ± 0.006	0.03 ± 0.01	0.03 ± 0.02	E Asia F	E Europe M	0.46
18	0.10 ± 0.02	0.19 ± 0.02	0.08 ± 0.02	0.10 ± 0.01	0.18 ± 0.02	0.11 ± 0.03	0.05 ± 0.02	0.043 ± 0.008	0.007 ± 0.005	0.010 ± 0.004	0.03 ± 0.01	0.03 ± 0.01	E Asia F	E Europe M	0.45
19	0.15 ± 0.03	0.24 ± 0.02	0.11 ± 0.03	0.15 ± 0.02	0.23 ± 0.03	0.15 ± 0.03	0.08 ± 0.02	0.07 ± 0.01	0.02 ± 0.01	0.034 ± 0.008	0.04 ± 0.01	0.04 ± 0.02	E Asia F	E Europe M	0.40
20	0.22 ± 0.03	0.31 ± 0.02	0.15 ± 0.02	0.18 ± 0.02	0.31 ± 0.03	0.22 ± 0.03	0.16 ± 0.03	0.10 ± 0.01	0.03 ± 0.01	0.08 ± 0.01	0.07 ± 0.02	0.09 ± 0.03	S E Asia F	E Europe M	0.34
21	0.24 ± 0.03	0.40 ± 0.02	0.16 ± 0.02	0.23 ± 0.02	0.37 ± 0.02	0.27 ± 0.03	0.19 ± 0.03	0.13 ± 0.01	0.05 ± 0.02	0.11 ± 0.01	0.11 ± 0.02	0.13 ± 0.03	E Asia F	E Europe M	0.31
22	0.32 ± 0.03	0.46 ± 0.02	0.24 ± 0.02	0.25 ± 0.02	0.45 ± 0.02	0.33 ± 0.04	0.29 ± 0.03	0.18 ± 0.01	0.10 ± 0.02	0.16 ± 0.02	0.14 ± 0.02	0.19 ± 0.03	E Asia F	E Europe M	0.26
23	0.34 ± 0.03	0.53 ± 0.02	0.31 ± 0.02	0.32 ± 0.02	0.52 ± 0.02	0.36 ± 0.03	0.33 ± 0.03	0.22 ± 0.02	0.16 ± 0.03	0.22 ± 0.02	0.18 ± 0.02	0.24 ± 0.03	E Asia F	E Europe M	0.22
24	0.42 ± 0.03	0.59 ± 0.02	0.38 ± 0.02	0.37 ± 0.01	0.59 ± 0.02	0.39 ± 0.03	0.41 ± 0.03	0.31 ± 0.02	0.21 ± 0.02	0.32 ± 0.02	0.25 ± 0.02	0.28 ± 0.03	E Asia F	E Europe M	0.18
25	0.48 ± 0.03	0.68 ± 0.01	0.43 ± 0.02	0.42 ± 0.01	0.64 ± 0.02	0.44 ± 0.03	0.50 ± 0.03	0.39 ± 0.02	0.32 ± 0.03	0.39 ± 0.02	0.32 ± 0.02	0.34 ± 0.03	E Asia F	S E Asia M	0.15
26	0.53 ± 0.03	0.73 ± 0.01	0.51 ± 0.02	0.48 ± 0.01	0.71 ± 0.02	0.48 ± 0.03	0.57 ± 0.03	0.45 ± 0.02	0.38 ± 0.03	0.47 ± 0.02	0.41 ± 0.03	0.42 ± 0.03	E Asia F	E Europe M	0.12
27	0.60 ± 0.03	0.79 ± 0.01	0.59 ± 0.02	0.53 ± 0.01	0.75 ± 0.02	0.54 ± 0.03	0.62 ± 0.03	0.55 ± 0.02	0.51 ± 0.03	0.54 ± 0.02	0.51 ± 0.03	0.48 ± 0.03	E Asia F	W Africa M	0.09
28	0.63 ± 0.02	0.843 ± 0.010	0.66 ± 0.02	0.58 ± 0.01	0.81 ± 0.02	0.58 ± 0.03	0.68 ± 0.02	0.62 ± 0.02	0.65 ± 0.03	0.62 ± 0.01	0.61 ± 0.03	0.54 ± 0.03	E Asia F	W Africa M	0.07
29	0.69 ± 0.02	0.884 ± 0.008	0.73 ± 0.02	0.64 ± 0.01	0.85 ± 0.01	0.61 ± 0.03	0.75 ± 0.02	0.72 ± 0.02	0.69 ± 0.02	0.68 ± 0.01	0.68 ± 0.03	0.63 ± 0.03	E Asia F	W Africa F	0.07
30	0.73 ± 0.02	0.908 ± 0.007	0.78 ± 0.02	0.67 ± 0.01	0.89 ± 0.01	0.64 ± 0.02	0.79 ± 0.02	0.77 ± 0.02	0.78 ± 0.02	0.73 ± 0.01	0.76 ± 0.03	0.68 ± 0.02	E Asia F	W Africa F	0.06
31	0.76 ± 0.02	0.926 ± 0.007	0.83 ± 0.02	0.72 ± 0.01	0.91 ± 0.01	0.71 ± 0.02	0.84 ± 0.02	0.83 ± 0.01	0.84 ± 0.02	0.78 ± 0.01	0.79 ± 0.02	0.73 ± 0.02	E Asia F	W Africa F	0.05
32	0.80 ± 0.02	0.946 ± 0.006	0.87 ± 0.01	0.77 ± 0.01	0.92 ± 0.01	0.72 ± 0.02	0.88 ± 0.02	0.88 ± 0.01	0.91 ± 0.02	0.829 ± 0.010	0.86 ± 0.02	0.77 ± 0.02	E Asia F	W Africa F	0.05
33	0.83 ± 0.02	0.963 ± 0.005	0.90 ± 0.01	0.80 ± 0.01	0.94 ± 0.01	0.77 ± 0.02	0.90 ± 0.02	0.91 ± 0.01	0.95 ± 0.01	0.860 ± 0.009	0.90 ± 0.02	0.82 ± 0.02	E Asia F	W Africa F	0.04
34	0.86 ± 0.02	0.975 ± 0.004	0.93 ± 0.01	0.85 ± 0.01	0.964 ± 0.007	0.80 ± 0.02	0.91 ± 0.02	0.936 ± 0.008	0.96 ± 0.01	0.894 ± 0.008	0.93 ± 0.02	0.85 ± 0.02	E Asia F	W Africa F	0.04

Table 164. *For algorithm privately-000 with Border images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.05 ± 0.03	0.08 ± 0.01	0.04 ± 0.02	0.06 ± 0.01	0.09 ± 0.03	0.02 ± 0.02	0.06 ± 0.03	0.040 ± 0.008	0.02 ± 0.01	0.023 ± 0.008	0.05 ± 0.02	0.05 ± 0.03	S E Asia F	E Europe M	0.28
15	0.14 ± 0.05	0.11 ± 0.01	0.07 ± 0.02	0.07 ± 0.02	0.13 ± 0.03	0.07 ± 0.04	0.11 ± 0.05	0.073 ± 0.009	0.03 ± 0.01	0.040 ± 0.009	0.04 ± 0.01	0.06 ± 0.03	E Africa F	E Europe M	0.27
16	0.12 ± 0.04	0.15 ± 0.01	0.07 ± 0.02	0.12 ± 0.02	0.16 ± 0.03	0.11 ± 0.04	0.09 ± 0.04	0.105 ± 0.010	0.04 ± 0.01	0.06 ± 0.01	0.09 ± 0.02	0.07 ± 0.03	S E Asia F	E Europe M	0.21
17	0.14 ± 0.04	0.21 ± 0.01	0.11 ± 0.02	0.17 ± 0.02	0.21 ± 0.02	0.16 ± 0.04	0.20 ± 0.05	0.15 ± 0.01	0.06 ± 0.02	0.13 ± 0.02	0.13 ± 0.02	0.16 ± 0.04	E Asia F	E Europe M	0.17
18	0.23 ± 0.05	0.25 ± 0.01	0.13 ± 0.02	0.19 ± 0.02	0.27 ± 0.02	0.17 ± 0.04	0.27 ± 0.05	0.20 ± 0.01	0.11 ± 0.02	0.16 ± 0.02	0.18 ± 0.02	0.19 ± 0.04	E Africa M	E Europe M	0.15
19	0.23 ± 0.03	0.30 ± 0.01	0.18 ± 0.02	0.24 ± 0.02	0.31 ± 0.02	0.19 ± 0.03	0.30 ± 0.05	0.25 ± 0.01	0.14 ± 0.02	0.22 ± 0.02	0.22 ± 0.02	0.23 ± 0.04	S E Asia F	E Europe M	0.13
20	0.29 ± 0.04	0.36 ± 0.01	0.19 ± 0.02	0.27 ± 0.02	0.38 ± 0.02	0.24 ± 0.03	0.41 ± 0.04	0.32 ± 0.01	0.20 ± 0.02	0.30 ± 0.02	0.28 ± 0.02	0.27 ± 0.03	E Africa M	E Europe F	0.14
21	0.34 ± 0.04	0.42 ± 0.01	0.24 ± 0.02	0.32 ± 0.02	0.42 ± 0.02	0.30 ± 0.03	0.46 ± 0.04	0.38 ± 0.01	0.28 ± 0.02	0.38 ± 0.02	0.33 ± 0.02	0.34 ± 0.04	E Africa M	E Europe F	0.11
22	0.43 ± 0.03	0.486 ± 0.009	0.30 ± 0.02	0.36 ± 0.01	0.47 ± 0.02	0.38 ± 0.03	0.53 ± 0.04	0.45 ± 0.01	0.34 ± 0.02	0.47 ± 0.01	0.43 ± 0.02	0.40 ± 0.04	E Africa M	E Europe F	0.10
23	0.43 ± 0.04	0.538 ± 0.009	0.35 ± 0.01	0.41 ± 0.01	0.53 ± 0.02	0.39 ± 0.03	0.62 ± 0.04	0.51 ± 0.01	0.45 ± 0.02	0.54 ± 0.01	0.49 ± 0.02	0.50 ± 0.03	E Africa M	E Europe F	0.09
24	0.49 ± 0.03	0.595 ± 0.009	0.40 ± 0.01	0.46 ± 0.01	0.59 ± 0.02	0.43 ± 0.03	0.67 ± 0.03	0.58 ± 0.01	0.57 ± 0.02	0.63 ± 0.01	0.56 ± 0.02	0.54 ± 0.03	E Africa M	E Europe F	0.09
25	0.53 ± 0.03	0.654 ± 0.009	0.47 ± 0.01	0.51 ± 0.01	0.65 ± 0.02	0.51 ± 0.03	0.73 ± 0.03	0.64 ± 0.01	0.63 ± 0.02	0.68 ± 0.01	0.62 ± 0.02	0.62 ± 0.03	E Africa M	E Europe F	0.08
26	0.59 ± 0.03	0.705 ± 0.007	0.53 ± 0.01	0.556 ± 0.009	0.69 ± 0.01	0.50 ± 0.03	0.77 ± 0.03	0.700 ± 0.009	0.71 ± 0.02	0.74 ± 0.01	0.67 ± 0.02	0.65 ± 0.02	E Africa M	W Africa F	0.08
27	0.61 ± 0.03	0.740 ± 0.006	0.60 ± 0.01	0.590 ± 0.009	0.74 ± 0.01	0.56 ± 0.02	0.80 ± 0.02	0.740 ± 0.009	0.77 ± 0.01	0.778 ± 0.009	0.76 ± 0.02	0.73 ± 0.02	E Africa M	W Africa F	0.07
28	0.68 ± 0.03	0.788 ± 0.006	0.66 ± 0.01	0.635 ± 0.008	0.78 ± 0.01	0.58 ± 0.02	0.84 ± 0.02	0.796 ± 0.009	0.85 ± 0.01	0.824 ± 0.007	0.80 ± 0.02	0.77 ± 0.02	E Europe M	W Africa F	0.07
29	0.73 ± 0.03	0.825 ± 0.005	0.71 ± 0.01	0.673 ± 0.008	0.81 ± 0.01	0.63 ± 0.02	0.86 ± 0.02	0.830 ± 0.008	0.87 ± 0.01	0.854 ± 0.006	0.83 ± 0.02	0.80 ± 0.02	E Europe M	W Africa F	0.06
30	0.72 ± 0.02	0.854 ± 0.005	0.764 ± 0.010	0.712 ± 0.007	0.84 ± 0.01	0.66 ± 0.02	0.89 ± 0.02	0.859 ± 0.007	0.910 ± 0.009	0.878 ± 0.005	0.86 ± 0.02	0.84 ± 0.01	E Europe M	W Africa F	0.06
31	0.77 ± 0.02	0.883 ± 0.005	0.807 ± 0.009	0.750 ± 0.007	0.868 ± 0.010	0.71 ± 0.02	0.91 ± 0.02	0.889 ± 0.006	0.932 ± 0.008	0.909 ± 0.005	0.90 ± 0.01	0.85 ± 0.01	E Europe M	W Africa F	0.05
32	0.79 ± 0.02	0.903 ± 0.005	0.848 ± 0.009	0.786 ± 0.007	0.898 ± 0.009	0.72 ± 0.02	0.93 ± 0.01	0.918 ± 0.005	0.951 ± 0.007	0.925 ± 0.004	0.91 ± 0.01	0.88 ± 0.01	E Europe M	W Africa F	0.05
33	0.83 ± 0.02	0.917 ± 0.004	0.877 ± 0.009	0.810 ± 0.006	0.902 ± 0.010	0.74 ± 0.02	0.93 ± 0.01	0.933 ± 0.005	0.963 ± 0.006	0.938 ± 0.004	0.93 ± 0.01	0.90 ± 0.01	E Europe M	W Africa F	0.04
34	0.81 ± 0.02	0.933 ± 0.004	0.905 ± 0.008	0.840 ± 0.006	0.923 ± 0.010	0.76 ± 0.02	0.95 ± 0.01	0.947 ± 0.004	0.973 ± 0.005	0.950 ± 0.003	0.95 ± 0.01	0.91 ± 0.01	E Europe M	W Africa F	0.04

Table 165. *For algorithm regula-000 with Application images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.004 ± 0.004	0.001 ± 0.001	0.000 ± 0.000	0.001 ± 0.001	0.002 ± 0.002	0.000 ± 0.000	0.000 ± 0.000	0.002 ± 0.002	0.000 ± 0.000	0.001 ± 0.001	0.000 ± 0.000	0.000 ± 0.000	E Africa F	E Europe F	0.74
15	0.01 ± 0.01	0.002 ± 0.002	0.000 ± 0.000	0.009 ± 0.005	0.010 ± 0.007	0.009 ± 0.009	0.003 ± 0.003	0.000 ± 0.000	0.000 ± 0.000	0.002 ± 0.002	0.000 ± 0.000	0.005 ± 0.005	E Africa F	E Europe F	0.62
16	0.03 ± 0.02	0.003 ± 0.002	0.003 ± 0.003	0.004 ± 0.004	0.02 ± 0.01	0.05 ± 0.02	0.02 ± 0.01	0.001 ± 0.001	0.003 ± 0.003	0.002 ± 0.002	0.003 ± 0.003	0.009 ± 0.009	W Africa F	E Asia M	0.62
17	0.07 ± 0.02	0.013 ± 0.006	0.02 ± 0.01	0.03 ± 0.01	0.02 ± 0.01	0.09 ± 0.03	0.003 ± 0.003	0.002 ± 0.002	0.000 ± 0.000	0.007 ± 0.005	0.011 ± 0.008	0.03 ± 0.02	W Africa F	E Europe M	0.59
18	0.10 ± 0.02	0.015 ± 0.005	0.03 ± 0.01	0.034 ± 0.009	0.04 ± 0.01	0.14 ± 0.03	0.015 ± 0.009	0.009 ± 0.004	0.002 ± 0.002	0.014 ± 0.006	0.011 ± 0.007	0.06 ± 0.02	W Africa F	E Europe M	0.56
19	0.19 ± 0.03	0.040 ± 0.008	0.06 ± 0.02	0.07 ± 0.01	0.10 ± 0.02	0.23 ± 0.03	0.07 ± 0.02	0.012 ± 0.004	0.011 ± 0.008	0.029 ± 0.007	0.016 ± 0.008	0.09 ± 0.03	W Africa F	E Europe M	0.49
20	0.24 ± 0.03	0.08 ± 0.01	0.08 ± 0.02	0.11 ± 0.02	0.14 ± 0.02	0.33 ± 0.04	0.13 ± 0.03	0.020 ± 0.006	0.02 ± 0.01	0.07 ± 0.01	0.05 ± 0.01	0.17 ± 0.03	W Africa F	E Europe M	0.43
21	0.31 ± 0.04	0.14 ± 0.01	0.16 ± 0.02	0.19 ± 0.02	0.21 ± 0.02	0.40 ± 0.04	0.22 ± 0.03	0.05 ± 0.01	0.04 ± 0.02	0.13 ± 0.02	0.11 ± 0.02	0.26 ± 0.04	W Africa F	E Europe M	0.33
22	0.43 ± 0.03	0.19 ± 0.02	0.24 ± 0.02	0.26 ± 0.02	0.31 ± 0.02	0.46 ± 0.04	0.37 ± 0.03	0.11 ± 0.01	0.13 ± 0.02	0.22 ± 0.02	0.16 ± 0.02	0.33 ± 0.04	W Africa F	E Asia M	0.26
23	0.52 ± 0.03	0.30 ± 0.02	0.35 ± 0.02	0.37 ± 0.02	0.41 ± 0.02	0.60 ± 0.03	0.45 ± 0.04	0.19 ± 0.02	0.23 ± 0.03	0.33 ± 0.02	0.30 ± 0.03	0.49 ± 0.03	W Africa F	E Asia M	0.19
24	0.62 ± 0.03	0.40 ± 0.02	0.49 ± 0.02	0.48 ± 0.02	0.52 ± 0.02	0.66 ± 0.03	0.57 ± 0.03	0.30 ± 0.02	0.40 ± 0.03	0.50 ± 0.02	0.42 ± 0.03	0.60 ± 0.03	W Africa F	E Asia M	0.13
25	0.66 ± 0.03	0.54 ± 0.01	0.59 ± 0.02	0.55 ± 0.01	0.64 ± 0.02	0.76 ± 0.02	0.70 ± 0.03	0.44 ± 0.02	0.57 ± 0.03	0.62 ± 0.02	0.57 ± 0.03	0.70 ± 0.03	W Africa F	E Asia M	0.08
26	0.73 ± 0.02	0.63 ± 0.01	0.71 ± 0.02	0.65 ± 0.01	0.74 ± 0.02	0.83 ± 0.02	0.78 ± 0.02	0.59 ± 0.02	0.70 ± 0.03	0.73 ± 0.02	0.68 ± 0.03	0.80 ± 0.02	W Africa F	E Asia M	0.06
27	0.82 ± 0.02	0.74 ± 0.01	0.80 ± 0.02	0.71 ± 0.01	0.81 ± 0.02	0.88 ± 0.02	0.84 ± 0.02	0.70 ± 0.02	0.84 ± 0.02	0.82 ± 0.01	0.81 ± 0.02	0.88 ± 0.02	W Africa F	E Asia M	0.04
28	0.87 ± 0.02	0.81 ± 0.01	0.90 ± 0.01	0.80 ± 0.01	0.88 ± 0.01	0.91 ± 0.01	0.89 ± 0.02	0.81 ± 0.01	0.90 ± 0.02	0.887 ± 0.009	0.88 ± 0.02	0.91 ± 0.01	W Africa F	S Asia F	0.03
29	0.91 ± 0.01	0.869 ± 0.008	0.940 ± 0.008	0.852 ± 0.009	0.926 ± 0.010	0.94 ± 0.01	0.94 ± 0.01	0.89 ± 0.01	0.96 ± 0.01	0.927 ± 0.007	0.91 ± 0.02	0.95 ± 0.01	E Europe M	S Asia F	0.02
30	0.93 ± 0.01	0.922 ± 0.007	0.960 ± 0.008	0.889 ± 0.008	0.950 ± 0.009	0.95 ± 0.01	0.966 ± 0.010	0.937 ± 0.008	0.981 ± 0.008	0.958 ± 0.005	0.96 ± 0.01	0.962 ± 0.009	E Europe M	S Asia F	0.01
31	0.95 ± 0.01	0.950 ± 0.005	0.982 ± 0.005	0.924 ± 0.007	0.970 ± 0.007	0.974 ± 0.007	0.976 ± 0.009	0.965 ± 0.006	0.989 ± 0.006	0.975 ± 0.004	0.981 ± 0.008	0.983 ± 0.007	E Europe M	S Asia F	0.01
32	0.97 ± 0.01	0.973 ± 0.005	0.993 ± 0.003	0.957 ± 0.006	0.978 ± 0.006	0.982 ± 0.007	0.986 ± 0.007	0.982 ± 0.004	0.995 ± 0.004	0.985 ± 0.003	0.987 ± 0.007	0.988 ± 0.005	E Europe M	S Asia F	0.01
33	0.983 ± 0.007	0.985 ± 0.003	0.992 ± 0.004	0.972 ± 0.005	0.991 ± 0.004	0.991 ± 0.005	0.993 ± 0.005	0.992 ± 0.004	0.998 ± 0.003	0.993 ± 0.002	0.988 ± 0.006	0.990 ± 0.005	E Europe M	S Asia F	0.00
34	0.979 ± 0.008	0.991 ± 0.002	0.997 ± 0.002	0.983 ± 0.004	0.993 ± 0.004	0.993 ± 0.005	0.995 ± 0.004	0.995 ± 0.002	0.998 ± 0.003	0.995 ± 0.002	0.996 ± 0.005	0.996 ± 0.004	E Europe M	E Africa F	0.00

Table 166. *For algorithm regula-000 with Border images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.06 ± 0.03	0.012 ± 0.005	0.02 ± 0.01	0.018 ± 0.008	0.011 ± 0.009	0.03 ± 0.03	0.02 ± 0.02	0.005 ± 0.003	0.002 ± 0.002	0.003 ± 0.002	0.006 ± 0.006	0.04 ± 0.03	E Africa F	E Europe M	0.50
15	0.09 ± 0.04	0.017 ± 0.004	0.03 ± 0.01	0.030 ± 0.009	0.02 ± 0.01	0.14 ± 0.05	0.04 ± 0.02	0.008 ± 0.003	0.004 ± 0.004	0.005 ± 0.004	0.005 ± 0.005	0.03 ± 0.02	W Africa F	E Europe M	0.58
16	0.13 ± 0.05	0.024 ± 0.005	0.03 ± 0.01	0.04 ± 0.01	0.03 ± 0.01	0.10 ± 0.04	0.04 ± 0.02	0.007 ± 0.003	0.003 ± 0.003	0.005 ± 0.003	0.008 ± 0.006	0.04 ± 0.02	E Africa F	E Europe M	0.55
17	0.17 ± 0.05	0.049 ± 0.007	0.05 ± 0.02	0.07 ± 0.01	0.04 ± 0.01	0.17 ± 0.04	0.11 ± 0.04	0.010 ± 0.003	0.003 ± 0.003	0.013 ± 0.005	0.013 ± 0.008	0.10 ± 0.03	W Africa F	E Europe M	0.51
18	0.27 ± 0.05	0.062 ± 0.006	0.11 ± 0.02	0.11 ± 0.01	0.07 ± 0.01	0.19 ± 0.04	0.12 ± 0.04	0.023 ± 0.004	0.009 ± 0.006	0.028 ± 0.007	0.021 ± 0.009	0.11 ± 0.03	E Africa F	E Europe M	0.46
19	0.36 ± 0.05	0.093 ± 0.007	0.13 ± 0.02	0.18 ± 0.01	0.11 ± 0.01	0.32 ± 0.04	0.20 ± 0.04	0.041 ± 0.005	0.04 ± 0.01	0.053 ± 0.008	0.04 ± 0.01	0.15 ± 0.03	E Africa F	E Europe M	0.42
20	0.43 ± 0.04	0.146 ± 0.007	0.19 ± 0.02	0.22 ± 0.01	0.17 ± 0.02	0.38 ± 0.04	0.27 ± 0.04	0.068 ± 0.006	0.05 ± 0.01	0.09 ± 0.01	0.09 ± 0.02	0.21 ± 0.03	E Africa F	E Europe M	0.36
21	0.49 ± 0.04	0.205 ± 0.008	0.26 ± 0.02	0.28 ± 0.01	0.22 ± 0.02	0.49 ± 0.04	0.33 ± 0.04	0.121 ± 0.008	0.09 ± 0.02	0.15 ± 0.01	0.12 ± 0.02	0.30 ± 0.04	E Africa F	E Europe M	0.30
22	0.60 ± 0.04	0.272 ± 0.009	0.35 ± 0.02	0.36 ± 0.01	0.31 ± 0.02	0.57 ± 0.03	0.44 ± 0.04	0.188 ± 0.009	0.17 ± 0.02	0.23 ± 0.01	0.23 ± 0.02	0.40 ± 0.03	E Africa F	E Europe M	0.24
23	0.63 ± 0.04	0.349 ± 0.009	0.43 ± 0.02	0.43 ± 0.01	0.41 ± 0.02	0.62 ± 0.03	0.50 ± 0.03	0.28 ± 0.01	0.27 ± 0.02	0.31 ± 0.01	0.31 ± 0.02	0.48 ± 0.03	E Africa F	E Europe M	0.17
24	0.72 ± 0.03	0.436 ± 0.009	0.53 ± 0.02	0.51 ± 0.01	0.50 ± 0.02	0.67 ± 0.03	0.62 ± 0.03	0.39 ± 0.01	0.40 ± 0.02	0.42 ± 0.01	0.42 ± 0.02	0.57 ± 0.03	E Africa F	E Asia M	0.13
25	0.75 ± 0.03	0.533 ± 0.008	0.63 ± 0.01	0.57 ± 0.01	0.58 ± 0.02	0.77 ± 0.02	0.69 ± 0.03	0.49 ± 0.01	0.51 ± 0.02	0.53 ± 0.01	0.54 ± 0.02	0.67 ± 0.03	W Africa F	E Asia M	0.09
26	0.81 ± 0.02	0.624 ± 0.008	0.70 ± 0.01	0.634 ± 0.009	0.67 ± 0.01	0.78 ± 0.02	0.78 ± 0.03	0.61 ± 0.01	0.64 ± 0.02	0.61 ± 0.01	0.64 ± 0.02	0.75 ± 0.02	E Africa F	E Asia M	0.06
27	0.84 ± 0.02	0.690 ± 0.008	0.792 ± 0.009	0.695 ± 0.008	0.74 ± 0.01	0.86 ± 0.02	0.82 ± 0.02	0.687 ± 0.010	0.74 ± 0.01	0.696 ± 0.009	0.74 ± 0.02	0.82 ± 0.02	W Africa F	E Asia M	0.05
28	0.89 ± 0.02	0.759 ± 0.006	0.855 ± 0.008	0.744 ± 0.008	0.81 ± 0.01	0.88 ± 0.01	0.89 ± 0.02	0.769 ± 0.009	0.84 ± 0.01	0.779 ± 0.008	0.81 ± 0.02	0.88 ± 0.01	E Africa F	S Asia F	0.04
29	0.91 ± 0.01	0.816 ± 0.006	0.900 ± 0.007	0.793 ± 0.007	0.85 ± 0.01	0.91 ± 0.01	0.91 ± 0.02	0.838 ± 0.008	0.891 ± 0.010	0.836 ± 0.007	0.86 ± 0.02	0.90 ± 0.01	E Africa M	S Asia F	0.03
30	0.93 ± 0.01	0.868 ± 0.005	0.932 ± 0.006	0.842 ± 0.006	0.900 ± 0.010	0.93 ± 0.01	0.95 ± 0.01	0.886 ± 0.007	0.936 ± 0.008	0.879 ± 0.005	0.90 ± 0.01	0.93 ± 0.01	E Africa M	S Asia F	0.02
31	0.94 ± 0.01	0.906 ± 0.004	0.953 ± 0.005	0.881 ± 0.005	0.915 ± 0.008	0.960 ± 0.009	0.97 ± 0.01	0.922 ± 0.006	0.961 ± 0.006	0.916 ± 0.004	0.92 ± 0.01	0.954 ± 0.008	E Africa M	S Asia F	0.02
32	0.97 ± 0.01	0.930 ± 0.004	0.974 ± 0.004	0.909 ± 0.005	0.938 ± 0.007	0.960 ± 0.010	0.974 ± 0.009	0.947 ± 0.005	0.979 ± 0.004	0.936 ± 0.003	0.953 ± 0.010	0.964 ± 0.008	E Europe M	S Asia F	0.01
33	0.96 ± 0.01	0.952 ± 0.003	0.982 ± 0.003	0.935 ± 0.004	0.961 ± 0.006	0.973 ± 0.009	0.985 ± 0.008	0.963 ± 0.004	0.984 ± 0.004	0.956 ± 0.003	0.966 ± 0.008	0.977 ± 0.007	E Africa M	S Asia F	0.01
34	0.980 ± 0.008	0.965 ± 0.003	0.988 ± 0.003	0.953 ± 0.004	0.969 ± 0.006	0.984 ± 0.007	0.989 ± 0.006	0.972 ± 0.003	0.992 ± 0.003	0.971 ± 0.002	0.976 ± 0.007	0.987 ± 0.005	E Europe M	S Asia F	0.01

Table 167. *For algorithm roc-000 with Application images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.04 ± 0.02	0.034 ± 0.009	0.000 ± 0.000	0.006 ± 0.004	0.04 ± 0.02	0.04 ± 0.02	0.013 ± 0.008	0.030 ± 0.007	0.000 ± 0.000	0.003 ± 0.003	0.03 ± 0.02	0.004 ± 0.004	S E Asia F	E Europe F	0.49
15	0.06 ± 0.02	0.07 ± 0.01	0.003 ± 0.003	0.027 ± 0.010	0.06 ± 0.02	0.08 ± 0.04	0.03 ± 0.02	0.05 ± 0.01	0.000 ± 0.000	0.011 ± 0.006	0.03 ± 0.01	0.02 ± 0.02	W Africa F	E Europe M	0.43
16	0.11 ± 0.03	0.14 ± 0.02	0.005 ± 0.005	0.03 ± 0.01	0.11 ± 0.03	0.14 ± 0.04	0.05 ± 0.02	0.06 ± 0.01	0.003 ± 0.003	0.018 ± 0.008	0.05 ± 0.02	0.05 ± 0.03	W Africa F	E Europe M	0.45
17	0.18 ± 0.04	0.17 ± 0.02	0.02 ± 0.01	0.07 ± 0.01	0.13 ± 0.03	0.22 ± 0.04	0.07 ± 0.03	0.12 ± 0.02	0.000 ± 0.000	0.04 ± 0.01	0.11 ± 0.03	0.11 ± 0.03	W Africa F	E Europe M	0.38
18	0.19 ± 0.03	0.22 ± 0.02	0.05 ± 0.02	0.07 ± 0.01	0.20 ± 0.03	0.26 ± 0.04	0.13 ± 0.03	0.17 ± 0.01	0.007 ± 0.005	0.07 ± 0.01	0.14 ± 0.03	0.15 ± 0.03	W Africa F	E Europe M	0.33
19	0.26 ± 0.03	0.31 ± 0.02	0.08 ± 0.02	0.12 ± 0.01	0.29 ± 0.03	0.38 ± 0.05	0.25 ± 0.04	0.28 ± 0.02	0.019 ± 0.009	0.11 ± 0.01	0.23 ± 0.03	0.28 ± 0.04	W Africa F	E Europe M	0.29
20	0.37 ± 0.04	0.40 ± 0.02	0.10 ± 0.02	0.18 ± 0.02	0.38 ± 0.03	0.41 ± 0.04	0.32 ± 0.04	0.39 ± 0.02	0.04 ± 0.01	0.21 ± 0.02	0.35 ± 0.03	0.39 ± 0.04	W Africa F	E Europe M	0.24
21	0.41 ± 0.04	0.52 ± 0.02	0.15 ± 0.02	0.23 ± 0.02	0.48 ± 0.03	0.50 ± 0.04	0.46 ± 0.04	0.51 ± 0.02	0.06 ± 0.02	0.30 ± 0.02	0.50 ± 0.03	0.51 ± 0.04	E Asia F	E Europe M	0.23
22	0.51 ± 0.03	0.60 ± 0.02	0.22 ± 0.02	0.28 ± 0.02	0.59 ± 0.02	0.57 ± 0.04	0.63 ± 0.04	0.62 ± 0.02	0.18 ± 0.03	0.42 ± 0.02	0.58 ± 0.03	0.61 ± 0.04	E Africa M	E Europe M	0.19
23	0.57 ± 0.03	0.70 ± 0.02	0.29 ± 0.02	0.35 ± 0.02	0.68 ± 0.02	0.65 ± 0.03	0.66 ± 0.03	0.74 ± 0.02	0.23 ± 0.03	0.55 ± 0.02	0.72 ± 0.03	0.70 ± 0.03	E Asia M	E Europe M	0.17
24	0.65 ± 0.03	0.76 ± 0.01	0.39 ± 0.02	0.42 ± 0.01	0.76 ± 0.02	0.70 ± 0.03	0.78 ± 0.03	0.82 ± 0.01	0.41 ± 0.03	0.66 ± 0.02	0.81 ± 0.02	0.79 ± 0.02	E Asia M	E Europe F	0.14
25	0.69 ± 0.02	0.83 ± 0.01	0.47 ± 0.02	0.47 ± 0.01	0.82 ± 0.02	0.78 ± 0.02	0.83 ± 0.02	0.88 ± 0.01	0.55 ± 0.03	0.73 ± 0.02	0.88 ± 0.02	0.86 ± 0.02	E Asia M	E Europe F	0.12
26	0.74 ± 0.02	0.872 ± 0.010	0.57 ± 0.02	0.55 ± 0.01	0.87 ± 0.01	0.82 ± 0.02	0.88 ± 0.02	0.936 ± 0.009	0.64 ± 0.03	0.81 ± 0.01	0.92 ± 0.02	0.91 ± 0.02	E Asia M	S Asia F	0.10
27	0.78 ± 0.02	0.915 ± 0.008	0.67 ± 0.02	0.61 ± 0.01	0.90 ± 0.01	0.86 ± 0.02	0.91 ± 0.02	0.965 ± 0.007	0.77 ± 0.02	0.86 ± 0.01	0.95 ± 0.01	0.93 ± 0.01	E Asia M	S Asia F	0.08
28	0.83 ± 0.02	0.939 ± 0.006	0.75 ± 0.02	0.67 ± 0.01	0.932 ± 0.009	0.90 ± 0.02	0.94 ± 0.01	0.982 ± 0.005	0.85 ± 0.02	0.903 ± 0.009	0.973 ± 0.008	0.96 ± 0.01	E Asia M	S Asia F	0.06
29	0.88 ± 0.02	0.968 ± 0.004	0.83 ± 0.01	0.73 ± 0.01	0.949 ± 0.008	0.93 ± 0.01	0.967 ± 0.010	0.989 ± 0.004	0.91 ± 0.02	0.943 ± 0.006	0.980 ± 0.008	0.975 ± 0.008	E Asia M	S Asia F	0.04
30	0.91 ± 0.02	0.981 ± 0.003	0.88 ± 0.01	0.78 ± 0.01	0.976 ± 0.006	0.93 ± 0.01	0.972 ± 0.010	0.992 ± 0.003	0.95 ± 0.01	0.955 ± 0.006	0.987 ± 0.008	0.984 ± 0.006	E Asia M	S Asia F	0.03
31	0.92 ± 0.01	0.988 ± 0.003	0.91 ± 0.01	0.825 ± 0.009	0.982 ± 0.005	0.96 ± 0.01	0.981 ± 0.008	0.998 ± 0.002	0.970 ± 0.008	0.974 ± 0.004	0.995 ± 0.005	0.989 ± 0.005	E Asia M	S Asia F	0.03
32	0.95 ± 0.01	0.991 ± 0.002	0.953 ± 0.009	0.875 ± 0.009	0.986 ± 0.005	0.97 ± 0.01	0.990 ± 0.005	0.999 ± 0.001	0.980 ± 0.008	0.985 ± 0.003	0.995 ± 0.004	0.995 ± 0.004	E Asia M	S Asia F	0.02
33	0.96 ± 0.01	0.995 ± 0.002	0.963 ± 0.008	0.903 ± 0.008	0.992 ± 0.004	0.978 ± 0.009	0.995 ± 0.005	0.999 ± 0.001	0.994 ± 0.004	0.989 ± 0.002	0.996 ± 0.004	0.996 ± 0.003	E Asia M	S Asia F	0.01
34	0.979 ± 0.008	0.998 ± 0.001	0.980 ± 0.006	0.933 ± 0.007	0.997 ± 0.002	0.989 ± 0.006	0.995 ± 0.005	0.999 ± 0.001	0.996 ± 0.004	0.993 ± 0.003	1.000 ± 0.000	0.996 ± 0.004	S E Asia M	S Asia F	0.01

Table 168. *For algorithm roc-000 with Border images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.14 ± 0.05	0.10 ± 0.01	0.009 ± 0.006	0.032 ± 0.010	0.05 ± 0.02	0.13 ± 0.05	0.12 ± 0.04	0.045 ± 0.009	0.002 ± 0.002	0.007 ± 0.004	0.03 ± 0.01	0.09 ± 0.04	E Africa F	E Europe M	0.47
15	0.18 ± 0.05	0.15 ± 0.01	0.02 ± 0.01	0.05 ± 0.01	0.08 ± 0.02	0.25 ± 0.06	0.19 ± 0.06	0.088 ± 0.010	0.004 ± 0.004	0.010 ± 0.004	0.06 ± 0.02	0.18 ± 0.06	W Africa F	E Europe M	0.47
16	0.29 ± 0.06	0.19 ± 0.01	0.03 ± 0.01	0.07 ± 0.01	0.14 ± 0.02	0.27 ± 0.05	0.22 ± 0.06	0.13 ± 0.01	0.002 ± 0.002	0.023 ± 0.007	0.09 ± 0.02	0.13 ± 0.04	E Africa F	E Europe M	0.43
17	0.38 ± 0.06	0.27 ± 0.01	0.05 ± 0.02	0.10 ± 0.02	0.20 ± 0.03	0.37 ± 0.05	0.25 ± 0.05	0.19 ± 0.01	0.014 ± 0.008	0.07 ± 0.01	0.15 ± 0.02	0.25 ± 0.05	E Africa F	E Europe M	0.37
18	0.45 ± 0.05	0.35 ± 0.01	0.09 ± 0.02	0.14 ± 0.02	0.27 ± 0.02	0.38 ± 0.05	0.32 ± 0.06	0.26 ± 0.01	0.020 ± 0.009	0.10 ± 0.01	0.22 ± 0.03	0.34 ± 0.04	E Africa F	E Europe M	0.32
19	0.49 ± 0.05	0.42 ± 0.01	0.12 ± 0.02	0.20 ± 0.02	0.32 ± 0.02	0.47 ± 0.04	0.44 ± 0.05	0.36 ± 0.01	0.03 ± 0.01	0.16 ± 0.01	0.31 ± 0.03	0.42 ± 0.04	E Africa F	E Europe M	0.28
20	0.58 ± 0.04	0.51 ± 0.01	0.18 ± 0.02	0.24 ± 0.01	0.42 ± 0.02	0.58 ± 0.04	0.58 ± 0.04	0.47 ± 0.01	0.07 ± 0.01	0.26 ± 0.02	0.42 ± 0.03	0.52 ± 0.04	E Africa M	E Europe M	0.25
21	0.61 ± 0.04	0.58 ± 0.01	0.23 ± 0.02	0.32 ± 0.01	0.49 ± 0.02	0.61 ± 0.04	0.61 ± 0.04	0.59 ± 0.01	0.13 ± 0.02	0.34 ± 0.02	0.55 ± 0.03	0.61 ± 0.04	E Africa F	E Europe M	0.20
22	0.72 ± 0.04	0.663 ± 0.009	0.31 ± 0.02	0.38 ± 0.01	0.58 ± 0.02	0.70 ± 0.03	0.75 ± 0.03	0.69 ± 0.01	0.22 ± 0.02	0.46 ± 0.01	0.67 ± 0.02	0.73 ± 0.03	E Africa M	E Europe M	0.18
23	0.76 ± 0.03	0.727 ± 0.008	0.37 ± 0.01	0.44 ± 0.01	0.67 ± 0.02	0.76 ± 0.03	0.80 ± 0.03	0.77 ± 0.01	0.32 ± 0.02	0.57 ± 0.01	0.74 ± 0.02	0.80 ± 0.03	W Africa M	E Europe M	0.15
24	0.79 ± 0.03	0.781 ± 0.007	0.45 ± 0.01	0.51 ± 0.01	0.74 ± 0.02	0.80 ± 0.02	0.85 ± 0.03	0.831 ± 0.008	0.46 ± 0.02	0.66 ± 0.01	0.81 ± 0.02	0.86 ± 0.02	W Africa M	E Europe F	0.12
25	0.82 ± 0.03	0.836 ± 0.007	0.53 ± 0.01	0.56 ± 0.01	0.79 ± 0.01	0.84 ± 0.02	0.91 ± 0.02	0.893 ± 0.007	0.57 ± 0.02	0.74 ± 0.01	0.89 ± 0.02	0.90 ± 0.02	E Africa M	E Europe F	0.10
26	0.86 ± 0.02	0.875 ± 0.005	0.60 ± 0.01	0.632 ± 0.009	0.85 ± 0.01	0.86 ± 0.02	0.93 ± 0.02	0.927 ± 0.006	0.67 ± 0.02	0.797 ± 0.009	0.92 ± 0.01	0.93 ± 0.01	E Africa M	E Europe F	0.08
27	0.85 ± 0.02	0.905 ± 0.004	0.68 ± 0.01	0.677 ± 0.009	0.875 ± 0.010	0.90 ± 0.01	0.94 ± 0.02	0.948 ± 0.005	0.76 ± 0.02	0.855 ± 0.007	0.95 ± 0.01	0.953 ± 0.010	W Africa M	S Asia F	0.07
28	0.92 ± 0.02	0.927 ± 0.004	0.75 ± 0.01	0.735 ± 0.008	0.912 ± 0.009	0.91 ± 0.01	0.96 ± 0.01	0.966 ± 0.004	0.84 ± 0.01	0.898 ± 0.005	0.958 ± 0.009	0.969 ± 0.008	W Africa M	S Asia F	0.05
29	0.93 ± 0.01	0.949 ± 0.003	0.815 ± 0.009	0.773 ± 0.007	0.933 ± 0.008	0.94 ± 0.01	0.982 ± 0.009	0.978 ± 0.003	0.86 ± 0.01	0.922 ± 0.004	0.973 ± 0.008	0.980 ± 0.005	E Africa M	S Asia F	0.04
30	0.93 ± 0.01	0.961 ± 0.003	0.861 ± 0.008	0.824 ± 0.006	0.952 ± 0.007	0.954 ± 0.009	0.986 ± 0.007	0.984 ± 0.003	0.922 ± 0.009	0.943 ± 0.004	0.983 ± 0.006	0.984 ± 0.005	E Africa M	S Asia F	0.03
31	0.95 ± 0.01	0.972 ± 0.003	0.892 ± 0.007	0.855 ± 0.006	0.962 ± 0.006	0.970 ± 0.008	0.988 ± 0.007	0.986 ± 0.002	0.949 ± 0.008	0.961 ± 0.003	0.982 ± 0.007	0.989 ± 0.004	W Africa M	S Asia F	0.02
32	0.97 ± 0.01	0.979 ± 0.002	0.931 ± 0.006	0.884 ± 0.005	0.967 ± 0.006	0.974 ± 0.008	0.991 ± 0.005	0.991 ± 0.002	0.964 ± 0.006	0.971 ± 0.003	0.986 ± 0.006	0.992 ± 0.004	W Africa M	S Asia F	0.02
33	0.981 ± 0.008	0.983 ± 0.002	0.949 ± 0.006	0.914 ± 0.005	0.977 ± 0.005	0.981 ± 0.007	0.996 ± 0.004	0.994 ± 0.001	0.979 ± 0.004	0.980 ± 0.002	0.990 ± 0.005	0.995 ± 0.003	E Africa M	S Asia F	0.01
34	0.975 ± 0.009	0.986 ± 0.002	0.967 ± 0.005	0.933 ± 0.005	0.984 ± 0.004	0.989 ± 0.005	0.999 ± 0.002	0.994 ± 0.002	0.983 ± 0.004	0.985 ± 0.002	0.995 ± 0.004	0.996 ± 0.003	E Africa M	S Asia F	0.01

Table 169. *For algorithm roc-001 with Application images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.011 ± 0.009	0.005 ± 0.003	0.000 ± 0.000	0.003 ± 0.002	0.004 ± 0.004	0.02 ± 0.01	0.002 ± 0.002	0.002 ± 0.002	0.000 ± 0.000	0.003 ± 0.002	0.002 ± 0.002	0.004 ± 0.004	W Africa F	E Europe F	0.54
15	0.04 ± 0.02	0.016 ± 0.007	0.000 ± 0.000	0.023 ± 0.010	0.03 ± 0.01	0.07 ± 0.03	0.010 ± 0.008	0.004 ± 0.003	0.000 ± 0.000	0.005 ± 0.004	0.002 ± 0.002	0.005 ± 0.005	W Africa F	E Europe F	0.64
16	0.09 ± 0.03	0.04 ± 0.01	0.000 ± 0.000	0.023 ± 0.009	0.05 ± 0.02	0.09 ± 0.03	0.03 ± 0.02	0.014 ± 0.006	0.003 ± 0.003	0.004 ± 0.003	0.01 ± 0.01	0.01 ± 0.01	E Africa F	E Europe F	0.57
17	0.14 ± 0.04	0.10 ± 0.02	0.003 ± 0.003	0.07 ± 0.02	0.10 ± 0.03	0.18 ± 0.04	0.05 ± 0.02	0.042 ± 0.010	0.003 ± 0.003	0.019 ± 0.008	0.03 ± 0.02	0.08 ± 0.03	W Africa F	E Europe F	0.47
18	0.19 ± 0.03	0.15 ± 0.01	0.02 ± 0.01	0.10 ± 0.01	0.14 ± 0.02	0.23 ± 0.04	0.09 ± 0.02	0.09 ± 0.01	0.002 ± 0.002	0.045 ± 0.009	0.06 ± 0.02	0.13 ± 0.03	W Africa F	E Europe M	0.39
19	0.32 ± 0.04	0.25 ± 0.02	0.04 ± 0.02	0.17 ± 0.02	0.25 ± 0.03	0.36 ± 0.04	0.19 ± 0.03	0.18 ± 0.02	0.013 ± 0.009	0.10 ± 0.01	0.13 ± 0.02	0.24 ± 0.04	W Africa F	E Europe M	0.33
20	0.44 ± 0.04	0.35 ± 0.02	0.08 ± 0.02	0.26 ± 0.02	0.37 ± 0.03	0.43 ± 0.04	0.30 ± 0.04	0.31 ± 0.02	0.03 ± 0.01	0.18 ± 0.02	0.25 ± 0.03	0.32 ± 0.04	E Africa F	E Europe M	0.26
21	0.54 ± 0.04	0.48 ± 0.02	0.14 ± 0.02	0.35 ± 0.02	0.48 ± 0.03	0.51 ± 0.04	0.45 ± 0.04	0.48 ± 0.02	0.08 ± 0.02	0.29 ± 0.02	0.41 ± 0.03	0.45 ± 0.04	E Africa F	E Europe M	0.21
22	0.64 ± 0.03	0.61 ± 0.02	0.23 ± 0.02	0.48 ± 0.02	0.60 ± 0.02	0.61 ± 0.04	0.61 ± 0.03	0.62 ± 0.02	0.14 ± 0.03	0.43 ± 0.02	0.56 ± 0.03	0.57 ± 0.04	E Africa F	E Europe M	0.17
23	0.72 ± 0.03	0.72 ± 0.02	0.35 ± 0.02	0.60 ± 0.02	0.72 ± 0.02	0.69 ± 0.03	0.68 ± 0.03	0.76 ± 0.02	0.29 ± 0.03	0.58 ± 0.02	0.72 ± 0.03	0.72 ± 0.03	E Asia M	E Europe M	0.12
24	0.78 ± 0.03	0.80 ± 0.01	0.49 ± 0.02	0.68 ± 0.01	0.80 ± 0.02	0.76 ± 0.03	0.81 ± 0.03	0.85 ± 0.01	0.47 ± 0.03	0.70 ± 0.02	0.81 ± 0.02	0.80 ± 0.02	E Asia M	E Europe M	0.09
25	0.82 ± 0.02	0.872 ± 0.010	0.61 ± 0.02	0.76 ± 0.01	0.87 ± 0.01	0.85 ± 0.02	0.87 ± 0.02	0.92 ± 0.01	0.61 ± 0.03	0.81 ± 0.02	0.88 ± 0.02	0.87 ± 0.02	E Asia M	E Europe F	0.07
26	0.89 ± 0.02	0.914 ± 0.008	0.74 ± 0.02	0.82 ± 0.01	0.92 ± 0.01	0.89 ± 0.02	0.91 ± 0.02	0.956 ± 0.008	0.77 ± 0.02	0.88 ± 0.01	0.94 ± 0.01	0.92 ± 0.02	E Asia M	E Europe F	0.04
27	0.92 ± 0.01	0.953 ± 0.006	0.83 ± 0.01	0.872 ± 0.009	0.945 ± 0.008	0.92 ± 0.02	0.95 ± 0.01	0.976 ± 0.006	0.89 ± 0.02	0.927 ± 0.008	0.97 ± 0.01	0.95 ± 0.01	E Asia M	E Europe F	0.03
28	0.95 ± 0.01	0.972 ± 0.005	0.91 ± 0.01	0.919 ± 0.007	0.971 ± 0.006	0.96 ± 0.01	0.972 ± 0.008	0.989 ± 0.004	0.93 ± 0.01	0.958 ± 0.006	0.986 ± 0.008	0.965 ± 0.009	E Asia M	E Europe F	0.01
29	0.966 ± 0.010	0.989 ± 0.003	0.947 ± 0.009	0.947 ± 0.006	0.987 ± 0.004	0.96 ± 0.01	0.981 ± 0.008	0.996 ± 0.002	0.966 ± 0.009	0.978 ± 0.004	0.992 ± 0.005	0.985 ± 0.006	E Asia M	E Europe F	0.01
30	0.978 ± 0.008	0.995 ± 0.002	0.974 ± 0.006	0.969 ± 0.005	0.992 ± 0.004	0.978 ± 0.007	0.990 ± 0.006	0.999 ± 0.001	0.992 ± 0.005	0.988 ± 0.003	0.993 ± 0.005	0.992 ± 0.005	E Asia M	S Asia F	0.01
31	0.990 ± 0.005	0.997 ± 0.002	0.991 ± 0.004	0.980 ± 0.004	0.994 ± 0.003	0.984 ± 0.007	0.995 ± 0.004	0.999 ± 0.001	0.995 ± 0.004	0.994 ± 0.002	0.997 ± 0.004	0.995 ± 0.003	E Asia M	S Asia F	0.00
32	0.990 ± 0.005	0.999 ± 0.001	0.996 ± 0.003	0.990 ± 0.003	0.997 ± 0.002	0.988 ± 0.005	0.998 ± 0.002	0.999 ± 0.001	0.997 ± 0.003	0.997 ± 0.001	0.998 ± 0.003	0.998 ± 0.002	E Asia M	W Africa F	0.00
33	0.997 ± 0.003	0.999 ± 0.001	0.996 ± 0.003	0.993 ± 0.002	0.999 ± 0.001	0.994 ± 0.004	1.000 ± 0.000	1.000 ± 0.001	0.999 ± 0.002	0.999 ± 0.001	0.999 ± 0.002	0.996 ± 0.004	E Africa M	S Asia F	0.00
34	0.999 ± 0.002	1.000 ± 0.000	1.000 ± 0.001	0.997 ± 0.002	0.999 ± 0.002	0.999 ± 0.001	0.999 ± 0.002	1.000 ± 0.001	0.999 ± 0.002	0.999 ± 0.001	1.000 ± 0.000	1.000 ± 0.000	E Asia F	S Asia F	0.00

Table 170. *For algorithm roc-001 with Border images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.11 ± 0.04	0.009 ± 0.004	0.000 ± 0.000	0.017 ± 0.007	0.011 ± 0.009	0.07 ± 0.04	0.03 ± 0.02	0.004 ± 0.003	0.000 ± 0.000	0.002 ± 0.002	0.008 ± 0.006	0.04 ± 0.03	E Africa F	E Europe F	0.68
15	0.16 ± 0.05	0.022 ± 0.006	0.006 ± 0.006	0.028 ± 0.009	0.02 ± 0.01	0.14 ± 0.04	0.000 ± 0.000	0.010 ± 0.004	0.000 ± 0.000	0.004 ± 0.003	0.009 ± 0.007	0.07 ± 0.04	E Africa F	E Africa M	0.70
16	0.23 ± 0.06	0.056 ± 0.008	0.006 ± 0.005	0.07 ± 0.01	0.04 ± 0.01	0.22 ± 0.05	0.08 ± 0.04	0.024 ± 0.005	0.000 ± 0.000	0.009 ± 0.005	0.03 ± 0.01	0.09 ± 0.04	E Africa F	E Europe M	0.57
17	0.32 ± 0.05	0.11 ± 0.01	0.03 ± 0.01	0.10 ± 0.01	0.09 ± 0.02	0.29 ± 0.05	0.15 ± 0.04	0.073 ± 0.008	0.005 ± 0.005	0.034 ± 0.008	0.07 ± 0.02	0.18 ± 0.04	E Africa F	E Europe M	0.46
18	0.43 ± 0.05	0.172 ± 0.010	0.07 ± 0.01	0.17 ± 0.02	0.15 ± 0.02	0.34 ± 0.05	0.26 ± 0.05	0.137 ± 0.009	0.015 ± 0.009	0.056 ± 0.009	0.10 ± 0.02	0.26 ± 0.04	E Africa F	E Europe M	0.39
19	0.52 ± 0.05	0.27 ± 0.01	0.10 ± 0.01	0.25 ± 0.02	0.26 ± 0.02	0.47 ± 0.04	0.36 ± 0.05	0.24 ± 0.01	0.025 ± 0.010	0.14 ± 0.01	0.20 ± 0.02	0.34 ± 0.05	E Africa F	E Europe M	0.32
20	0.63 ± 0.04	0.38 ± 0.01	0.17 ± 0.02	0.34 ± 0.02	0.39 ± 0.02	0.60 ± 0.04	0.48 ± 0.04	0.38 ± 0.01	0.05 ± 0.01	0.21 ± 0.01	0.37 ± 0.03	0.48 ± 0.04	E Africa F	E Europe M	0.26
21	0.71 ± 0.04	0.49 ± 0.01	0.25 ± 0.02	0.43 ± 0.02	0.49 ± 0.02	0.67 ± 0.04	0.61 ± 0.04	0.52 ± 0.01	0.16 ± 0.02	0.32 ± 0.02	0.50 ± 0.02	0.63 ± 0.03	E Africa F	E Europe M	0.21
22	0.80 ± 0.03	0.603 ± 0.009	0.36 ± 0.02	0.53 ± 0.01	0.60 ± 0.02	0.77 ± 0.03	0.71 ± 0.04	0.65 ± 0.01	0.27 ± 0.02	0.46 ± 0.02	0.62 ± 0.02	0.73 ± 0.03	E Africa F	E Europe M	0.16
23	0.83 ± 0.03	0.693 ± 0.009	0.46 ± 0.02	0.61 ± 0.01	0.71 ± 0.02	0.81 ± 0.02	0.78 ± 0.03	0.77 ± 0.01	0.44 ± 0.02	0.59 ± 0.01	0.74 ± 0.02	0.82 ± 0.02	E Africa F	E Europe M	0.11
24	0.88 ± 0.02	0.775 ± 0.007	0.58 ± 0.01	0.71 ± 0.01	0.79 ± 0.01	0.86 ± 0.02	0.87 ± 0.02	0.847 ± 0.009	0.57 ± 0.02	0.70 ± 0.01	0.82 ± 0.02	0.88 ± 0.02	W Africa M	E Europe M	0.08
25	0.91 ± 0.02	0.843 ± 0.006	0.69 ± 0.01	0.765 ± 0.009	0.85 ± 0.01	0.91 ± 0.02	0.92 ± 0.02	0.912 ± 0.006	0.71 ± 0.02	0.80 ± 0.01	0.89 ± 0.02	0.92 ± 0.01	W Africa M	E Europe F	0.06
26	0.94 ± 0.01	0.897 ± 0.005	0.78 ± 0.01	0.826 ± 0.008	0.902 ± 0.009	0.92 ± 0.01	0.95 ± 0.01	0.942 ± 0.005	0.81 ± 0.02	0.866 ± 0.007	0.94 ± 0.01	0.95 ± 0.01	E Africa M	E Europe F	0.04
27	0.95 ± 0.01	0.932 ± 0.004	0.860 ± 0.008	0.868 ± 0.006	0.939 ± 0.007	0.957 ± 0.010	0.97 ± 0.01	0.971 ± 0.004	0.89 ± 0.01	0.917 ± 0.006	0.964 ± 0.009	0.976 ± 0.008	W Africa M	E Europe F	0.03
28	0.968 ± 0.010	0.956 ± 0.003	0.912 ± 0.007	0.905 ± 0.005	0.960 ± 0.006	0.963 ± 0.009	0.982 ± 0.008	0.982 ± 0.003	0.945 ± 0.008	0.949 ± 0.004	0.974 ± 0.008	0.980 ± 0.007	E Asia M	S Asia F	0.01
29	0.977 ± 0.008	0.976 ± 0.002	0.948 ± 0.005	0.936 ± 0.004	0.975 ± 0.005	0.979 ± 0.007	0.992 ± 0.006	0.990 ± 0.002	0.959 ± 0.006	0.970 ± 0.003	0.987 ± 0.006	0.988 ± 0.005	E Africa M	S Asia F	0.01
30	0.981 ± 0.008	0.983 ± 0.002	0.970 ± 0.004	0.955 ± 0.003	0.987 ± 0.004	0.985 ± 0.005	0.996 ± 0.004	0.994 ± 0.002	0.982 ± 0.005	0.982 ± 0.002	0.992 ± 0.004	0.992 ± 0.004	E Africa M	S Asia F	0.01
31	0.995 ± 0.004	0.990 ± 0.001	0.982 ± 0.003	0.971 ± 0.003	0.994 ± 0.003	0.988 ± 0.005	0.995 ± 0.004	0.996 ± 0.001	0.992 ± 0.003	0.990 ± 0.002	0.997 ± 0.003	0.995 ± 0.003	S E Asia M	S Asia F	0.00
32	0.991 ± 0.005	0.995 ± 0.001	0.993 ± 0.002	0.981 ± 0.003	0.995 ± 0.002	0.994 ± 0.004	0.995 ± 0.004	0.999 ± 0.001	0.995 ± 0.002	0.993 ± 0.001	0.997 ± 0.003	0.998 ± 0.002	E Asia M	S Asia F	0.00
33	0.997 ± 0.003	0.996 ± 0.001	0.996 ± 0.002	0.988 ± 0.002	0.995 ± 0.002	0.999 ± 0.002	0.999 ± 0.002	0.999 ± 0.001	0.997 ± 0.002	0.996 ± 0.001	0.999 ± 0.001	0.999 ± 0.001	S E Asia M	S Asia F	0.00
34	0.998 ± 0.003	0.997 ± 0.001	0.998 ± 0.001	0.993 ± 0.002	0.998 ± 0.002	0.998 ± 0.003	1.000 ± 0.000	1.000 ± 0.000	1.000 ± 0.001	0.998 ± 0.001	0.999 ± 0.002	1.000 ± 0.000	E Africa M	S Asia F	0.00

Table 171. *For algorithm roc-002 with Application images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.000 ± 0.000	0.001 ± 0.001	0.000 ± 0.000	0.001 ± 0.001	0.004 ± 0.004	0.004 ± 0.004	0.002 ± 0.002	0.003 ± 0.002	0.000 ± 0.000	0.001 ± 0.001	0.000 ± 0.000	0.004 ± 0.004	S E Asia F	E Africa F	0.58
15	0.012 ± 0.009	0.008 ± 0.004	0.000 ± 0.000	0.006 ± 0.004	0.01 ± 0.01	0.009 ± 0.009	0.005 ± 0.005	0.001 ± 0.001	0.000 ± 0.000	0.002 ± 0.002	0.000 ± 0.000	0.005 ± 0.005	S E Asia F	E Europe F	0.56
16	0.03 ± 0.02	0.019 ± 0.007	0.000 ± 0.000	0.005 ± 0.004	0.04 ± 0.02	0.04 ± 0.02	0.02 ± 0.01	0.004 ± 0.003	0.003 ± 0.003	0.002 ± 0.002	0.008 ± 0.008	0.005 ± 0.005	W Africa F	E Europe F	0.57
17	0.05 ± 0.02	0.040 ± 0.010	0.008 ± 0.008	0.025 ± 0.009	0.06 ± 0.02	0.05 ± 0.02	0.012 ± 0.009	0.014 ± 0.005	0.000 ± 0.000	0.010 ± 0.006	0.02 ± 0.01	0.04 ± 0.02	S E Asia F	E Europe M	0.42
18	0.08 ± 0.02	0.07 ± 0.01	0.007 ± 0.005	0.030 ± 0.009	0.07 ± 0.02	0.06 ± 0.02	0.03 ± 0.01	0.037 ± 0.007	0.002 ± 0.002	0.023 ± 0.007	0.02 ± 0.01	0.05 ± 0.02	E Africa F	E Europe M	0.39
19	0.15 ± 0.03	0.12 ± 0.01	0.02 ± 0.01	0.06 ± 0.01	0.10 ± 0.02	0.13 ± 0.03	0.11 ± 0.03	0.08 ± 0.01	0.011 ± 0.008	0.045 ± 0.010	0.06 ± 0.02	0.11 ± 0.03	E Africa F	E Europe M	0.31
20	0.24 ± 0.03	0.22 ± 0.02	0.03 ± 0.01	0.08 ± 0.01	0.20 ± 0.02	0.21 ± 0.03	0.17 ± 0.03	0.15 ± 0.01	0.03 ± 0.01	0.09 ± 0.01	0.11 ± 0.02	0.15 ± 0.03	E Africa F	E Europe F	0.30
21	0.31 ± 0.03	0.32 ± 0.02	0.07 ± 0.02	0.16 ± 0.01	0.29 ± 0.03	0.24 ± 0.03	0.28 ± 0.04	0.26 ± 0.02	0.06 ± 0.02	0.16 ± 0.02	0.18 ± 0.03	0.25 ± 0.04	E Asia F	E Europe M	0.24
22	0.41 ± 0.03	0.44 ± 0.02	0.13 ± 0.02	0.24 ± 0.02	0.39 ± 0.02	0.35 ± 0.03	0.42 ± 0.03	0.37 ± 0.02	0.14 ± 0.02	0.27 ± 0.02	0.28 ± 0.03	0.31 ± 0.04	E Asia F	E Europe F	0.20
23	0.49 ± 0.03	0.55 ± 0.02	0.24 ± 0.02	0.34 ± 0.02	0.51 ± 0.02	0.45 ± 0.03	0.49 ± 0.03	0.50 ± 0.02	0.23 ± 0.03	0.42 ± 0.02	0.43 ± 0.03	0.46 ± 0.04	E Asia F	E Europe M	0.14
24	0.59 ± 0.03	0.67 ± 0.01	0.35 ± 0.02	0.44 ± 0.02	0.62 ± 0.02	0.53 ± 0.03	0.61 ± 0.03	0.63 ± 0.02	0.39 ± 0.03	0.56 ± 0.02	0.55 ± 0.03	0.57 ± 0.03	E Asia F	E Europe F	0.11
25	0.62 ± 0.03	0.76 ± 0.01	0.48 ± 0.02	0.54 ± 0.01	0.70 ± 0.02	0.61 ± 0.03	0.73 ± 0.03	0.76 ± 0.02	0.54 ± 0.03	0.69 ± 0.02	0.71 ± 0.03	0.69 ± 0.03	E Asia F	E Europe F	0.08
26	0.72 ± 0.02	0.83 ± 0.01	0.60 ± 0.02	0.62 ± 0.01	0.80 ± 0.02	0.70 ± 0.02	0.80 ± 0.02	0.85 ± 0.01	0.69 ± 0.03	0.80 ± 0.01	0.79 ± 0.02	0.77 ± 0.02	E Asia M	E Europe F	0.06
27	0.78 ± 0.02	0.892 ± 0.008	0.72 ± 0.02	0.70 ± 0.01	0.86 ± 0.01	0.76 ± 0.02	0.85 ± 0.02	0.91 ± 0.01	0.81 ± 0.02	0.86 ± 0.01	0.88 ± 0.02	0.84 ± 0.02	E Asia M	S Asia F	0.05
28	0.84 ± 0.02	0.930 ± 0.007	0.82 ± 0.01	0.78 ± 0.01	0.904 ± 0.010	0.83 ± 0.02	0.91 ± 0.02	0.954 ± 0.008	0.88 ± 0.02	0.922 ± 0.008	0.94 ± 0.01	0.89 ± 0.02	E Asia M	S Asia F	0.04
29	0.89 ± 0.02	0.958 ± 0.005	0.89 ± 0.01	0.843 ± 0.010	0.941 ± 0.009	0.89 ± 0.02	0.95 ± 0.01	0.978 ± 0.006	0.95 ± 0.01	0.949 ± 0.006	0.95 ± 0.01	0.94 ± 0.01	E Asia M	S Asia F	0.02
30	0.93 ± 0.01	0.978 ± 0.004	0.942 ± 0.009	0.890 ± 0.008	0.963 ± 0.008	0.91 ± 0.01	0.970 ± 0.010	0.987 ± 0.005	0.980 ± 0.008	0.970 ± 0.004	0.983 ± 0.008	0.958 ± 0.010	E Asia M	S Asia F	0.02
31	0.95 ± 0.01	0.985 ± 0.003	0.973 ± 0.007	0.922 ± 0.007	0.984 ± 0.005	0.94 ± 0.01	0.975 ± 0.009	0.996 ± 0.003	0.983 ± 0.007	0.985 ± 0.003	0.984 ± 0.008	0.977 ± 0.008	E Asia M	S Asia F	0.01
32	0.96 ± 0.01	0.993 ± 0.002	0.988 ± 0.005	0.954 ± 0.006	0.986 ± 0.005	0.96 ± 0.01	0.987 ± 0.007	0.997 ± 0.002	0.993 ± 0.005	0.992 ± 0.002	0.994 ± 0.004	0.983 ± 0.006	E Asia M	S Asia F	0.01
33	0.977 ± 0.009	0.996 ± 0.002	0.991 ± 0.004	0.972 ± 0.005	0.992 ± 0.004	0.978 ± 0.008	0.995 ± 0.004	0.998 ± 0.002	0.998 ± 0.003	0.996 ± 0.001	0.996 ± 0.004	0.991 ± 0.005	E Asia M	S Asia F	0.00
34	0.983 ± 0.008	0.999 ± 0.001	0.997 ± 0.002	0.983 ± 0.004	0.998 ± 0.002	0.985 ± 0.007	0.993 ± 0.004	0.999 ± 0.001	0.999 ± 0.002	0.998 ± 0.001	0.998 ± 0.003	0.994 ± 0.004	E Asia F	S Asia F	0.00

Table 172. *For algorithm roc-002 with Border images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.05 ± 0.03	0.010 ± 0.004	0.000 ± 0.000	0.007 ± 0.005	0.005 ± 0.005	0.03 ± 0.03	0.02 ± 0.02	0.001 ± 0.001	0.000 ± 0.000	0.000 ± 0.000	0.000 ± 0.000	0.01 ± 0.01	E Africa F	E Europe F	0.70
15	0.06 ± 0.03	0.023 ± 0.005	0.004 ± 0.004	0.011 ± 0.005	0.018 ± 0.009	0.10 ± 0.04	0.006 ± 0.006	0.012 ± 0.004	0.000 ± 0.000	0.003 ± 0.002	0.002 ± 0.002	0.04 ± 0.02	W Africa F	E Europe M	0.66
16	0.13 ± 0.04	0.054 ± 0.008	0.006 ± 0.005	0.035 ± 0.010	0.04 ± 0.01	0.11 ± 0.04	0.03 ± 0.02	0.028 ± 0.005	0.002 ± 0.002	0.005 ± 0.003	0.016 ± 0.009	0.06 ± 0.03	E Africa F	E Europe M	0.53
17	0.17 ± 0.04	0.11 ± 0.01	0.017 ± 0.009	0.06 ± 0.01	0.08 ± 0.02	0.18 ± 0.04	0.08 ± 0.04	0.067 ± 0.008	0.002 ± 0.002	0.028 ± 0.007	0.04 ± 0.01	0.15 ± 0.04	W Africa F	E Europe M	0.43
18	0.25 ± 0.05	0.175 ± 0.010	0.06 ± 0.01	0.09 ± 0.01	0.11 ± 0.02	0.22 ± 0.04	0.14 ± 0.04	0.129 ± 0.010	0.014 ± 0.008	0.044 ± 0.009	0.06 ± 0.01	0.17 ± 0.04	E Africa F	E Europe M	0.36
19	0.32 ± 0.04	0.26 ± 0.01	0.09 ± 0.01	0.16 ± 0.01	0.18 ± 0.02	0.32 ± 0.04	0.22 ± 0.04	0.22 ± 0.01	0.03 ± 0.01	0.10 ± 0.01	0.14 ± 0.02	0.24 ± 0.04	E Africa F	E Europe M	0.29
20	0.43 ± 0.04	0.37 ± 0.01	0.14 ± 0.02	0.21 ± 0.01	0.29 ± 0.02	0.43 ± 0.04	0.35 ± 0.04	0.36 ± 0.01	0.05 ± 0.01	0.15 ± 0.01	0.27 ± 0.03	0.35 ± 0.03	E Africa F	E Europe M	0.25
21	0.53 ± 0.04	0.45 ± 0.01	0.20 ± 0.01	0.30 ± 0.01	0.36 ± 0.02	0.52 ± 0.04	0.44 ± 0.04	0.47 ± 0.01	0.12 ± 0.02	0.24 ± 0.02	0.36 ± 0.02	0.47 ± 0.04	E Africa F	E Europe M	0.21
22	0.61 ± 0.04	0.557 ± 0.009	0.31 ± 0.02	0.38 ± 0.01	0.49 ± 0.02	0.61 ± 0.03	0.55 ± 0.04	0.61 ± 0.01	0.21 ± 0.02	0.37 ± 0.01	0.50 ± 0.02	0.60 ± 0.03	E Africa F	E Europe M	0.16
23	0.66 ± 0.03	0.643 ± 0.009	0.40 ± 0.01	0.46 ± 0.01	0.59 ± 0.02	0.66 ± 0.03	0.65 ± 0.04	0.72 ± 0.01	0.35 ± 0.02	0.50 ± 0.01	0.59 ± 0.03	0.69 ± 0.03	E Asia M	E Europe M	0.12
24	0.76 ± 0.03	0.731 ± 0.008	0.52 ± 0.01	0.56 ± 0.01	0.68 ± 0.02	0.77 ± 0.02	0.77 ± 0.03	0.800 ± 0.010	0.48 ± 0.02	0.64 ± 0.01	0.70 ± 0.02	0.79 ± 0.02	E Asia M	E Europe M	0.09
25	0.78 ± 0.03	0.797 ± 0.007	0.63 ± 0.01	0.62 ± 0.01	0.74 ± 0.02	0.82 ± 0.02	0.82 ± 0.03	0.875 ± 0.007	0.61 ± 0.02	0.74 ± 0.01	0.80 ± 0.02	0.86 ± 0.02	E Asia M	E Europe M	0.07
26	0.83 ± 0.02	0.860 ± 0.005	0.71 ± 0.01	0.707 ± 0.009	0.82 ± 0.01	0.85 ± 0.02	0.89 ± 0.02	0.923 ± 0.006	0.73 ± 0.02	0.814 ± 0.009	0.88 ± 0.02	0.89 ± 0.02	E Asia M	S Asia F	0.05
27	0.88 ± 0.02	0.897 ± 0.004	0.801 ± 0.010	0.760 ± 0.008	0.87 ± 0.01	0.91 ± 0.01	0.92 ± 0.02	0.949 ± 0.005	0.83 ± 0.01	0.883 ± 0.007	0.91 ± 0.01	0.94 ± 0.01	E Asia M	S Asia F	0.04
28	0.93 ± 0.01	0.930 ± 0.004	0.872 ± 0.007	0.824 ± 0.006	0.905 ± 0.009	0.92 ± 0.01	0.96 ± 0.01	0.972 ± 0.004	0.903 ± 0.010	0.929 ± 0.005	0.966 ± 0.008	0.955 ± 0.010	E Asia M	S Asia F	0.03
29	0.94 ± 0.01	0.957 ± 0.003	0.920 ± 0.006	0.866 ± 0.006	0.935 ± 0.007	0.959 ± 0.010	0.975 ± 0.010	0.986 ± 0.003	0.927 ± 0.009	0.955 ± 0.004	0.973 ± 0.007	0.974 ± 0.007	E Asia M	S Asia F	0.02
30	0.95 ± 0.01	0.969 ± 0.002	0.949 ± 0.005	0.902 ± 0.005	0.960 ± 0.007	0.965 ± 0.009	0.983 ± 0.007	0.989 ± 0.002	0.966 ± 0.006	0.973 ± 0.003	0.988 ± 0.005	0.981 ± 0.005	E Asia M	S Asia F	0.01
31	0.97 ± 0.01	0.981 ± 0.002	0.970 ± 0.004	0.930 ± 0.004	0.973 ± 0.005	0.980 ± 0.007	0.990 ± 0.006	0.995 ± 0.001	0.980 ± 0.004	0.984 ± 0.002	0.991 ± 0.005	0.988 ± 0.004	E Asia M	S Asia F	0.01
32	0.976 ± 0.009	0.988 ± 0.002	0.985 ± 0.003	0.954 ± 0.003	0.985 ± 0.004	0.985 ± 0.006	0.996 ± 0.004	0.998 ± 0.001	0.988 ± 0.004	0.991 ± 0.001	0.994 ± 0.004	0.994 ± 0.003	E Asia M	S Asia F	0.01
33	0.990 ± 0.006	0.993 ± 0.001	0.990 ± 0.002	0.971 ± 0.003	0.987 ± 0.003	0.993 ± 0.004	0.998 ± 0.003	0.999 ± 0.001	0.995 ± 0.002	0.994 ± 0.001	0.998 ± 0.003	0.998 ± 0.002	E Asia M	S Asia F	0.00
34	0.992 ± 0.005	0.996 ± 0.001	0.994 ± 0.002	0.980 ± 0.002	0.992 ± 0.003	0.995 ± 0.003	0.998 ± 0.003	0.999 ± 0.001	0.999 ± 0.001	0.997 ± 0.001	0.998 ± 0.002	0.998 ± 0.002	E Asia M	S Asia F	0.00

Table 173. *For algorithm shufti-000 with Application images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.06 ± 0.02	0.021 ± 0.007	0.02 ± 0.01	0.016 ± 0.007	0.02 ± 0.01	0.05 ± 0.02	0.04 ± 0.02	0.016 ± 0.005	0.002 ± 0.002	0.007 ± 0.004	0.002 ± 0.002	0.009 ± 0.009	E Africa F	E Europe M	0.47
15	0.08 ± 0.03	0.041 ± 0.010	0.06 ± 0.02	0.05 ± 0.01	0.03 ± 0.02	0.06 ± 0.03	0.06 ± 0.02	0.018 ± 0.006	0.006 ± 0.006	0.011 ± 0.006	0.012 ± 0.010	0.01 ± 0.01	E Africa F	E Europe M	0.39
16	0.13 ± 0.03	0.05 ± 0.01	0.11 ± 0.03	0.06 ± 0.02	0.07 ± 0.02	0.12 ± 0.04	0.10 ± 0.03	0.027 ± 0.007	0.02 ± 0.01	0.022 ± 0.009	0.02 ± 0.01	0.03 ± 0.02	E Africa F	E Europe M	0.38
17	0.21 ± 0.04	0.09 ± 0.01	0.14 ± 0.03	0.14 ± 0.02	0.11 ± 0.03	0.17 ± 0.04	0.11 ± 0.03	0.05 ± 0.01	0.02 ± 0.01	0.05 ± 0.01	0.06 ± 0.02	0.09 ± 0.03	E Africa F	E Europe M	0.32
18	0.24 ± 0.03	0.14 ± 0.01	0.17 ± 0.03	0.18 ± 0.02	0.15 ± 0.02	0.20 ± 0.04	0.16 ± 0.03	0.09 ± 0.01	0.03 ± 0.01	0.12 ± 0.01	0.09 ± 0.02	0.11 ± 0.03	E Africa F	E Europe M	0.22
19	0.38 ± 0.04	0.19 ± 0.02	0.27 ± 0.04	0.28 ± 0.02	0.24 ± 0.02	0.31 ± 0.04	0.24 ± 0.03	0.19 ± 0.02	0.14 ± 0.03	0.22 ± 0.02	0.19 ± 0.03	0.24 ± 0.04	E Africa F	E Europe M	0.15
20	0.45 ± 0.04	0.27 ± 0.02	0.39 ± 0.04	0.35 ± 0.02	0.33 ± 0.03	0.37 ± 0.04	0.33 ± 0.04	0.30 ± 0.02	0.25 ± 0.04	0.36 ± 0.02	0.31 ± 0.03	0.32 ± 0.04	E Africa F	E Europe M	0.09
21	0.55 ± 0.04	0.37 ± 0.02	0.47 ± 0.03	0.47 ± 0.02	0.44 ± 0.03	0.48 ± 0.04	0.52 ± 0.04	0.44 ± 0.02	0.38 ± 0.04	0.50 ± 0.02	0.46 ± 0.03	0.45 ± 0.04	E Africa F	E Asia F	0.07
22	0.61 ± 0.03	0.48 ± 0.02	0.56 ± 0.03	0.56 ± 0.02	0.50 ± 0.02	0.51 ± 0.04	0.66 ± 0.03	0.60 ± 0.02	0.53 ± 0.04	0.64 ± 0.02	0.58 ± 0.03	0.53 ± 0.04	E Africa M	E Asia F	0.06
23	0.70 ± 0.03	0.56 ± 0.02	0.64 ± 0.02	0.66 ± 0.02	0.62 ± 0.02	0.65 ± 0.03	0.73 ± 0.03	0.70 ± 0.02	0.65 ± 0.03	0.76 ± 0.02	0.70 ± 0.03	0.66 ± 0.04	S Asia M	E Asia F	0.04
24	0.75 ± 0.02	0.67 ± 0.02	0.73 ± 0.02	0.73 ± 0.01	0.71 ± 0.02	0.69 ± 0.03	0.81 ± 0.03	0.82 ± 0.02	0.79 ± 0.03	0.85 ± 0.01	0.80 ± 0.02	0.76 ± 0.03	S Asia M	E Asia F	0.04
25	0.78 ± 0.02	0.75 ± 0.01	0.81 ± 0.02	0.80 ± 0.01	0.79 ± 0.02	0.73 ± 0.02	0.87 ± 0.02	0.88 ± 0.01	0.89 ± 0.02	0.921 ± 0.010	0.88 ± 0.02	0.83 ± 0.02	S Asia M	W Africa F	0.04
26	0.85 ± 0.02	0.81 ± 0.01	0.86 ± 0.01	0.84 ± 0.01	0.86 ± 0.01	0.82 ± 0.02	0.92 ± 0.02	0.93 ± 0.01	0.92 ± 0.02	0.953 ± 0.007	0.93 ± 0.02	0.90 ± 0.02	S Asia M	E Asia F	0.03
27	0.88 ± 0.02	0.854 ± 0.010	0.91 ± 0.01	0.885 ± 0.008	0.89 ± 0.01	0.85 ± 0.02	0.95 ± 0.01	0.953 ± 0.008	0.971 ± 0.010	0.968 ± 0.006	0.95 ± 0.01	0.93 ± 0.01	E Europe M	W Africa F	0.03
28	0.91 ± 0.01	0.908 ± 0.007	0.944 ± 0.009	0.920 ± 0.007	0.925 ± 0.009	0.89 ± 0.02	0.969 ± 0.010	0.972 ± 0.006	0.976 ± 0.008	0.980 ± 0.004	0.97 ± 0.01	0.95 ± 0.01	S Asia M	W Africa F	0.02
29	0.94 ± 0.01	0.937 ± 0.006	0.963 ± 0.007	0.942 ± 0.006	0.950 ± 0.008	0.91 ± 0.01	0.987 ± 0.007	0.983 ± 0.005	0.986 ± 0.007	0.990 ± 0.003	0.973 ± 0.009	0.973 ± 0.008	S Asia M	W Africa F	0.01
30	0.96 ± 0.01	0.956 ± 0.005	0.972 ± 0.006	0.956 ± 0.005	0.966 ± 0.007	0.93 ± 0.01	0.988 ± 0.006	0.993 ± 0.003	0.992 ± 0.005	0.991 ± 0.003	0.986 ± 0.007	0.987 ± 0.005	E Asia M	W Africa F	0.01
31	0.972 ± 0.009	0.968 ± 0.004	0.981 ± 0.005	0.970 ± 0.004	0.972 ± 0.006	0.95 ± 0.01	0.992 ± 0.005	0.996 ± 0.002	0.997 ± 0.003	0.994 ± 0.002	0.995 ± 0.004	0.988 ± 0.005	E Europe M	W Africa F	0.01
32	0.966 ± 0.010	0.985 ± 0.003	0.991 ± 0.004	0.979 ± 0.004	0.983 ± 0.005	0.967 ± 0.009	0.993 ± 0.005	0.994 ± 0.003	0.997 ± 0.003	0.999 ± 0.001	0.992 ± 0.005	0.991 ± 0.005	S Asia M	E Africa F	0.01
33	0.984 ± 0.007	0.987 ± 0.003	0.988 ± 0.005	0.988 ± 0.003	0.990 ± 0.004	0.978 ± 0.008	0.996 ± 0.004	0.998 ± 0.002	0.999 ± 0.002	0.999 ± 0.001	0.996 ± 0.004	0.996 ± 0.003	S Asia M	W Africa F	0.00
34	0.994 ± 0.005	0.992 ± 0.002	0.992 ± 0.004	0.991 ± 0.003	0.995 ± 0.003	0.984 ± 0.007	0.994 ± 0.005	0.998 ± 0.002	0.999 ± 0.002	0.999 ± 0.001	0.998 ± 0.003	0.997 ± 0.003	S Asia M	W Africa F	0.00

Table 174. *For algorithm shufti-000 with Border images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.07 ± 0.03	0.032 ± 0.008	0.04 ± 0.02	0.05 ± 0.01	0.02 ± 0.01	0.08 ± 0.04	0.09 ± 0.04	0.018 ± 0.005	0.005 ± 0.005	0.013 ± 0.006	0.02 ± 0.01	0.06 ± 0.04	E Africa M	E Europe M	0.40
15	0.13 ± 0.05	0.039 ± 0.007	0.08 ± 0.02	0.08 ± 0.02	0.03 ± 0.01	0.11 ± 0.04	0.16 ± 0.05	0.031 ± 0.006	0.013 ± 0.009	0.028 ± 0.008	0.04 ± 0.02	0.09 ± 0.04	E Africa M	E Europe M	0.39
16	0.14 ± 0.05	0.062 ± 0.008	0.10 ± 0.02	0.12 ± 0.02	0.06 ± 0.02	0.15 ± 0.04	0.27 ± 0.06	0.055 ± 0.008	0.02 ± 0.01	0.06 ± 0.01	0.04 ± 0.01	0.13 ± 0.04	E Africa M	E Europe M	0.36
17	0.20 ± 0.04	0.094 ± 0.010	0.13 ± 0.02	0.14 ± 0.02	0.09 ± 0.02	0.19 ± 0.05	0.32 ± 0.06	0.092 ± 0.009	0.05 ± 0.02	0.10 ± 0.02	0.09 ± 0.02	0.21 ± 0.05	E Africa M	E Europe M	0.29
18	0.30 ± 0.05	0.120 ± 0.009	0.21 ± 0.02	0.20 ± 0.02	0.13 ± 0.02	0.29 ± 0.05	0.40 ± 0.06	0.129 ± 0.009	0.09 ± 0.02	0.16 ± 0.02	0.11 ± 0.02	0.25 ± 0.04	E Africa M	E Europe M	0.27
19	0.36 ± 0.04	0.158 ± 0.009	0.24 ± 0.02	0.26 ± 0.02	0.16 ± 0.02	0.39 ± 0.04	0.50 ± 0.05	0.193 ± 0.010	0.13 ± 0.02	0.26 ± 0.02	0.18 ± 0.02	0.29 ± 0.05	E Africa M	E Europe M	0.24
20	0.42 ± 0.04	0.208 ± 0.009	0.31 ± 0.02	0.32 ± 0.02	0.19 ± 0.02	0.43 ± 0.04	0.55 ± 0.05	0.27 ± 0.01	0.19 ± 0.02	0.36 ± 0.02	0.28 ± 0.02	0.40 ± 0.04	E Africa M	S E Asia F	0.20
21	0.48 ± 0.04	0.245 ± 0.008	0.36 ± 0.02	0.39 ± 0.02	0.24 ± 0.02	0.52 ± 0.04	0.65 ± 0.04	0.38 ± 0.01	0.31 ± 0.03	0.47 ± 0.02	0.36 ± 0.02	0.53 ± 0.04	E Africa M	S E Asia F	0.17
22	0.55 ± 0.04	0.307 ± 0.009	0.42 ± 0.02	0.45 ± 0.01	0.30 ± 0.02	0.55 ± 0.03	0.74 ± 0.04	0.47 ± 0.01	0.40 ± 0.02	0.60 ± 0.02	0.45 ± 0.03	0.57 ± 0.03	E Africa M	S E Asia F	0.15
23	0.56 ± 0.04	0.367 ± 0.008	0.51 ± 0.02	0.51 ± 0.01	0.39 ± 0.02	0.57 ± 0.03	0.76 ± 0.03	0.56 ± 0.01	0.52 ± 0.02	0.67 ± 0.01	0.55 ± 0.03	0.65 ± 0.03	E Africa M	E Asia F	0.12
24	0.60 ± 0.03	0.424 ± 0.009	0.57 ± 0.01	0.57 ± 0.01	0.45 ± 0.02	0.63 ± 0.03	0.80 ± 0.03	0.64 ± 0.01	0.63 ± 0.02	0.77 ± 0.01	0.67 ± 0.02	0.73 ± 0.03	E Africa M	E Asia F	0.11
25	0.66 ± 0.03	0.492 ± 0.008	0.66 ± 0.01	0.63 ± 0.01	0.51 ± 0.02	0.67 ± 0.02	0.85 ± 0.02	0.724 ± 0.010	0.71 ± 0.02	0.836 ± 0.009	0.74 ± 0.02	0.80 ± 0.02	E Africa M	E Asia F	0.10
26	0.72 ± 0.03	0.557 ± 0.007	0.71 ± 0.01	0.670 ± 0.009	0.59 ± 0.02	0.74 ± 0.02	0.91 ± 0.02	0.792 ± 0.009	0.80 ± 0.02	0.881 ± 0.007	0.80 ± 0.02	0.85 ± 0.02	E Africa M	E Asia F	0.09
27	0.74 ± 0.03	0.609 ± 0.007	0.769 ± 0.010	0.711 ± 0.008	0.63 ± 0.01	0.76 ± 0.02	0.91 ± 0.02	0.842 ± 0.008	0.86 ± 0.01	0.914 ± 0.006	0.86 ± 0.02	0.90 ± 0.01	S Asia M	E Asia F	0.08
28	0.78 ± 0.02	0.677 ± 0.007	0.823 ± 0.009	0.757 ± 0.008	0.68 ± 0.02	0.77 ± 0.02	0.95 ± 0.01	0.884 ± 0.007	0.91 ± 0.01	0.938 ± 0.005	0.89 ± 0.01	0.91 ± 0.01	E Africa M	E Asia F	0.07
29	0.79 ± 0.02	0.714 ± 0.007	0.851 ± 0.008	0.785 ± 0.007	0.74 ± 0.01	0.81 ± 0.02	0.95 ± 0.01	0.920 ± 0.006	0.930 ± 0.008	0.956 ± 0.003	0.92 ± 0.01	0.93 ± 0.01	S Asia M	E Asia F	0.06
30	0.82 ± 0.02	0.770 ± 0.006	0.882 ± 0.008	0.826 ± 0.007	0.78 ± 0.01	0.84 ± 0.02	0.96 ± 0.01	0.943 ± 0.005	0.950 ± 0.008	0.966 ± 0.003	0.94 ± 0.01	0.948 ± 0.009	S Asia M	E Asia F	0.05
31	0.84 ± 0.02	0.800 ± 0.006	0.910 ± 0.006	0.856 ± 0.005	0.82 ± 0.01	0.86 ± 0.02	0.972 ± 0.009	0.954 ± 0.004	0.967 ± 0.006	0.977 ± 0.002	0.957 ± 0.010	0.964 ± 0.007	S Asia M	E Asia F	0.04
32	0.85 ± 0.02	0.833 ± 0.006	0.930 ± 0.007	0.877 ± 0.005	0.85 ± 0.01	0.88 ± 0.02	0.971 ± 0.009	0.966 ± 0.004	0.975 ± 0.005	0.979 ± 0.002	0.968 ± 0.008	0.971 ± 0.006	S Asia M	E Asia F	0.04
33	0.86 ± 0.02	0.862 ± 0.005	0.939 ± 0.007	0.897 ± 0.005	0.85 ± 0.01	0.88 ± 0.02	0.971 ± 0.009	0.977 ± 0.003	0.980 ± 0.005	0.982 ± 0.002	0.976 ± 0.008	0.978 ± 0.006	S Asia M	S E Asia F	0.03
34	0.88 ± 0.02	0.884 ± 0.005	0.947 ± 0.006	0.915 ± 0.005	0.89 ± 0.01	0.90 ± 0.01	0.981 ± 0.008	0.981 ± 0.003	0.988 ± 0.003	0.987 ± 0.002	0.983 ± 0.006	0.977 ± 0.006	E Europe M	E Africa F	0.03

Table 175. *For algorithm unissey-001 with Application images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.04 ± 0.02	0.07 ± 0.01	0.02 ± 0.01	0.024 ± 0.008	0.05 ± 0.02	0.11 ± 0.04	0.04 ± 0.02	0.07 ± 0.01	0.009 ± 0.007	0.022 ± 0.007	0.06 ± 0.02	0.04 ± 0.02	W Africa F	E Europe M	0.35
15	0.09 ± 0.03	0.13 ± 0.02	0.06 ± 0.02	0.06 ± 0.01	0.10 ± 0.03	0.15 ± 0.04	0.06 ± 0.02	0.12 ± 0.02	0.02 ± 0.01	0.05 ± 0.01	0.09 ± 0.03	0.06 ± 0.03	W Africa F	E Europe M	0.27
16	0.12 ± 0.03	0.19 ± 0.02	0.10 ± 0.03	0.10 ± 0.02	0.16 ± 0.03	0.19 ± 0.05	0.11 ± 0.03	0.17 ± 0.02	0.05 ± 0.02	0.10 ± 0.02	0.17 ± 0.04	0.08 ± 0.04	E Asia F	E Europe M	0.21
17	0.17 ± 0.04	0.26 ± 0.02	0.19 ± 0.04	0.15 ± 0.02	0.21 ± 0.04	0.29 ± 0.05	0.20 ± 0.04	0.26 ± 0.02	0.04 ± 0.02	0.15 ± 0.02	0.23 ± 0.04	0.14 ± 0.03	W Africa F	E Europe M	0.20
18	0.22 ± 0.03	0.32 ± 0.02	0.22 ± 0.03	0.18 ± 0.02	0.24 ± 0.03	0.32 ± 0.04	0.27 ± 0.04	0.32 ± 0.02	0.12 ± 0.03	0.26 ± 0.02	0.28 ± 0.03	0.25 ± 0.04	E Asia F	E Europe M	0.14
19	0.28 ± 0.04	0.41 ± 0.02	0.25 ± 0.04	0.27 ± 0.02	0.32 ± 0.03	0.41 ± 0.04	0.41 ± 0.04	0.40 ± 0.02	0.22 ± 0.03	0.36 ± 0.02	0.36 ± 0.04	0.29 ± 0.04	E Asia F	E Europe M	0.12
20	0.37 ± 0.04	0.48 ± 0.02	0.36 ± 0.03	0.32 ± 0.02	0.39 ± 0.03	0.50 ± 0.04	0.52 ± 0.04	0.49 ± 0.02	0.30 ± 0.04	0.47 ± 0.03	0.46 ± 0.03	0.42 ± 0.04	E Africa M	E Europe M	0.10
21	0.42 ± 0.04	0.55 ± 0.02	0.42 ± 0.03	0.38 ± 0.02	0.46 ± 0.03	0.52 ± 0.04	0.57 ± 0.04	0.57 ± 0.02	0.40 ± 0.04	0.54 ± 0.02	0.55 ± 0.03	0.48 ± 0.04	E Africa M	S Asia F	0.08
22	0.48 ± 0.03	0.61 ± 0.02	0.54 ± 0.03	0.44 ± 0.02	0.53 ± 0.02	0.59 ± 0.04	0.69 ± 0.03	0.64 ± 0.02	0.54 ± 0.04	0.65 ± 0.02	0.60 ± 0.03	0.52 ± 0.04	E Africa M	S Asia F	0.08
23	0.52 ± 0.03	0.69 ± 0.02	0.60 ± 0.02	0.51 ± 0.02	0.61 ± 0.02	0.65 ± 0.03	0.73 ± 0.03	0.74 ± 0.02	0.60 ± 0.04	0.73 ± 0.02	0.69 ± 0.03	0.60 ± 0.04	E Asia M	S Asia F	0.07
24	0.58 ± 0.03	0.73 ± 0.01	0.68 ± 0.02	0.57 ± 0.02	0.68 ± 0.02	0.68 ± 0.03	0.77 ± 0.03	0.76 ± 0.02	0.73 ± 0.03	0.80 ± 0.02	0.75 ± 0.03	0.66 ± 0.03	S Asia M	S Asia F	0.06
25	0.64 ± 0.03	0.78 ± 0.01	0.75 ± 0.02	0.60 ± 0.01	0.72 ± 0.02	0.74 ± 0.03	0.84 ± 0.02	0.83 ± 0.02	0.80 ± 0.02	0.85 ± 0.01	0.81 ± 0.02	0.72 ± 0.03	S Asia M	S Asia F	0.06
26	0.72 ± 0.02	0.82 ± 0.01	0.82 ± 0.02	0.65 ± 0.01	0.77 ± 0.02	0.77 ± 0.02	0.88 ± 0.02	0.87 ± 0.01	0.85 ± 0.02	0.87 ± 0.01	0.85 ± 0.02	0.77 ± 0.02	E Africa M	S Asia F	0.05
27	0.73 ± 0.02	0.865 ± 0.010	0.85 ± 0.01	0.69 ± 0.01	0.81 ± 0.01	0.81 ± 0.02	0.90 ± 0.02	0.90 ± 0.01	0.90 ± 0.02	0.906 ± 0.009	0.88 ± 0.02	0.81 ± 0.02	S Asia M	S Asia F	0.05
28	0.78 ± 0.02	0.894 ± 0.008	0.88 ± 0.01	0.72 ± 0.01	0.85 ± 0.01	0.85 ± 0.02	0.92 ± 0.01	0.929 ± 0.010	0.93 ± 0.01	0.926 ± 0.008	0.91 ± 0.02	0.82 ± 0.02	E Europe M	S Asia F	0.04
29	0.83 ± 0.02	0.922 ± 0.007	0.92 ± 0.01	0.78 ± 0.01	0.88 ± 0.01	0.88 ± 0.02	0.93 ± 0.01	0.954 ± 0.008	0.95 ± 0.01	0.944 ± 0.006	0.93 ± 0.01	0.89 ± 0.02	E Asia M	S Asia F	0.03
30	0.85 ± 0.02	0.942 ± 0.006	0.934 ± 0.010	0.808 ± 0.010	0.91 ± 0.01	0.88 ± 0.02	0.94 ± 0.01	0.966 ± 0.006	0.971 ± 0.009	0.954 ± 0.006	0.95 ± 0.01	0.89 ± 0.02	E Europe M	S Asia F	0.03
31	0.87 ± 0.02	0.951 ± 0.005	0.961 ± 0.008	0.842 ± 0.009	0.925 ± 0.010	0.89 ± 0.02	0.969 ± 0.010	0.977 ± 0.005	0.981 ± 0.008	0.964 ± 0.005	0.97 ± 0.01	0.91 ± 0.01	E Europe M	S Asia F	0.03
32	0.90 ± 0.02	0.958 ± 0.005	0.969 ± 0.007	0.873 ± 0.009	0.940 ± 0.010	0.91 ± 0.01	0.974 ± 0.009	0.982 ± 0.005	0.989 ± 0.006	0.976 ± 0.004	0.978 ± 0.009	0.92 ± 0.01	E Europe M	S Asia F	0.02
33	0.91 ± 0.01	0.976 ± 0.004	0.969 ± 0.008	0.895 ± 0.008	0.952 ± 0.009	0.94 ± 0.01	0.967 ± 0.009	0.991 ± 0.004	0.996 ± 0.004	0.981 ± 0.003	0.986 ± 0.007	0.95 ± 0.01	E Europe M	S Asia F	0.02
34	0.93 ± 0.02	0.982 ± 0.004	0.982 ± 0.006	0.922 ± 0.007	0.971 ± 0.007	0.94 ± 0.01	0.988 ± 0.007	0.993 ± 0.003	0.998 ± 0.003	0.987 ± 0.003	0.987 ± 0.007	0.95 ± 0.01	E Europe M	S Asia F	0.01

Table 176. *For algorithm unissey-001 with Border images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.10 ± 0.05	0.050 ± 0.009	0.03 ± 0.02	0.03 ± 0.01	0.03 ± 0.02	0.06 ± 0.03	0.05 ± 0.03	0.033 ± 0.007	0.007 ± 0.007	0.013 ± 0.006	0.04 ± 0.01	0.01 ± 0.01	E Africa F	E Europe M	0.34
15	0.09 ± 0.04	0.08 ± 0.01	0.07 ± 0.02	0.05 ± 0.01	0.08 ± 0.02	0.13 ± 0.05	0.15 ± 0.05	0.060 ± 0.009	0.03 ± 0.01	0.03 ± 0.01	0.04 ± 0.02	0.06 ± 0.03	E Africa M	E Europe M	0.29
16	0.14 ± 0.04	0.12 ± 0.01	0.10 ± 0.02	0.08 ± 0.01	0.08 ± 0.02	0.18 ± 0.05	0.12 ± 0.04	0.098 ± 0.009	0.03 ± 0.01	0.06 ± 0.01	0.08 ± 0.02	0.08 ± 0.04	W Africa F	E Europe M	0.22
17	0.14 ± 0.04	0.16 ± 0.01	0.12 ± 0.02	0.11 ± 0.02	0.11 ± 0.02	0.24 ± 0.05	0.14 ± 0.05	0.14 ± 0.01	0.03 ± 0.01	0.11 ± 0.02	0.12 ± 0.02	0.13 ± 0.04	W Africa F	E Europe M	0.19
18	0.25 ± 0.04	0.20 ± 0.01	0.20 ± 0.02	0.14 ± 0.02	0.14 ± 0.02	0.24 ± 0.05	0.24 ± 0.05	0.19 ± 0.01	0.10 ± 0.02	0.15 ± 0.02	0.15 ± 0.02	0.19 ± 0.04	E Africa F	E Europe M	0.15
19	0.29 ± 0.04	0.25 ± 0.01	0.21 ± 0.02	0.18 ± 0.02	0.18 ± 0.02	0.31 ± 0.04	0.32 ± 0.05	0.24 ± 0.01	0.12 ± 0.02	0.22 ± 0.02	0.20 ± 0.02	0.21 ± 0.04	E Africa M	E Europe M	0.14
20	0.33 ± 0.04	0.31 ± 0.01	0.28 ± 0.02	0.21 ± 0.02	0.23 ± 0.02	0.37 ± 0.04	0.39 ± 0.05	0.30 ± 0.01	0.19 ± 0.02	0.31 ± 0.02	0.28 ± 0.02	0.23 ± 0.03	E Africa M	E Europe M	0.13
21	0.39 ± 0.04	0.35 ± 0.01	0.32 ± 0.02	0.25 ± 0.01	0.26 ± 0.02	0.43 ± 0.04	0.44 ± 0.04	0.36 ± 0.01	0.29 ± 0.03	0.40 ± 0.02	0.34 ± 0.02	0.29 ± 0.03	E Africa M	S Asia F	0.11
22	0.45 ± 0.04	0.388 ± 0.010	0.40 ± 0.02	0.30 ± 0.01	0.31 ± 0.02	0.47 ± 0.03	0.52 ± 0.04	0.43 ± 0.01	0.36 ± 0.03	0.47 ± 0.02	0.41 ± 0.02	0.35 ± 0.03	E Africa M	S Asia F	0.10
23	0.51 ± 0.04	0.438 ± 0.010	0.45 ± 0.02	0.34 ± 0.01	0.38 ± 0.02	0.53 ± 0.03	0.57 ± 0.04	0.50 ± 0.01	0.47 ± 0.02	0.55 ± 0.01	0.51 ± 0.03	0.41 ± 0.03	E Africa M	S Asia F	0.09
24	0.54 ± 0.03	0.506 ± 0.009	0.51 ± 0.01	0.40 ± 0.01	0.45 ± 0.02	0.56 ± 0.03	0.61 ± 0.03	0.57 ± 0.01	0.57 ± 0.02	0.63 ± 0.01	0.56 ± 0.02	0.44 ± 0.03	S Asia M	S Asia F	0.08
25	0.61 ± 0.03	0.558 ± 0.008	0.58 ± 0.01	0.41 ± 0.01	0.51 ± 0.02	0.61 ± 0.02	0.70 ± 0.03	0.62 ± 0.01	0.63 ± 0.02	0.68 ± 0.01	0.63 ± 0.02	0.52 ± 0.03	E Africa M	S Asia F	0.08
26	0.67 ± 0.03	0.615 ± 0.008	0.64 ± 0.01	0.478 ± 0.009	0.54 ± 0.01	0.62 ± 0.02	0.73 ± 0.03	0.69 ± 0.01	0.71 ± 0.02	0.720 ± 0.010	0.68 ± 0.02	0.56 ± 0.02	E Africa M	S Asia F	0.07
27	0.68 ± 0.02	0.653 ± 0.007	0.69 ± 0.01	0.501 ± 0.009	0.61 ± 0.01	0.68 ± 0.02	0.76 ± 0.03	0.738 ± 0.009	0.78 ± 0.01	0.766 ± 0.009	0.74 ± 0.02	0.63 ± 0.02	E Europe M	S Asia F	0.07
28	0.74 ± 0.03	0.710 ± 0.007	0.74 ± 0.01	0.550 ± 0.009	0.65 ± 0.01	0.68 ± 0.02	0.82 ± 0.02	0.788 ± 0.008	0.84 ± 0.01	0.810 ± 0.007	0.78 ± 0.02	0.68 ± 0.02	E Europe M	S Asia F	0.07
29	0.77 ± 0.02	0.745 ± 0.006	0.796 ± 0.010	0.586 ± 0.008	0.69 ± 0.01	0.74 ± 0.02	0.83 ± 0.02	0.825 ± 0.008	0.87 ± 0.01	0.841 ± 0.006	0.83 ± 0.02	0.72 ± 0.02	E Europe M	S Asia F	0.06
30	0.77 ± 0.02	0.781 ± 0.006	0.834 ± 0.008	0.628 ± 0.008	0.74 ± 0.01	0.75 ± 0.02	0.85 ± 0.02	0.859 ± 0.007	0.904 ± 0.009	0.867 ± 0.006	0.85 ± 0.02	0.76 ± 0.02	E Europe M	S Asia F	0.05
31	0.81 ± 0.02	0.821 ± 0.005	0.861 ± 0.008	0.665 ± 0.007	0.77 ± 0.01	0.78 ± 0.02	0.89 ± 0.02	0.886 ± 0.006	0.933 ± 0.008	0.891 ± 0.005	0.86 ± 0.02	0.76 ± 0.02	E Europe M	S Asia F	0.05
32	0.83 ± 0.02	0.845 ± 0.005	0.893 ± 0.008	0.715 ± 0.007	0.80 ± 0.01	0.80 ± 0.02	0.92 ± 0.02	0.912 ± 0.006	0.951 ± 0.007	0.910 ± 0.004	0.88 ± 0.01	0.79 ± 0.02	E Europe M	S Asia F	0.05
33	0.87 ± 0.02	0.872 ± 0.004	0.914 ± 0.008	0.755 ± 0.007	0.84 ± 0.01	0.84 ± 0.02	0.92 ± 0.02	0.930 ± 0.005	0.961 ± 0.006	0.925 ± 0.004	0.93 ± 0.01	0.82 ± 0.01	E Europe M	S Asia F	0.04
34	0.87 ± 0.02	0.895 ± 0.004	0.935 ± 0.006	0.791 ± 0.008	0.86 ± 0.01	0.85 ± 0.02	0.94 ± 0.01	0.942 ± 0.005	0.979 ± 0.004	0.938 ± 0.004	0.94 ± 0.01	0.86 ± 0.01	E Europe M	S Asia F	0.04

Table 177. *For algorithm viante-000 with Application images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.25 ± 0.04	0.06 ± 0.01	0.007 ± 0.007	0.17 ± 0.02	0.14 ± 0.03	0.21 ± 0.05	0.09 ± 0.02	0.022 ± 0.007	0.000 ± 0.000	0.036 ± 0.009	0.05 ± 0.02	0.07 ± 0.03	E Africa F	E Europe M	0.52
15	0.36 ± 0.05	0.11 ± 0.02	0.02 ± 0.01	0.29 ± 0.03	0.21 ± 0.04	0.29 ± 0.06	0.11 ± 0.03	0.05 ± 0.01	0.003 ± 0.003	0.09 ± 0.02	0.09 ± 0.03	0.15 ± 0.05	E Africa F	E Europe M	0.45
16	0.49 ± 0.04	0.21 ± 0.02	0.03 ± 0.02	0.41 ± 0.03	0.39 ± 0.05	0.43 ± 0.06	0.28 ± 0.05	0.14 ± 0.02	0.01 ± 0.01	0.21 ± 0.03	0.23 ± 0.04	0.28 ± 0.06	E Africa F	E Europe M	0.34
17	0.60 ± 0.05	0.33 ± 0.03	0.12 ± 0.04	0.51 ± 0.03	0.46 ± 0.05	0.57 ± 0.05	0.43 ± 0.05	0.25 ± 0.02	0.02 ± 0.01	0.35 ± 0.03	0.37 ± 0.05	0.47 ± 0.05	E Africa F	E Europe M	0.27
18	0.65 ± 0.04	0.42 ± 0.02	0.18 ± 0.03	0.56 ± 0.02	0.56 ± 0.03	0.61 ± 0.04	0.54 ± 0.04	0.36 ± 0.02	0.06 ± 0.02	0.48 ± 0.02	0.47 ± 0.04	0.55 ± 0.05	E Africa F	E Europe M	0.21
19	0.74 ± 0.04	0.55 ± 0.02	0.25 ± 0.03	0.70 ± 0.02	0.68 ± 0.03	0.71 ± 0.04	0.70 ± 0.04	0.54 ± 0.02	0.12 ± 0.03	0.67 ± 0.02	0.61 ± 0.03	0.69 ± 0.04	E Africa F	E Europe M	0.17
20	0.80 ± 0.03	0.66 ± 0.02	0.42 ± 0.03	0.77 ± 0.02	0.78 ± 0.02	0.78 ± 0.04	0.82 ± 0.03	0.68 ± 0.02	0.22 ± 0.03	0.78 ± 0.02	0.78 ± 0.03	0.81 ± 0.04	E Africa M	E Europe M	0.13
21	0.88 ± 0.02	0.76 ± 0.02	0.51 ± 0.03	0.84 ± 0.01	0.85 ± 0.02	0.83 ± 0.03	0.90 ± 0.02	0.80 ± 0.02	0.38 ± 0.04	0.86 ± 0.02	0.84 ± 0.03	0.86 ± 0.03	E Africa M	E Europe M	0.10
22	0.91 ± 0.02	0.84 ± 0.02	0.64 ± 0.03	0.90 ± 0.01	0.90 ± 0.01	0.87 ± 0.03	0.95 ± 0.02	0.88 ± 0.01	0.61 ± 0.03	0.92 ± 0.01	0.91 ± 0.02	0.92 ± 0.02	E Africa M	E Europe M	0.06
23	0.92 ± 0.02	0.90 ± 0.01	0.75 ± 0.02	0.934 ± 0.008	0.93 ± 0.01	0.92 ± 0.02	0.97 ± 0.01	0.937 ± 0.010	0.71 ± 0.03	0.961 ± 0.009	0.95 ± 0.01	0.96 ± 0.01	E Africa M	E Europe M	0.04
24	0.95 ± 0.01	0.935 ± 0.008	0.87 ± 0.01	0.963 ± 0.007	0.959 ± 0.007	0.94 ± 0.02	0.989 ± 0.006	0.957 ± 0.008	0.86 ± 0.02	0.981 ± 0.005	0.972 ± 0.009	0.97 ± 0.01	E Africa M	E Europe M	0.02
25	0.96 ± 0.01	0.957 ± 0.006	0.92 ± 0.01	0.967 ± 0.005	0.970 ± 0.006	0.96 ± 0.01	0.994 ± 0.005	0.978 ± 0.006	0.93 ± 0.02	0.992 ± 0.003	0.988 ± 0.006	0.988 ± 0.007	E Africa M	E Europe F	0.01
26	0.968 ± 0.010	0.971 ± 0.005	0.956 ± 0.008	0.981 ± 0.004	0.987 ± 0.004	0.96 ± 0.01	0.995 ± 0.004	0.989 ± 0.004	0.95 ± 0.01	0.995 ± 0.002	0.995 ± 0.004	0.994 ± 0.005	E Africa M	E Europe M	0.01
27	0.979 ± 0.008	0.983 ± 0.003	0.975 ± 0.007	0.986 ± 0.003	0.988 ± 0.004	0.981 ± 0.008	0.995 ± 0.004	0.995 ± 0.003	0.988 ± 0.006	0.997 ± 0.002	0.997 ± 0.003	0.996 ± 0.004	S Asia M	E Europe F	0.00
28	0.991 ± 0.005	0.989 ± 0.003	0.993 ± 0.003	0.989 ± 0.003	0.995 ± 0.002	0.984 ± 0.007	0.999 ± 0.001	0.998 ± 0.002	0.991 ± 0.005	0.998 ± 0.001	0.997 ± 0.003	0.998 ± 0.003	E Africa M	W Africa F	0.00
29	0.993 ± 0.004	0.996 ± 0.002	0.997 ± 0.003	0.994 ± 0.002	0.997 ± 0.002	0.988 ± 0.005	0.999 ± 0.002	0.999 ± 0.001	0.996 ± 0.003	1.000 ± 0.001	0.999 ± 0.002	1.000 ± 0.000	W Africa M	W Africa F	0.00
30	0.992 ± 0.005	0.997 ± 0.001	0.996 ± 0.003	0.997 ± 0.001	0.998 ± 0.002	0.991 ± 0.005	0.999 ± 0.002	1.000 ± 0.001	0.999 ± 0.002	1.000 ± 0.000	0.998 ± 0.003	1.000 ± 0.000	W Africa M	W Africa F	0.00
31	0.997 ± 0.003	0.998 ± 0.001	0.999 ± 0.001	0.997 ± 0.001	1.000 ± 0.001	0.997 ± 0.003	0.999 ± 0.001	1.000 ± 0.001	0.999 ± 0.001	1.000 ± 0.000	0.999 ± 0.003	0.999 ± 0.002	S Asia M	W Africa F	0.00
32	0.998 ± 0.003	0.999 ± 0.001	0.999 ± 0.001	0.999 ± 0.001	1.000 ± 0.001	0.997 ± 0.003	1.000 ± 0.000	1.000 ± 0.000	0.998 ± 0.003	1.000 ± 0.000	1.000 ± 0.000	1.000 ± 0.000	E Africa M	W Africa F	0.00
33	0.995 ± 0.005	1.000 ± 0.000	1.000 ± 0.000	0.999 ± 0.001	1.000 ± 0.000	0.999 ± 0.002	1.000 ± 0.000	1.000 ± 0.000	0.999 ± 0.002	1.000 ± 0.000	0.999 ± 0.002	1.000 ± 0.000	E Europe F	E Africa F	0.00
34	0.995 ± 0.004	1.000 ± 0.001	1.000 ± 0.001	1.000 ± 0.001	1.000 ± 0.000	1.000 ± 0.000	1.000 ± 0.000	1.000 ± 0.001	0.999 ± 0.001	1.000 ± 0.000	1.000 ± 0.000	1.000 ± 0.000	S E Asia F	E Africa F	0.00

Table 178. *For algorithm viante-000 with Border images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.38 ± 0.07	0.025 ± 0.006	0.009 ± 0.006	0.26 ± 0.02	0.10 ± 0.03	0.44 ± 0.08	0.25 ± 0.06	0.009 ± 0.004	0.000 ± 0.000	0.032 ± 0.009	0.03 ± 0.01	0.25 ± 0.08	W Africa F	E Europe M	0.60
15	0.58 ± 0.07	0.043 ± 0.008	0.04 ± 0.02	0.37 ± 0.03	0.14 ± 0.03	0.55 ± 0.07	0.40 ± 0.08	0.014 ± 0.004	0.007 ± 0.007	0.09 ± 0.01	0.05 ± 0.02	0.38 ± 0.07	E Africa F	E Europe M	0.56
16	0.69 ± 0.06	0.074 ± 0.009	0.06 ± 0.02	0.50 ± 0.03	0.23 ± 0.03	0.71 ± 0.06	0.55 ± 0.07	0.035 ± 0.006	0.018 ± 0.010	0.21 ± 0.02	0.12 ± 0.03	0.56 ± 0.07	W Africa F	E Europe M	0.50
17	0.74 ± 0.05	0.13 ± 0.01	0.11 ± 0.02	0.63 ± 0.02	0.30 ± 0.03	0.76 ± 0.06	0.70 ± 0.07	0.086 ± 0.009	0.03 ± 0.01	0.40 ± 0.02	0.23 ± 0.03	0.66 ± 0.06	W Africa F	E Europe M	0.42
18	0.81 ± 0.04	0.205 ± 0.010	0.18 ± 0.02	0.72 ± 0.02	0.41 ± 0.03	0.83 ± 0.04	0.83 ± 0.04	0.16 ± 0.01	0.08 ± 0.02	0.55 ± 0.02	0.35 ± 0.03	0.78 ± 0.04	W Africa F	E Europe M	0.35
19	0.90 ± 0.03	0.29 ± 0.01	0.25 ± 0.02	0.79 ± 0.02	0.53 ± 0.02	0.86 ± 0.03	0.89 ± 0.03	0.23 ± 0.01	0.10 ± 0.02	0.71 ± 0.02	0.49 ± 0.03	0.84 ± 0.04	E Africa F	E Europe M	0.30
20	0.91 ± 0.02	0.40 ± 0.01	0.33 ± 0.02	0.86 ± 0.01	0.62 ± 0.02	0.90 ± 0.02	0.94 ± 0.02	0.33 ± 0.01	0.20 ± 0.02	0.82 ± 0.01	0.60 ± 0.03	0.89 ± 0.03	E Africa M	E Europe M	0.24
21	0.96 ± 0.02	0.49 ± 0.01	0.43 ± 0.02	0.897 ± 0.010	0.70 ± 0.02	0.94 ± 0.02	0.98 ± 0.01	0.45 ± 0.01	0.33 ± 0.03	0.900 ± 0.010	0.70 ± 0.02	0.97 ± 0.01	E Africa M	E Europe M	0.19
22	0.97 ± 0.01	0.572 ± 0.010	0.54 ± 0.02	0.926 ± 0.007	0.78 ± 0.02	0.95 ± 0.02	0.99 ± 0.01	0.57 ± 0.01	0.45 ± 0.03	0.940 ± 0.008	0.79 ± 0.02	0.97 ± 0.01	E Africa M	E Europe M	0.15
23	0.97 ± 0.01	0.651 ± 0.009	0.64 ± 0.01	0.951 ± 0.006	0.84 ± 0.01	0.97 ± 0.01	0.990 ± 0.009	0.66 ± 0.01	0.59 ± 0.02	0.966 ± 0.005	0.85 ± 0.02	0.98 ± 0.01	E Africa M	E Europe M	0.11
24	0.977 ± 0.010	0.726 ± 0.008	0.73 ± 0.01	0.970 ± 0.004	0.88 ± 0.01	0.981 ± 0.008	0.997 ± 0.004	0.748 ± 0.010	0.73 ± 0.02	0.985 ± 0.003	0.89 ± 0.02	0.991 ± 0.006	E Africa M	E Asia F	0.07
25	0.987 ± 0.007	0.796 ± 0.006	0.824 ± 0.010	0.972 ± 0.003	0.912 ± 0.008	0.983 ± 0.007	1.000 ± 0.000	0.830 ± 0.009	0.82 ± 0.01	0.989 ± 0.003	0.93 ± 0.01	0.995 ± 0.004	E Africa M	E Asia F	0.05
26	0.990 ± 0.006	0.848 ± 0.006	0.869 ± 0.008	0.982 ± 0.002	0.943 ± 0.007	0.982 ± 0.007	0.999 ± 0.002	0.883 ± 0.007	0.89 ± 0.01	0.994 ± 0.002	0.95 ± 0.01	0.995 ± 0.004	E Africa M	E Asia F	0.03
27	0.996 ± 0.003	0.886 ± 0.005	0.923 ± 0.006	0.987 ± 0.002	0.958 ± 0.006	0.993 ± 0.004	0.999 ± 0.002	0.918 ± 0.006	0.935 ± 0.010	0.996 ± 0.001	0.973 ± 0.007	0.998 ± 0.002	E Africa M	E Asia F	0.02
28	0.998 ± 0.003	0.920 ± 0.004	0.952 ± 0.005	0.989 ± 0.002	0.971 ± 0.005	0.992 ± 0.004	0.999 ± 0.002	0.949 ± 0.004	0.966 ± 0.006	0.998 ± 0.001	0.977 ± 0.007	0.998 ± 0.002	E Africa M	E Asia F	0.01
29	0.996 ± 0.004	0.941 ± 0.003	0.972 ± 0.004	0.993 ± 0.001	0.978 ± 0.004	0.996 ± 0.003	1.000 ± 0.000	0.964 ± 0.004	0.978 ± 0.006	0.998 ± 0.001	0.982 ± 0.007	0.999 ± 0.001	E Africa M	E Asia F	0.01
30	0.995 ± 0.004	0.960 ± 0.003	0.987 ± 0.003	0.995 ± 0.001	0.984 ± 0.004	0.995 ± 0.003	1.000 ± 0.000	0.976 ± 0.004	0.992 ± 0.003	1.000 ± 0.000	0.990 ± 0.004	1.000 ± 0.001	E Africa M	E Asia F	0.01
31	0.998 ± 0.003	0.974 ± 0.002	0.992 ± 0.002	0.996 ± 0.001	0.990 ± 0.003	0.997 ± 0.003	1.000 ± 0.000	0.986 ± 0.002	0.996 ± 0.002	1.000 ± 0.000	0.990 ± 0.005	0.999 ± 0.001	E Africa M	E Asia F	0.00
32	0.998 ± 0.003	0.981 ± 0.002	0.997 ± 0.001	0.997 ± 0.001	0.992 ± 0.003	0.999 ± 0.002	1.000 ± 0.000	0.992 ± 0.002	0.998 ± 0.001	1.000 ± 0.000	0.993 ± 0.004	1.000 ± 0.001	E Africa M	E Asia F	0.00
33	0.998 ± 0.003	0.988 ± 0.002	0.997 ± 0.001	0.998 ± 0.001	0.994 ± 0.003	0.999 ± 0.001	1.000 ± 0.000	0.994 ± 0.001	1.000 ± 0.000	1.000 ± 0.000	0.998 ± 0.003	1.000 ± 0.000	E Africa M	E Asia F	0.00
34	1.000 ± 0.000	0.990 ± 0.001	0.998 ± 0.001	0.998 ± 0.001	0.994 ± 0.003	0.998 ± 0.003	1.000 ± 0.000	0.995 ± 0.002	1.000 ± 0.000	1.000 ± 0.000	0.999 ± 0.001	1.000 ± 0.000	E Africa F	E Asia F	0.00

Table 179. *For algorithm yoti-001 with Application images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.03 ± 0.02	0.014 ± 0.005	0.03 ± 0.01	0.027 ± 0.008	0.04 ± 0.02	0.06 ± 0.03	0.006 ± 0.006	0.005 ± 0.003	0.000 ± 0.000	0.002 ± 0.002	0.005 ± 0.005	0.000 ± 0.000	W Africa F	E Europe M	0.60
15	0.05 ± 0.02	0.041 ± 0.010	0.07 ± 0.03	0.07 ± 0.02	0.04 ± 0.02	0.09 ± 0.04	0.008 ± 0.008	0.006 ± 0.004	0.000 ± 0.000	0.007 ± 0.005	0.002 ± 0.002	0.01 ± 0.01	W Africa F	E Europe M	0.54
16	0.13 ± 0.03	0.08 ± 0.01	0.11 ± 0.03	0.12 ± 0.02	0.15 ± 0.03	0.17 ± 0.04	0.02 ± 0.01	0.010 ± 0.005	0.003 ± 0.003	0.006 ± 0.004	0.003 ± 0.003	0.02 ± 0.02	W Africa F	S E Asia M	0.54
17	0.18 ± 0.04	0.14 ± 0.02	0.19 ± 0.04	0.21 ± 0.02	0.18 ± 0.04	0.24 ± 0.05	0.02 ± 0.01	0.036 ± 0.009	0.003 ± 0.003	0.021 ± 0.008	0.02 ± 0.01	0.08 ± 0.03	W Africa F	E Europe M	0.46
18	0.23 ± 0.04	0.19 ± 0.02	0.26 ± 0.04	0.25 ± 0.02	0.26 ± 0.03	0.32 ± 0.04	0.07 ± 0.02	0.059 ± 0.009	0.03 ± 0.01	0.043 ± 0.009	0.04 ± 0.01	0.10 ± 0.03	W Africa F	E Europe M	0.40
19	0.34 ± 0.04	0.29 ± 0.02	0.36 ± 0.04	0.35 ± 0.02	0.38 ± 0.03	0.44 ± 0.05	0.13 ± 0.03	0.12 ± 0.01	0.05 ± 0.02	0.09 ± 0.01	0.11 ± 0.02	0.18 ± 0.03	W Africa F	E Europe M	0.34
20	0.39 ± 0.04	0.40 ± 0.02	0.45 ± 0.04	0.43 ± 0.02	0.48 ± 0.03	0.49 ± 0.04	0.24 ± 0.04	0.22 ± 0.02	0.13 ± 0.03	0.18 ± 0.02	0.22 ± 0.03	0.28 ± 0.04	W Africa F	E Europe M	0.23
21	0.50 ± 0.04	0.51 ± 0.02	0.56 ± 0.03	0.56 ± 0.02	0.62 ± 0.02	0.61 ± 0.04	0.32 ± 0.03	0.35 ± 0.02	0.23 ± 0.03	0.30 ± 0.02	0.35 ± 0.03	0.38 ± 0.04	S E Asia F	E Europe M	0.18
22	0.56 ± 0.03	0.63 ± 0.02	0.68 ± 0.02	0.63 ± 0.02	0.70 ± 0.02	0.65 ± 0.04	0.50 ± 0.03	0.51 ± 0.02	0.40 ± 0.04	0.43 ± 0.02	0.49 ± 0.03	0.50 ± 0.04	S E Asia F	E Europe M	0.11
23	0.67 ± 0.03	0.73 ± 0.02	0.76 ± 0.02	0.72 ± 0.02	0.78 ± 0.02	0.77 ± 0.03	0.59 ± 0.03	0.62 ± 0.02	0.55 ± 0.04	0.60 ± 0.02	0.64 ± 0.03	0.65 ± 0.03	S E Asia F	E Europe M	0.07
24	0.72 ± 0.03	0.80 ± 0.01	0.86 ± 0.02	0.79 ± 0.01	0.86 ± 0.01	0.79 ± 0.03	0.73 ± 0.03	0.75 ± 0.02	0.73 ± 0.03	0.72 ± 0.02	0.77 ± 0.03	0.73 ± 0.03	S E Asia F	E Africa F	0.04
25	0.77 ± 0.02	0.870 ± 0.010	0.90 ± 0.01	0.84 ± 0.01	0.90 ± 0.01	0.84 ± 0.02	0.78 ± 0.02	0.84 ± 0.02	0.85 ± 0.02	0.83 ± 0.01	0.85 ± 0.02	0.81 ± 0.02	E Europe F	E Africa F	0.03
26	0.82 ± 0.02	0.913 ± 0.007	0.949 ± 0.008	0.883 ± 0.009	0.939 ± 0.009	0.88 ± 0.02	0.87 ± 0.02	0.92 ± 0.01	0.91 ± 0.02	0.89 ± 0.01	0.92 ± 0.01	0.88 ± 0.02	E Europe F	E Africa F	0.02
27	0.86 ± 0.02	0.950 ± 0.006	0.967 ± 0.007	0.912 ± 0.007	0.955 ± 0.007	0.91 ± 0.02	0.89 ± 0.02	0.949 ± 0.008	0.95 ± 0.01	0.941 ± 0.007	0.95 ± 0.01	0.91 ± 0.02	E Europe F	E Africa F	0.02
28	0.90 ± 0.02	0.967 ± 0.005	0.983 ± 0.005	0.931 ± 0.006	0.965 ± 0.007	0.94 ± 0.01	0.95 ± 0.01	0.971 ± 0.006	0.977 ± 0.008	0.963 ± 0.006	0.97 ± 0.01	0.95 ± 0.01	E Europe F	E Africa F	0.01
29	0.93 ± 0.01	0.980 ± 0.003	0.989 ± 0.004	0.954 ± 0.005	0.985 ± 0.004	0.94 ± 0.01	0.96 ± 0.01	0.986 ± 0.004	0.990 ± 0.006	0.978 ± 0.004	0.978 ± 0.008	0.972 ± 0.007	E Europe M	E Africa F	0.01
30	0.95 ± 0.01	0.987 ± 0.003	0.995 ± 0.003	0.965 ± 0.005	0.990 ± 0.004	0.96 ± 0.01	0.972 ± 0.010	0.991 ± 0.004	0.995 ± 0.004	0.986 ± 0.003	0.987 ± 0.007	0.978 ± 0.006	E Europe M	E Africa F	0.01
31	0.96 ± 0.01	0.991 ± 0.002	0.996 ± 0.003	0.975 ± 0.004	0.991 ± 0.004	0.96 ± 0.01	0.985 ± 0.007	0.996 ± 0.002	0.997 ± 0.003	0.992 ± 0.002	0.991 ± 0.007	0.989 ± 0.006	E Europe M	E Africa F	0.01
32	0.96 ± 0.01	0.995 ± 0.002	0.999 ± 0.002	0.982 ± 0.003	0.993 ± 0.003	0.965 ± 0.010	0.987 ± 0.007	0.996 ± 0.003	0.998 ± 0.003	0.997 ± 0.001	0.993 ± 0.005	0.994 ± 0.004	E Europe F	E Africa F	0.01
33	0.980 ± 0.008	0.996 ± 0.002	0.997 ± 0.002	0.987 ± 0.003	0.996 ± 0.003	0.978 ± 0.008	0.995 ± 0.004	0.998 ± 0.002	0.999 ± 0.002	0.997 ± 0.001	0.996 ± 0.005	0.994 ± 0.004	E Europe M	W Africa F	0.00
34	0.980 ± 0.008	0.998 ± 0.001	0.997 ± 0.002	0.993 ± 0.002	0.997 ± 0.002	0.983 ± 0.007	0.997 ± 0.003	0.998 ± 0.002	0.999 ± 0.002	0.998 ± 0.001	0.997 ± 0.004	0.997 ± 0.003	E Europe M	E Africa F	0.00

Table 180. *For algorithm yoti-001 with Border images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.15 ± 0.05	0.11 ± 0.01	0.08 ± 0.02	0.07 ± 0.02	0.13 ± 0.03	0.17 ± 0.05	0.06 ± 0.03	0.033 ± 0.007	0.012 ± 0.010	0.020 ± 0.007	0.05 ± 0.02	0.07 ± 0.04	W Africa F	E Europe M	0.37
15	0.16 ± 0.05	0.14 ± 0.01	0.12 ± 0.03	0.10 ± 0.02	0.19 ± 0.03	0.20 ± 0.05	0.09 ± 0.04	0.072 ± 0.009	0.02 ± 0.01	0.026 ± 0.008	0.07 ± 0.02	0.14 ± 0.05	W Africa F	E Europe M	0.31
16	0.21 ± 0.05	0.20 ± 0.01	0.18 ± 0.03	0.15 ± 0.02	0.28 ± 0.03	0.25 ± 0.05	0.16 ± 0.05	0.11 ± 0.01	0.04 ± 0.01	0.05 ± 0.01	0.12 ± 0.03	0.18 ± 0.05	S E Asia F	E Europe M	0.27
17	0.23 ± 0.05	0.28 ± 0.01	0.26 ± 0.03	0.21 ± 0.02	0.34 ± 0.03	0.29 ± 0.05	0.22 ± 0.05	0.19 ± 0.01	0.06 ± 0.02	0.12 ± 0.02	0.20 ± 0.03	0.28 ± 0.05	S E Asia F	E Europe M	0.19
18	0.36 ± 0.05	0.34 ± 0.01	0.33 ± 0.03	0.27 ± 0.02	0.44 ± 0.03	0.38 ± 0.05	0.33 ± 0.06	0.28 ± 0.01	0.13 ± 0.03	0.15 ± 0.02	0.32 ± 0.03	0.33 ± 0.05	S E Asia F	E Europe M	0.16
19	0.40 ± 0.05	0.42 ± 0.01	0.40 ± 0.02	0.35 ± 0.02	0.48 ± 0.02	0.44 ± 0.05	0.39 ± 0.05	0.37 ± 0.01	0.20 ± 0.03	0.26 ± 0.02	0.41 ± 0.03	0.43 ± 0.04	S E Asia F	E Europe M	0.11
20	0.49 ± 0.04	0.51 ± 0.01	0.47 ± 0.02	0.43 ± 0.02	0.56 ± 0.02	0.50 ± 0.04	0.52 ± 0.05	0.49 ± 0.01	0.31 ± 0.03	0.36 ± 0.02	0.54 ± 0.03	0.53 ± 0.04	S E Asia F	E Europe M	0.09
21	0.54 ± 0.04	0.58 ± 0.01	0.55 ± 0.02	0.49 ± 0.02	0.63 ± 0.02	0.60 ± 0.04	0.61 ± 0.04	0.61 ± 0.01	0.47 ± 0.03	0.45 ± 0.02	0.63 ± 0.02	0.66 ± 0.04	W Africa M	S Asia M	0.07
22	0.62 ± 0.03	0.643 ± 0.009	0.61 ± 0.02	0.56 ± 0.01	0.68 ± 0.02	0.66 ± 0.03	0.73 ± 0.04	0.720 ± 0.010	0.58 ± 0.03	0.58 ± 0.01	0.74 ± 0.02	0.73 ± 0.03	S E Asia M	S Asia F	0.06
23	0.62 ± 0.04	0.719 ± 0.009	0.69 ± 0.01	0.62 ± 0.01	0.76 ± 0.01	0.67 ± 0.03	0.76 ± 0.03	0.789 ± 0.009	0.71 ± 0.02	0.67 ± 0.01	0.82 ± 0.02	0.80 ± 0.03	S E Asia M	S Asia F	0.06
24	0.70 ± 0.03	0.759 ± 0.007	0.75 ± 0.01	0.67 ± 0.01	0.79 ± 0.01	0.71 ± 0.02	0.82 ± 0.03	0.845 ± 0.008	0.80 ± 0.02	0.76 ± 0.01	0.86 ± 0.02	0.86 ± 0.02	S E Asia M	S Asia F	0.05
25	0.72 ± 0.03	0.810 ± 0.007	0.81 ± 0.01	0.706 ± 0.010	0.83 ± 0.01	0.75 ± 0.02	0.90 ± 0.02	0.902 ± 0.007	0.87 ± 0.01	0.835 ± 0.009	0.91 ± 0.01	0.90 ± 0.02	S E Asia M	S Asia F	0.05
26	0.77 ± 0.03	0.850 ± 0.006	0.840 ± 0.009	0.748 ± 0.009	0.87 ± 0.01	0.80 ± 0.02	0.91 ± 0.02	0.932 ± 0.005	0.90 ± 0.01	0.877 ± 0.007	0.94 ± 0.01	0.93 ± 0.01	S E Asia M	S Asia F	0.04
27	0.81 ± 0.02	0.881 ± 0.005	0.885 ± 0.008	0.783 ± 0.008	0.893 ± 0.009	0.83 ± 0.02	0.94 ± 0.01	0.951 ± 0.005	0.937 ± 0.009	0.908 ± 0.006	0.959 ± 0.010	0.94 ± 0.01	S E Asia M	S Asia F	0.04
28	0.83 ± 0.02	0.908 ± 0.004	0.914 ± 0.007	0.815 ± 0.008	0.913 ± 0.009	0.83 ± 0.02	0.96 ± 0.01	0.964 ± 0.004	0.965 ± 0.006	0.936 ± 0.005	0.968 ± 0.008	0.959 ± 0.008	S E Asia M	S Asia F	0.04
29	0.88 ± 0.02	0.929 ± 0.004	0.938 ± 0.006	0.833 ± 0.006	0.928 ± 0.009	0.87 ± 0.01	0.978 ± 0.009	0.978 ± 0.003	0.968 ± 0.006	0.950 ± 0.004	0.978 ± 0.007	0.974 ± 0.006	S E Asia M	S Asia F	0.03
30	0.88 ± 0.02	0.944 ± 0.003	0.954 ± 0.005	0.858 ± 0.006	0.944 ± 0.007	0.88 ± 0.01	0.978 ± 0.009	0.983 ± 0.003	0.977 ± 0.005	0.967 ± 0.003	0.986 ± 0.006	0.977 ± 0.006	S E Asia M	S Asia F	0.03
31	0.90 ± 0.02	0.957 ± 0.003	0.966 ± 0.004	0.888 ± 0.005	0.946 ± 0.007	0.90 ± 0.01	0.984 ± 0.007	0.990 ± 0.002	0.989 ± 0.003	0.975 ± 0.003	0.991 ± 0.005	0.987 ± 0.005	S E Asia M	S Asia F	0.02
32	0.92 ± 0.02	0.965 ± 0.003	0.976 ± 0.004	0.904 ± 0.005	0.965 ± 0.006	0.91 ± 0.01	0.986 ± 0.007	0.990 ± 0.002	0.990 ± 0.003	0.982 ± 0.002	0.984 ± 0.007	0.987 ± 0.005	E Asia M	S Asia F	0.02
33	0.93 ± 0.02	0.972 ± 0.002	0.979 ± 0.004	0.912 ± 0.005	0.968 ± 0.005	0.93 ± 0.01	0.993 ± 0.005	0.993 ± 0.002	0.996 ± 0.002	0.987 ± 0.002	0.992 ± 0.004	0.994 ± 0.003	E Europe M	S Asia F	0.02
34	0.93 ± 0.01	0.977 ± 0.002	0.984 ± 0.003	0.930 ± 0.005	0.975 ± 0.005	0.95 ± 0.01	0.993 ± 0.005	0.994 ± 0.002	0.997 ± 0.002	0.990 ± 0.002	0.995 ± 0.003	0.993 ± 0.004	E Europe M	S Asia F	0.01

Table 181. *For algorithm yoti-002 with Application images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.013 ± 0.009	0.021 ± 0.007	0.007 ± 0.007	0.014 ± 0.006	0.04 ± 0.02	0.03 ± 0.02	0.006 ± 0.006	0.004 ± 0.003	0.000 ± 0.000	0.003 ± 0.002	0.002 ± 0.002	0.000 ± 0.000	S E Asia F	E Europe M	0.60
15	0.03 ± 0.02	0.04 ± 0.01	0.02 ± 0.01	0.03 ± 0.01	0.04 ± 0.02	0.05 ± 0.03	0.008 ± 0.008	0.006 ± 0.004	0.000 ± 0.000	0.003 ± 0.003	0.005 ± 0.005	0.005 ± 0.005	W Africa F	E Europe M	0.52
16	0.07 ± 0.02	0.07 ± 0.01	0.04 ± 0.02	0.07 ± 0.02	0.13 ± 0.03	0.11 ± 0.04	0.02 ± 0.01	0.011 ± 0.005	0.003 ± 0.003	0.008 ± 0.006	0.01 ± 0.01	0.009 ± 0.009	S E Asia F	E Europe M	0.54
17	0.10 ± 0.03	0.12 ± 0.02	0.06 ± 0.02	0.14 ± 0.02	0.16 ± 0.04	0.18 ± 0.04	0.012 ± 0.009	0.028 ± 0.007	0.006 ± 0.006	0.018 ± 0.007	0.011 ± 0.008	0.04 ± 0.02	W Africa F	E Europe M	0.51
18	0.12 ± 0.02	0.16 ± 0.02	0.09 ± 0.02	0.18 ± 0.02	0.22 ± 0.03	0.19 ± 0.03	0.04 ± 0.02	0.043 ± 0.008	0.005 ± 0.005	0.043 ± 0.009	0.03 ± 0.01	0.07 ± 0.02	S E Asia F	E Europe M	0.43
19	0.22 ± 0.03	0.24 ± 0.02	0.15 ± 0.03	0.29 ± 0.02	0.33 ± 0.03	0.29 ± 0.04	0.11 ± 0.03	0.10 ± 0.01	0.02 ± 0.01	0.08 ± 0.01	0.08 ± 0.02	0.15 ± 0.03	S E Asia F	E Europe M	0.34
20	0.29 ± 0.03	0.37 ± 0.02	0.19 ± 0.03	0.39 ± 0.02	0.45 ± 0.03	0.38 ± 0.04	0.16 ± 0.03	0.16 ± 0.02	0.06 ± 0.02	0.16 ± 0.02	0.16 ± 0.03	0.19 ± 0.03	S E Asia F	E Europe M	0.28
21	0.36 ± 0.04	0.49 ± 0.02	0.32 ± 0.03	0.51 ± 0.02	0.57 ± 0.03	0.46 ± 0.04	0.27 ± 0.03	0.29 ± 0.02	0.14 ± 0.03	0.28 ± 0.02	0.29 ± 0.03	0.30 ± 0.04	S E Asia F	E Europe M	0.20
22	0.47 ± 0.03	0.60 ± 0.02	0.43 ± 0.03	0.62 ± 0.02	0.67 ± 0.02	0.55 ± 0.04	0.46 ± 0.04	0.44 ± 0.02	0.29 ± 0.03	0.43 ± 0.02	0.40 ± 0.03	0.36 ± 0.04	S E Asia F	E Europe M	0.14
23	0.56 ± 0.03	0.71 ± 0.02	0.53 ± 0.02	0.71 ± 0.02	0.77 ± 0.02	0.66 ± 0.03	0.54 ± 0.03	0.58 ± 0.02	0.43 ± 0.03	0.61 ± 0.02	0.57 ± 0.03	0.55 ± 0.03	S E Asia F	E Europe M	0.09
24	0.64 ± 0.03	0.80 ± 0.01	0.66 ± 0.02	0.79 ± 0.01	0.84 ± 0.01	0.70 ± 0.03	0.66 ± 0.03	0.72 ± 0.02	0.63 ± 0.03	0.73 ± 0.02	0.71 ± 0.02	0.66 ± 0.03	S E Asia F	E Europe M	0.06
25	0.70 ± 0.03	0.863 ± 0.010	0.77 ± 0.02	0.84 ± 0.01	0.89 ± 0.01	0.78 ± 0.03	0.75 ± 0.03	0.82 ± 0.01	0.78 ± 0.03	0.85 ± 0.01	0.82 ± 0.02	0.76 ± 0.03	S E Asia F	E Africa F	0.04
26	0.77 ± 0.02	0.915 ± 0.008	0.85 ± 0.01	0.881 ± 0.009	0.936 ± 0.009	0.83 ± 0.02	0.84 ± 0.02	0.91 ± 0.01	0.88 ± 0.02	0.908 ± 0.010	0.89 ± 0.02	0.83 ± 0.02	S E Asia F	E Africa F	0.03
27	0.82 ± 0.02	0.950 ± 0.006	0.91 ± 0.01	0.912 ± 0.008	0.953 ± 0.009	0.85 ± 0.02	0.89 ± 0.02	0.947 ± 0.009	0.94 ± 0.01	0.948 ± 0.007	0.92 ± 0.02	0.89 ± 0.02	S E Asia F	E Africa F	0.03
28	0.85 ± 0.02	0.971 ± 0.005	0.954 ± 0.008	0.938 ± 0.006	0.969 ± 0.007	0.91 ± 0.02	0.94 ± 0.01	0.969 ± 0.007	0.968 ± 0.009	0.965 ± 0.005	0.97 ± 0.01	0.93 ± 0.01	E Asia F	E Africa F	0.02
29	0.92 ± 0.01	0.983 ± 0.003	0.977 ± 0.006	0.951 ± 0.006	0.981 ± 0.005	0.93 ± 0.01	0.96 ± 0.01	0.983 ± 0.005	0.986 ± 0.006	0.982 ± 0.003	0.981 ± 0.008	0.96 ± 0.01	E Europe M	E Africa F	0.01
30	0.92 ± 0.01	0.989 ± 0.003	0.983 ± 0.006	0.967 ± 0.005	0.987 ± 0.004	0.94 ± 0.01	0.969 ± 0.010	0.992 ± 0.003	0.994 ± 0.004	0.987 ± 0.003	0.987 ± 0.007	0.973 ± 0.008	E Europe M	E Africa F	0.01
31	0.93 ± 0.01	0.995 ± 0.002	0.991 ± 0.004	0.977 ± 0.004	0.988 ± 0.004	0.95 ± 0.01	0.990 ± 0.006	0.994 ± 0.003	0.994 ± 0.004	0.993 ± 0.002	0.989 ± 0.007	0.987 ± 0.005	E Asia F	E Africa F	0.01
32	0.96 ± 0.01	0.997 ± 0.002	0.997 ± 0.002	0.987 ± 0.003	0.991 ± 0.004	0.967 ± 0.010	0.988 ± 0.006	0.998 ± 0.002	0.998 ± 0.003	0.996 ± 0.002	0.992 ± 0.005	0.990 ± 0.005	E Asia M	E Africa F	0.01
33	0.97 ± 0.01	0.998 ± 0.001	0.994 ± 0.004	0.988 ± 0.003	0.998 ± 0.002	0.984 ± 0.007	0.996 ± 0.004	0.998 ± 0.001	0.999 ± 0.002	0.997 ± 0.001	0.997 ± 0.004	0.991 ± 0.005	E Europe M	E Africa F	0.00
34	0.972 ± 0.009	0.998 ± 0.001	0.997 ± 0.002	0.992 ± 0.003	0.999 ± 0.002	0.988 ± 0.006	0.998 ± 0.003	0.998 ± 0.002	0.999 ± 0.001	0.997 ± 0.001	0.998 ± 0.003	0.997 ± 0.003	E Europe M	E Africa F	0.00

Table 182. *For algorithm yoti-002 with Border images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.08 ± 0.04	0.12 ± 0.01	0.04 ± 0.02	0.05 ± 0.01	0.19 ± 0.03	0.07 ± 0.03	0.02 ± 0.02	0.021 ± 0.006	0.007 ± 0.007	0.012 ± 0.006	0.03 ± 0.01	0.06 ± 0.04	S E Asia F	E Europe M	0.49
15	0.09 ± 0.04	0.18 ± 0.02	0.07 ± 0.02	0.07 ± 0.02	0.23 ± 0.04	0.17 ± 0.05	0.08 ± 0.04	0.051 ± 0.007	0.02 ± 0.01	0.015 ± 0.006	0.04 ± 0.02	0.08 ± 0.04	S E Asia F	S Asia M	0.41
16	0.20 ± 0.05	0.25 ± 0.01	0.11 ± 0.02	0.12 ± 0.02	0.34 ± 0.03	0.17 ± 0.04	0.07 ± 0.04	0.081 ± 0.009	0.018 ± 0.010	0.027 ± 0.008	0.07 ± 0.02	0.08 ± 0.04	S E Asia F	E Europe M	0.42
17	0.21 ± 0.04	0.34 ± 0.01	0.16 ± 0.02	0.15 ± 0.02	0.39 ± 0.03	0.26 ± 0.06	0.17 ± 0.05	0.15 ± 0.01	0.03 ± 0.01	0.08 ± 0.01	0.15 ± 0.03	0.20 ± 0.05	S E Asia F	E Europe M	0.30
18	0.30 ± 0.05	0.41 ± 0.01	0.24 ± 0.02	0.23 ± 0.02	0.50 ± 0.03	0.29 ± 0.05	0.27 ± 0.05	0.22 ± 0.01	0.08 ± 0.02	0.10 ± 0.01	0.22 ± 0.03	0.23 ± 0.04	S E Asia F	E Europe M	0.24
19	0.35 ± 0.04	0.50 ± 0.01	0.29 ± 0.02	0.30 ± 0.02	0.54 ± 0.02	0.39 ± 0.04	0.34 ± 0.05	0.32 ± 0.01	0.15 ± 0.02	0.19 ± 0.02	0.31 ± 0.03	0.34 ± 0.04	S E Asia F	E Europe M	0.19
20	0.47 ± 0.04	0.60 ± 0.01	0.37 ± 0.02	0.36 ± 0.02	0.63 ± 0.02	0.50 ± 0.04	0.45 ± 0.04	0.43 ± 0.01	0.26 ± 0.02	0.28 ± 0.02	0.44 ± 0.03	0.45 ± 0.04	S E Asia F	E Europe M	0.15
21	0.51 ± 0.04	0.669 ± 0.009	0.45 ± 0.02	0.43 ± 0.02	0.69 ± 0.02	0.55 ± 0.04	0.55 ± 0.04	0.56 ± 0.01	0.43 ± 0.03	0.38 ± 0.02	0.56 ± 0.03	0.58 ± 0.04	S E Asia F	S Asia M	0.10
22	0.63 ± 0.04	0.733 ± 0.009	0.53 ± 0.02	0.51 ± 0.01	0.74 ± 0.02	0.64 ± 0.03	0.68 ± 0.04	0.68 ± 0.01	0.56 ± 0.03	0.51 ± 0.02	0.68 ± 0.02	0.65 ± 0.03	S E Asia F	S Asia M	0.08
23	0.62 ± 0.03	0.798 ± 0.007	0.62 ± 0.02	0.56 ± 0.01	0.82 ± 0.01	0.66 ± 0.03	0.72 ± 0.03	0.77 ± 0.01	0.70 ± 0.02	0.61 ± 0.01	0.76 ± 0.02	0.76 ± 0.03	S E Asia F	S Asia F	0.07
24	0.69 ± 0.03	0.837 ± 0.006	0.70 ± 0.01	0.63 ± 0.01	0.85 ± 0.01	0.71 ± 0.03	0.81 ± 0.03	0.833 ± 0.009	0.81 ± 0.02	0.72 ± 0.01	0.84 ± 0.02	0.82 ± 0.02	S E Asia F	S Asia F	0.06
25	0.72 ± 0.03	0.880 ± 0.005	0.77 ± 0.01	0.668 ± 0.010	0.87 ± 0.01	0.75 ± 0.02	0.86 ± 0.02	0.899 ± 0.007	0.87 ± 0.01	0.803 ± 0.010	0.89 ± 0.02	0.88 ± 0.02	E Asia M	S Asia F	0.05
26	0.78 ± 0.02	0.906 ± 0.005	0.811 ± 0.009	0.712 ± 0.009	0.909 ± 0.009	0.80 ± 0.02	0.91 ± 0.02	0.936 ± 0.005	0.916 ± 0.010	0.856 ± 0.008	0.92 ± 0.01	0.91 ± 0.02	E Asia M	S Asia F	0.05
27	0.80 ± 0.02	0.933 ± 0.004	0.869 ± 0.008	0.753 ± 0.008	0.918 ± 0.008	0.83 ± 0.02	0.93 ± 0.02	0.960 ± 0.004	0.948 ± 0.008	0.900 ± 0.006	0.95 ± 0.01	0.93 ± 0.01	E Asia M	S Asia F	0.04
28	0.85 ± 0.02	0.951 ± 0.003	0.909 ± 0.006	0.784 ± 0.007	0.940 ± 0.008	0.85 ± 0.02	0.95 ± 0.01	0.972 ± 0.003	0.972 ± 0.006	0.929 ± 0.005	0.963 ± 0.009	0.957 ± 0.010	E Europe M	S Asia F	0.04
29	0.87 ± 0.02	0.966 ± 0.003	0.935 ± 0.005	0.813 ± 0.007	0.955 ± 0.006	0.88 ± 0.01	0.970 ± 0.010	0.984 ± 0.003	0.978 ± 0.005	0.947 ± 0.004	0.982 ± 0.006	0.971 ± 0.007	E Asia M	S Asia F	0.03
30	0.91 ± 0.01	0.975 ± 0.002	0.951 ± 0.005	0.847 ± 0.006	0.963 ± 0.006	0.91 ± 0.01	0.980 ± 0.008	0.989 ± 0.002	0.987 ± 0.004	0.962 ± 0.003	0.986 ± 0.006	0.974 ± 0.007	E Asia M	S Asia F	0.02
31	0.90 ± 0.02	0.982 ± 0.002	0.968 ± 0.004	0.866 ± 0.006	0.970 ± 0.006	0.93 ± 0.01	0.984 ± 0.007	0.994 ± 0.002	0.994 ± 0.003	0.974 ± 0.002	0.992 ± 0.005	0.985 ± 0.005	E Europe M	S Asia F	0.02
32	0.91 ± 0.02	0.988 ± 0.002	0.979 ± 0.003	0.888 ± 0.005	0.978 ± 0.005	0.93 ± 0.01	0.990 ± 0.006	0.996 ± 0.001	0.994 ± 0.003	0.981 ± 0.002	0.992 ± 0.004	0.986 ± 0.005	E Asia M	S Asia F	0.02
33	0.93 ± 0.01	0.991 ± 0.001	0.983 ± 0.003	0.903 ± 0.005	0.985 ± 0.004	0.94 ± 0.01	0.993 ± 0.005	0.997 ± 0.001	0.996 ± 0.002	0.986 ± 0.002	0.993 ± 0.004	0.994 ± 0.003	E Asia M	S Asia F	0.02
34	0.94 ± 0.01	0.992 ± 0.001	0.988 ± 0.003	0.924 ± 0.005	0.986 ± 0.004	0.96 ± 0.01	0.992 ± 0.005	0.997 ± 0.001	0.999 ± 0.001	0.990 ± 0.001	0.997 ± 0.003	0.994 ± 0.003	E Europe M	S Asia F	0.01

Table 183. *For algorithm yoti-003 with Application images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.013 ± 0.009	0.018 ± 0.007	0.005 ± 0.005	0.008 ± 0.005	0.04 ± 0.02	0.02 ± 0.02	0.002 ± 0.002	0.008 ± 0.004	0.000 ± 0.000	0.002 ± 0.002	0.000 ± 0.000	0.004 ± 0.004	S E Asia F	E Europe M	0.61
15	0.03 ± 0.02	0.040 ± 0.010	0.02 ± 0.01	0.026 ± 0.010	0.05 ± 0.02	0.01 ± 0.01	0.005 ± 0.005	0.004 ± 0.003	0.000 ± 0.000	0.004 ± 0.003	0.002 ± 0.002	0.005 ± 0.005	S E Asia F	E Europe M	0.56
16	0.07 ± 0.02	0.06 ± 0.01	0.04 ± 0.02	0.04 ± 0.01	0.10 ± 0.03	0.10 ± 0.03	0.02 ± 0.01	0.010 ± 0.005	0.003 ± 0.003	0.003 ± 0.003	0.008 ± 0.008	0.009 ± 0.009	W Africa F	E Europe M	0.54
17	0.11 ± 0.03	0.12 ± 0.02	0.05 ± 0.02	0.12 ± 0.02	0.14 ± 0.03	0.14 ± 0.04	0.012 ± 0.009	0.020 ± 0.007	0.006 ± 0.006	0.016 ± 0.008	0.03 ± 0.02	0.04 ± 0.02	W Africa F	E Europe M	0.46
18	0.14 ± 0.03	0.15 ± 0.02	0.05 ± 0.02	0.14 ± 0.02	0.19 ± 0.03	0.16 ± 0.03	0.03 ± 0.01	0.041 ± 0.007	0.005 ± 0.005	0.037 ± 0.009	0.03 ± 0.01	0.06 ± 0.02	S E Asia F	E Europe M	0.42
19	0.27 ± 0.04	0.24 ± 0.02	0.10 ± 0.02	0.25 ± 0.02	0.30 ± 0.03	0.25 ± 0.04	0.10 ± 0.02	0.09 ± 0.01	0.02 ± 0.01	0.08 ± 0.01	0.08 ± 0.02	0.15 ± 0.03	S E Asia F	E Europe M	0.34
20	0.34 ± 0.04	0.37 ± 0.02	0.15 ± 0.03	0.35 ± 0.02	0.44 ± 0.03	0.34 ± 0.04	0.17 ± 0.03	0.16 ± 0.01	0.07 ± 0.02	0.17 ± 0.02	0.18 ± 0.03	0.17 ± 0.03	S E Asia F	E Europe M	0.28
21	0.44 ± 0.04	0.49 ± 0.02	0.26 ± 0.03	0.48 ± 0.02	0.56 ± 0.03	0.45 ± 0.04	0.26 ± 0.03	0.30 ± 0.02	0.12 ± 0.02	0.29 ± 0.02	0.31 ± 0.03	0.26 ± 0.04	S E Asia F	E Europe M	0.21
22	0.53 ± 0.03	0.60 ± 0.02	0.37 ± 0.03	0.59 ± 0.02	0.66 ± 0.02	0.52 ± 0.04	0.43 ± 0.03	0.44 ± 0.02	0.28 ± 0.03	0.43 ± 0.02	0.43 ± 0.03	0.34 ± 0.04	S E Asia F	E Europe M	0.14
23	0.62 ± 0.03	0.71 ± 0.02	0.48 ± 0.02	0.70 ± 0.02	0.77 ± 0.02	0.63 ± 0.03	0.51 ± 0.03	0.59 ± 0.02	0.45 ± 0.03	0.61 ± 0.02	0.62 ± 0.03	0.53 ± 0.03	S E Asia F	E Europe M	0.10
24	0.72 ± 0.03	0.79 ± 0.01	0.65 ± 0.02	0.79 ± 0.01	0.85 ± 0.01	0.69 ± 0.03	0.64 ± 0.03	0.73 ± 0.02	0.66 ± 0.03	0.75 ± 0.02	0.78 ± 0.02	0.64 ± 0.03	S E Asia F	E Africa M	0.06
25	0.77 ± 0.02	0.877 ± 0.010	0.75 ± 0.02	0.84 ± 0.01	0.89 ± 0.01	0.77 ± 0.02	0.75 ± 0.03	0.85 ± 0.01	0.79 ± 0.02	0.86 ± 0.01	0.86 ± 0.02	0.74 ± 0.03	S E Asia F	W Africa M	0.04
26	0.81 ± 0.02	0.919 ± 0.008	0.85 ± 0.01	0.883 ± 0.009	0.942 ± 0.008	0.83 ± 0.02	0.84 ± 0.02	0.92 ± 0.01	0.88 ± 0.02	0.920 ± 0.009	0.93 ± 0.02	0.83 ± 0.02	S E Asia F	E Africa F	0.03
27	0.88 ± 0.02	0.955 ± 0.005	0.90 ± 0.01	0.924 ± 0.007	0.963 ± 0.006	0.88 ± 0.02	0.88 ± 0.02	0.954 ± 0.008	0.95 ± 0.01	0.960 ± 0.007	0.96 ± 0.01	0.89 ± 0.02	S E Asia M	W Africa F	0.02
28	0.91 ± 0.01	0.976 ± 0.004	0.951 ± 0.008	0.946 ± 0.006	0.977 ± 0.006	0.91 ± 0.02	0.93 ± 0.01	0.980 ± 0.005	0.973 ± 0.009	0.977 ± 0.005	0.987 ± 0.007	0.93 ± 0.01	S E Asia M	E Africa F	0.02
29	0.94 ± 0.01	0.987 ± 0.003	0.975 ± 0.006	0.960 ± 0.005	0.986 ± 0.005	0.93 ± 0.01	0.95 ± 0.01	0.988 ± 0.004	0.990 ± 0.006	0.991 ± 0.003	0.993 ± 0.005	0.96 ± 0.01	S E Asia M	W Africa F	0.01
30	0.96 ± 0.01	0.993 ± 0.002	0.985 ± 0.005	0.977 ± 0.004	0.992 ± 0.003	0.96 ± 0.01	0.973 ± 0.009	0.996 ± 0.002	0.996 ± 0.004	0.993 ± 0.002	0.994 ± 0.004	0.973 ± 0.008	E Europe M	E Africa F	0.01
31	0.96 ± 0.01	0.996 ± 0.002	0.993 ± 0.004	0.983 ± 0.003	0.996 ± 0.003	0.96 ± 0.01	0.988 ± 0.006	0.999 ± 0.001	0.999 ± 0.002	0.996 ± 0.002	0.994 ± 0.005	0.987 ± 0.006	E Asia M	W Africa F	0.01
32	0.972 ± 0.009	0.998 ± 0.001	0.998 ± 0.002	0.990 ± 0.003	0.997 ± 0.002	0.976 ± 0.007	0.988 ± 0.006	0.999 ± 0.001	0.999 ± 0.002	0.998 ± 0.001	0.995 ± 0.004	0.991 ± 0.005	E Asia M	E Africa F	0.00
33	0.984 ± 0.008	0.999 ± 0.001	0.996 ± 0.003	0.992 ± 0.002	1.000 ± 0.000	0.989 ± 0.006	0.998 ± 0.003	1.000 ± 0.001	0.999 ± 0.002	0.998 ± 0.001	0.998 ± 0.003	0.993 ± 0.004	S E Asia F	E Africa F	0.00
34	0.986 ± 0.007	0.999 ± 0.001	0.998 ± 0.002	0.996 ± 0.002	1.000 ± 0.001	0.987 ± 0.007	0.999 ± 0.002	0.999 ± 0.001	0.999 ± 0.001	0.999 ± 0.001	1.000 ± 0.000	0.998 ± 0.003	S E Asia M	E Africa F	0.00

Table 184. *For algorithm yoti-003 with Border images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.09 ± 0.04	0.13 ± 0.01	0.03 ± 0.02	0.05 ± 0.01	0.19 ± 0.04	0.07 ± 0.04	0.06 ± 0.03	0.041 ± 0.008	0.010 ± 0.007	0.008 ± 0.004	0.03 ± 0.01	0.04 ± 0.03	S E Asia F	S Asia M	0.46
15	0.11 ± 0.05	0.19 ± 0.01	0.08 ± 0.02	0.08 ± 0.02	0.24 ± 0.04	0.16 ± 0.05	0.07 ± 0.04	0.067 ± 0.008	0.007 ± 0.007	0.022 ± 0.007	0.05 ± 0.02	0.04 ± 0.03	S E Asia F	E Europe M	0.43
16	0.21 ± 0.05	0.24 ± 0.02	0.10 ± 0.02	0.12 ± 0.02	0.33 ± 0.03	0.17 ± 0.05	0.05 ± 0.03	0.103 ± 0.010	0.018 ± 0.010	0.034 ± 0.009	0.10 ± 0.02	0.06 ± 0.03	S E Asia F	E Europe M	0.42
17	0.22 ± 0.05	0.32 ± 0.02	0.15 ± 0.02	0.18 ± 0.02	0.40 ± 0.03	0.19 ± 0.05	0.15 ± 0.05	0.16 ± 0.01	0.02 ± 0.01	0.08 ± 0.01	0.15 ± 0.03	0.15 ± 0.04	S E Asia F	E Europe M	0.30
18	0.30 ± 0.04	0.40 ± 0.01	0.24 ± 0.02	0.25 ± 0.02	0.48 ± 0.02	0.26 ± 0.04	0.15 ± 0.04	0.23 ± 0.01	0.06 ± 0.02	0.10 ± 0.01	0.24 ± 0.03	0.16 ± 0.04	S E Asia F	E Europe M	0.28
19	0.35 ± 0.04	0.49 ± 0.01	0.31 ± 0.02	0.34 ± 0.02	0.50 ± 0.02	0.36 ± 0.04	0.24 ± 0.05	0.35 ± 0.01	0.10 ± 0.02	0.18 ± 0.01	0.36 ± 0.03	0.27 ± 0.04	S E Asia F	E Europe M	0.20
20	0.46 ± 0.04	0.58 ± 0.01	0.39 ± 0.02	0.40 ± 0.02	0.62 ± 0.02	0.44 ± 0.04	0.37 ± 0.04	0.46 ± 0.01	0.22 ± 0.02	0.27 ± 0.02	0.49 ± 0.03	0.36 ± 0.04	S E Asia F	E Europe M	0.16
21	0.51 ± 0.04	0.652 ± 0.009	0.48 ± 0.02	0.49 ± 0.02	0.66 ± 0.02	0.51 ± 0.04	0.45 ± 0.04	0.59 ± 0.01	0.35 ± 0.03	0.38 ± 0.02	0.58 ± 0.03	0.48 ± 0.04	S E Asia F	E Europe M	0.11
22	0.64 ± 0.04	0.724 ± 0.009	0.56 ± 0.02	0.56 ± 0.01	0.73 ± 0.02	0.60 ± 0.04	0.56 ± 0.04	0.70 ± 0.01	0.50 ± 0.03	0.52 ± 0.02	0.70 ± 0.02	0.58 ± 0.03	S E Asia F	E Europe M	0.08
23	0.61 ± 0.03	0.789 ± 0.008	0.64 ± 0.02	0.61 ± 0.01	0.79 ± 0.01	0.60 ± 0.03	0.64 ± 0.04	0.795 ± 0.009	0.64 ± 0.02	0.62 ± 0.01	0.79 ± 0.02	0.65 ± 0.03	E Asia M	W Africa F	0.07
24	0.69 ± 0.03	0.829 ± 0.007	0.73 ± 0.01	0.682 ± 0.009	0.84 ± 0.01	0.64 ± 0.03	0.72 ± 0.03	0.852 ± 0.008	0.77 ± 0.02	0.72 ± 0.01	0.87 ± 0.02	0.76 ± 0.03	S E Asia M	W Africa F	0.06
25	0.74 ± 0.03	0.869 ± 0.006	0.80 ± 0.01	0.732 ± 0.009	0.86 ± 0.01	0.72 ± 0.02	0.79 ± 0.03	0.916 ± 0.006	0.86 ± 0.01	0.809 ± 0.009	0.91 ± 0.01	0.82 ± 0.02	E Asia M	W Africa F	0.05
26	0.80 ± 0.02	0.906 ± 0.005	0.851 ± 0.008	0.776 ± 0.009	0.908 ± 0.009	0.75 ± 0.02	0.87 ± 0.02	0.948 ± 0.005	0.90 ± 0.01	0.870 ± 0.007	0.94 ± 0.01	0.87 ± 0.02	E Asia M	W Africa F	0.04
27	0.82 ± 0.02	0.934 ± 0.004	0.897 ± 0.007	0.807 ± 0.007	0.931 ± 0.007	0.81 ± 0.02	0.89 ± 0.02	0.969 ± 0.004	0.944 ± 0.008	0.907 ± 0.006	0.964 ± 0.009	0.92 ± 0.01	E Asia M	W Africa F	0.04
28	0.86 ± 0.02	0.952 ± 0.003	0.929 ± 0.005	0.841 ± 0.007	0.948 ± 0.007	0.84 ± 0.02	0.94 ± 0.01	0.981 ± 0.003	0.970 ± 0.006	0.939 ± 0.004	0.974 ± 0.008	0.93 ± 0.01	E Asia M	W Africa F	0.03
29	0.89 ± 0.02	0.967 ± 0.003	0.951 ± 0.005	0.864 ± 0.006	0.954 ± 0.007	0.85 ± 0.02	0.96 ± 0.01	0.990 ± 0.002	0.977 ± 0.005	0.960 ± 0.003	0.983 ± 0.006	0.959 ± 0.008	E Asia M	W Africa F	0.03
30	0.91 ± 0.01	0.979 ± 0.002	0.967 ± 0.004	0.896 ± 0.005	0.973 ± 0.005	0.89 ± 0.01	0.96 ± 0.01	0.994 ± 0.002	0.988 ± 0.004	0.973 ± 0.003	0.992 ± 0.004	0.970 ± 0.007	E Asia M	W Africa F	0.02
31	0.92 ± 0.02	0.985 ± 0.002	0.977 ± 0.003	0.915 ± 0.004	0.977 ± 0.005	0.91 ± 0.01	0.980 ± 0.008	0.995 ± 0.001	0.993 ± 0.003	0.984 ± 0.002	0.996 ± 0.003	0.976 ± 0.006	S E Asia M	W Africa F	0.02
32	0.95 ± 0.01	0.991 ± 0.001	0.987 ± 0.003	0.930 ± 0.004	0.981 ± 0.004	0.91 ± 0.01	0.987 ± 0.007	0.998 ± 0.001	0.995 ± 0.002	0.988 ± 0.002	0.995 ± 0.003	0.987 ± 0.004	E Asia M	W Africa F	0.01
33	0.94 ± 0.01	0.994 ± 0.001	0.991 ± 0.002	0.946 ± 0.004	0.987 ± 0.003	0.93 ± 0.01	0.993 ± 0.005	0.998 ± 0.001	0.998 ± 0.001	0.991 ± 0.001	0.999 ± 0.001	0.992 ± 0.004	S E Asia M	W Africa F	0.01
34	0.97 ± 0.01	0.994 ± 0.001	0.993 ± 0.002	0.958 ± 0.003	0.991 ± 0.003	0.96 ± 0.01	0.997 ± 0.003	0.998 ± 0.001	0.999 ± 0.001	0.995 ± 0.001	1.000 ± 0.000	0.997 ± 0.002	S E Asia M	S Asia F	0.01

Table 185. *For algorithm yoti-004 with Application images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.007 ± 0.007	0.008 ± 0.004	0.000 ± 0.000	0.004 ± 0.003	0.009 ± 0.007	0.004 ± 0.004	0.002 ± 0.002	0.002 ± 0.002	0.000 ± 0.000	0.002 ± 0.002	0.000 ± 0.000	0.000 ± 0.000	S E Asia F	E Europe F	0.59
15	0.01 ± 0.01	0.013 ± 0.006	0.000 ± 0.000	0.015 ± 0.008	0.03 ± 0.02	0.009 ± 0.009	0.010 ± 0.008	0.001 ± 0.001	0.000 ± 0.000	0.003 ± 0.003	0.002 ± 0.002	0.005 ± 0.005	S E Asia F	E Europe F	0.55
16	0.04 ± 0.02	0.031 ± 0.009	0.011 ± 0.008	0.022 ± 0.009	0.05 ± 0.02	0.03 ± 0.02	0.01 ± 0.01	0.003 ± 0.002	0.003 ± 0.003	0.003 ± 0.003	0.003 ± 0.003	0.000 ± 0.000	S E Asia F	W Africa M	0.57
17	0.06 ± 0.02	0.05 ± 0.01	0.011 ± 0.008	0.06 ± 0.02	0.09 ± 0.03	0.09 ± 0.03	0.012 ± 0.009	0.011 ± 0.005	0.003 ± 0.003	0.011 ± 0.006	0.011 ± 0.008	0.03 ± 0.02	W Africa F	E Europe M	0.50
18	0.08 ± 0.02	0.09 ± 0.01	0.02 ± 0.01	0.08 ± 0.01	0.12 ± 0.02	0.12 ± 0.03	0.02 ± 0.01	0.014 ± 0.004	0.000 ± 0.000	0.022 ± 0.006	0.013 ± 0.008	0.04 ± 0.02	S E Asia F	E Europe M	0.48
19	0.17 ± 0.03	0.15 ± 0.02	0.06 ± 0.02	0.15 ± 0.02	0.21 ± 0.03	0.21 ± 0.03	0.08 ± 0.02	0.042 ± 0.008	0.006 ± 0.006	0.040 ± 0.009	0.05 ± 0.01	0.10 ± 0.03	S E Asia F	E Europe M	0.39
20	0.22 ± 0.03	0.25 ± 0.02	0.07 ± 0.02	0.23 ± 0.02	0.34 ± 0.03	0.27 ± 0.04	0.13 ± 0.03	0.07 ± 0.01	0.03 ± 0.01	0.11 ± 0.01	0.10 ± 0.02	0.14 ± 0.03	S E Asia F	E Europe M	0.34
21	0.32 ± 0.04	0.36 ± 0.02	0.13 ± 0.02	0.35 ± 0.02	0.43 ± 0.03	0.38 ± 0.04	0.21 ± 0.03	0.16 ± 0.02	0.05 ± 0.02	0.19 ± 0.02	0.20 ± 0.03	0.23 ± 0.04	S E Asia F	E Europe M	0.27
22	0.41 ± 0.03	0.48 ± 0.02	0.24 ± 0.02	0.46 ± 0.02	0.56 ± 0.02	0.45 ± 0.04	0.35 ± 0.03	0.29 ± 0.02	0.13 ± 0.02	0.31 ± 0.02	0.31 ± 0.03	0.29 ± 0.04	S E Asia F	E Europe M	0.20
23	0.51 ± 0.03	0.59 ± 0.02	0.33 ± 0.02	0.59 ± 0.02	0.67 ± 0.02	0.58 ± 0.03	0.42 ± 0.03	0.42 ± 0.02	0.27 ± 0.03	0.47 ± 0.02	0.48 ± 0.03	0.48 ± 0.03	S E Asia F	E Europe M	0.14
24	0.62 ± 0.03	0.71 ± 0.01	0.50 ± 0.02	0.67 ± 0.01	0.78 ± 0.02	0.61 ± 0.03	0.56 ± 0.03	0.58 ± 0.02	0.48 ± 0.03	0.63 ± 0.02	0.65 ± 0.03	0.57 ± 0.04	S E Asia F	E Europe M	0.08
25	0.67 ± 0.03	0.81 ± 0.01	0.63 ± 0.02	0.75 ± 0.01	0.83 ± 0.01	0.73 ± 0.03	0.67 ± 0.03	0.73 ± 0.02	0.64 ± 0.03	0.77 ± 0.02	0.78 ± 0.02	0.67 ± 0.03	S E Asia F	E Europe F	0.06
26	0.75 ± 0.02	0.870 ± 0.010	0.75 ± 0.02	0.82 ± 0.01	0.90 ± 0.01	0.80 ± 0.02	0.77 ± 0.02	0.84 ± 0.01	0.78 ± 0.02	0.86 ± 0.01	0.86 ± 0.02	0.78 ± 0.02	S E Asia F	E Europe F	0.04
27	0.82 ± 0.02	0.925 ± 0.008	0.84 ± 0.01	0.872 ± 0.008	0.933 ± 0.009	0.85 ± 0.02	0.83 ± 0.02	0.91 ± 0.01	0.91 ± 0.02	0.919 ± 0.008	0.93 ± 0.01	0.86 ± 0.02	S E Asia F	E Africa F	0.03
28	0.86 ± 0.02	0.956 ± 0.006	0.919 ± 0.009	0.907 ± 0.007	0.961 ± 0.008	0.91 ± 0.02	0.89 ± 0.02	0.956 ± 0.008	0.94 ± 0.01	0.958 ± 0.006	0.97 ± 0.01	0.90 ± 0.02	S E Asia M	E Africa F	0.02
29	0.92 ± 0.01	0.979 ± 0.004	0.954 ± 0.008	0.933 ± 0.006	0.978 ± 0.005	0.92 ± 0.01	0.94 ± 0.01	0.980 ± 0.005	0.975 ± 0.009	0.977 ± 0.004	0.982 ± 0.008	0.95 ± 0.01	S E Asia M	W Africa F	0.01
30	0.94 ± 0.01	0.988 ± 0.003	0.968 ± 0.007	0.957 ± 0.005	0.990 ± 0.004	0.94 ± 0.01	0.96 ± 0.01	0.989 ± 0.004	0.993 ± 0.004	0.984 ± 0.003	0.991 ± 0.006	0.961 ± 0.009	E Europe M	E Africa F	0.01
31	0.95 ± 0.01	0.994 ± 0.002	0.985 ± 0.005	0.971 ± 0.004	0.991 ± 0.004	0.96 ± 0.01	0.980 ± 0.007	0.995 ± 0.003	0.993 ± 0.005	0.992 ± 0.003	0.990 ± 0.007	0.981 ± 0.006	E Asia M	E Africa F	0.01
32	0.968 ± 0.010	0.997 ± 0.001	0.995 ± 0.003	0.981 ± 0.004	0.995 ± 0.003	0.969 ± 0.010	0.984 ± 0.007	0.998 ± 0.002	0.998 ± 0.003	0.996 ± 0.002	0.995 ± 0.004	0.988 ± 0.005	E Europe M	E Africa F	0.01
33	0.97 ± 0.01	0.998 ± 0.001	0.994 ± 0.004	0.990 ± 0.003	0.999 ± 0.001	0.987 ± 0.007	0.992 ± 0.005	0.999 ± 0.001	0.999 ± 0.002	0.997 ± 0.001	0.998 ± 0.003	0.993 ± 0.004	S E Asia F	E Africa F	0.00
34	0.977 ± 0.008	0.999 ± 0.001	0.997 ± 0.002	0.992 ± 0.003	1.000 ± 0.001	0.987 ± 0.007	0.995 ± 0.004	0.999 ± 0.001	0.999 ± 0.002	0.999 ± 0.001	0.999 ± 0.002	0.997 ± 0.003	S E Asia F	E Africa F	0.00

Table 186. *For algorithm yoti-004 with Border images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.08 ± 0.04	0.11 ± 0.01	0.03 ± 0.02	0.04 ± 0.01	0.14 ± 0.03	0.06 ± 0.03	0.04 ± 0.02	0.028 ± 0.006	0.005 ± 0.005	0.007 ± 0.004	0.02 ± 0.01	0.04 ± 0.03	S E Asia F	E Europe M	0.45
15	0.08 ± 0.04	0.16 ± 0.01	0.05 ± 0.02	0.06 ± 0.01	0.21 ± 0.03	0.12 ± 0.05	0.06 ± 0.04	0.043 ± 0.007	0.000 ± 0.000	0.017 ± 0.007	0.02 ± 0.01	0.05 ± 0.03	S E Asia F	E Europe M	0.47
16	0.15 ± 0.04	0.22 ± 0.01	0.08 ± 0.02	0.10 ± 0.01	0.28 ± 0.03	0.13 ± 0.04	0.10 ± 0.04	0.068 ± 0.009	0.020 ± 0.010	0.018 ± 0.006	0.05 ± 0.01	0.07 ± 0.03	S E Asia F	S Asia M	0.41
17	0.17 ± 0.04	0.28 ± 0.02	0.11 ± 0.02	0.13 ± 0.02	0.35 ± 0.03	0.17 ± 0.04	0.14 ± 0.04	0.109 ± 0.010	0.015 ± 0.008	0.051 ± 0.010	0.08 ± 0.02	0.13 ± 0.04	S E Asia F	E Europe M	0.36
18	0.27 ± 0.04	0.36 ± 0.01	0.19 ± 0.02	0.18 ± 0.02	0.42 ± 0.03	0.20 ± 0.04	0.16 ± 0.04	0.163 ± 0.010	0.04 ± 0.01	0.07 ± 0.01	0.15 ± 0.02	0.16 ± 0.04	S E Asia F	E Europe M	0.30
19	0.31 ± 0.04	0.45 ± 0.01	0.23 ± 0.02	0.26 ± 0.02	0.47 ± 0.02	0.28 ± 0.04	0.23 ± 0.04	0.25 ± 0.01	0.08 ± 0.02	0.14 ± 0.01	0.23 ± 0.02	0.23 ± 0.04	S E Asia F	E Europe M	0.23
20	0.43 ± 0.04	0.54 ± 0.01	0.32 ± 0.02	0.33 ± 0.02	0.59 ± 0.02	0.39 ± 0.04	0.33 ± 0.04	0.36 ± 0.01	0.17 ± 0.02	0.21 ± 0.02	0.36 ± 0.03	0.31 ± 0.04	S E Asia F	E Europe M	0.19
21	0.46 ± 0.04	0.62 ± 0.01	0.39 ± 0.02	0.40 ± 0.01	0.63 ± 0.02	0.47 ± 0.04	0.42 ± 0.04	0.48 ± 0.01	0.30 ± 0.03	0.30 ± 0.02	0.48 ± 0.03	0.41 ± 0.04	S E Asia F	E Europe M	0.13
22	0.54 ± 0.04	0.691 ± 0.009	0.48 ± 0.02	0.49 ± 0.01	0.70 ± 0.02	0.54 ± 0.03	0.53 ± 0.04	0.62 ± 0.01	0.43 ± 0.03	0.44 ± 0.01	0.60 ± 0.03	0.52 ± 0.03	S E Asia F	E Europe M	0.09
23	0.58 ± 0.03	0.760 ± 0.009	0.57 ± 0.02	0.56 ± 0.01	0.78 ± 0.02	0.57 ± 0.03	0.61 ± 0.03	0.72 ± 0.01	0.58 ± 0.02	0.55 ± 0.01	0.71 ± 0.03	0.63 ± 0.03	S E Asia F	S Asia M	0.08
24	0.64 ± 0.03	0.810 ± 0.007	0.66 ± 0.01	0.64 ± 0.01	0.82 ± 0.01	0.65 ± 0.03	0.69 ± 0.03	0.805 ± 0.009	0.71 ± 0.02	0.65 ± 0.01	0.81 ± 0.02	0.70 ± 0.03	S E Asia F	E Africa F	0.06
25	0.71 ± 0.03	0.858 ± 0.006	0.74 ± 0.01	0.691 ± 0.010	0.85 ± 0.01	0.71 ± 0.02	0.74 ± 0.03	0.881 ± 0.008	0.82 ± 0.02	0.754 ± 0.010	0.88 ± 0.02	0.79 ± 0.02	E Asia M	S Asia F	0.05
26	0.75 ± 0.02	0.901 ± 0.005	0.804 ± 0.009	0.737 ± 0.008	0.900 ± 0.010	0.75 ± 0.02	0.84 ± 0.02	0.923 ± 0.006	0.88 ± 0.01	0.828 ± 0.008	0.92 ± 0.01	0.84 ± 0.02	E Asia M	S Asia F	0.05
27	0.80 ± 0.02	0.929 ± 0.004	0.865 ± 0.008	0.783 ± 0.007	0.920 ± 0.008	0.80 ± 0.02	0.90 ± 0.02	0.951 ± 0.005	0.932 ± 0.009	0.875 ± 0.007	0.95 ± 0.01	0.90 ± 0.01	E Asia M	S Asia F	0.04
28	0.85 ± 0.02	0.952 ± 0.003	0.910 ± 0.007	0.813 ± 0.007	0.945 ± 0.007	0.83 ± 0.02	0.93 ± 0.02	0.972 ± 0.004	0.959 ± 0.006	0.915 ± 0.005	0.971 ± 0.008	0.92 ± 0.01	E Asia M	S Asia F	0.03
29	0.88 ± 0.02	0.968 ± 0.003	0.939 ± 0.005	0.850 ± 0.006	0.952 ± 0.007	0.87 ± 0.02	0.95 ± 0.01	0.984 ± 0.002	0.972 ± 0.006	0.944 ± 0.004	0.981 ± 0.006	0.952 ± 0.008	E Asia M	S Asia F	0.03
30	0.89 ± 0.02	0.977 ± 0.002	0.958 ± 0.005	0.880 ± 0.006	0.969 ± 0.005	0.89 ± 0.01	0.97 ± 0.01	0.992 ± 0.002	0.986 ± 0.004	0.964 ± 0.003	0.985 ± 0.006	0.963 ± 0.008	E Asia M	S Asia F	0.02
31	0.92 ± 0.02	0.984 ± 0.002	0.970 ± 0.004	0.904 ± 0.005	0.978 ± 0.004	0.92 ± 0.01	0.967 ± 0.010	0.994 ± 0.002	0.992 ± 0.003	0.975 ± 0.003	0.989 ± 0.005	0.974 ± 0.007	E Asia M	S Asia F	0.02
32	0.93 ± 0.02	0.990 ± 0.001	0.984 ± 0.003	0.920 ± 0.005	0.981 ± 0.004	0.93 ± 0.01	0.984 ± 0.007	0.998 ± 0.001	0.995 ± 0.002	0.983 ± 0.002	0.992 ± 0.005	0.980 ± 0.006	E Asia M	S Asia F	0.01
33	0.94 ± 0.01	0.994 ± 0.001	0.988 ± 0.003	0.937 ± 0.005	0.987 ± 0.004	0.95 ± 0.01	0.989 ± 0.006	0.997 ± 0.001	0.998 ± 0.001	0.988 ± 0.002	0.997 ± 0.003	0.991 ± 0.004	E Europe M	S Asia F	0.01
34	0.96 ± 0.01	0.995 ± 0.001	0.992 ± 0.002	0.951 ± 0.003	0.990 ± 0.003	0.967 ± 0.010	0.991 ± 0.006	0.999 ± 0.001	0.999 ± 0.001	0.993 ± 0.001	0.996 ± 0.003	0.993 ± 0.003	E Europe M	S Asia F	0.01

Table 187. *For algorithm youverse-000 with Application images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.06 ± 0.02	0.005 ± 0.003	0.02 ± 0.01	0.027 ± 0.009	0.009 ± 0.007	0.07 ± 0.03	0.03 ± 0.01	0.002 ± 0.002	0.000 ± 0.000	0.013 ± 0.005	0.005 ± 0.005	0.03 ± 0.02	W Africa F	E Europe M	0.56
15	0.07 ± 0.03	0.015 ± 0.006	0.05 ± 0.02	0.06 ± 0.01	0.03 ± 0.02	0.12 ± 0.04	0.04 ± 0.02	0.004 ± 0.003	0.012 ± 0.009	0.022 ± 0.009	0.002 ± 0.002	0.06 ± 0.03	W Africa F	S E Asia M	0.49
16	0.13 ± 0.03	0.015 ± 0.006	0.07 ± 0.02	0.06 ± 0.02	0.02 ± 0.01	0.13 ± 0.04	0.07 ± 0.02	0.009 ± 0.004	0.02 ± 0.01	0.03 ± 0.01	0.03 ± 0.02	0.09 ± 0.03	E Africa F	E Asia M	0.44
17	0.18 ± 0.04	0.037 ± 0.009	0.13 ± 0.03	0.09 ± 0.02	0.04 ± 0.02	0.24 ± 0.04	0.12 ± 0.03	0.021 ± 0.007	0.03 ± 0.02	0.07 ± 0.01	0.02 ± 0.01	0.17 ± 0.04	W Africa F	S E Asia M	0.44
18	0.20 ± 0.04	0.046 ± 0.009	0.16 ± 0.03	0.13 ± 0.02	0.05 ± 0.01	0.24 ± 0.04	0.22 ± 0.04	0.031 ± 0.007	0.08 ± 0.02	0.11 ± 0.02	0.04 ± 0.01	0.25 ± 0.04	W Africa M	E Asia M	0.37
19	0.25 ± 0.04	0.054 ± 0.010	0.21 ± 0.03	0.17 ± 0.02	0.07 ± 0.02	0.29 ± 0.04	0.29 ± 0.04	0.048 ± 0.008	0.11 ± 0.02	0.21 ± 0.02	0.09 ± 0.02	0.28 ± 0.04	W Africa F	E Asia M	0.32
20	0.31 ± 0.04	0.08 ± 0.01	0.30 ± 0.03	0.22 ± 0.02	0.06 ± 0.01	0.35 ± 0.04	0.40 ± 0.04	0.07 ± 0.01	0.18 ± 0.03	0.29 ± 0.02	0.12 ± 0.02	0.38 ± 0.04	E Africa M	S E Asia F	0.32
21	0.36 ± 0.04	0.11 ± 0.01	0.35 ± 0.03	0.27 ± 0.02	0.11 ± 0.02	0.38 ± 0.04	0.48 ± 0.04	0.13 ± 0.01	0.26 ± 0.03	0.36 ± 0.02	0.18 ± 0.03	0.50 ± 0.04	W Africa M	S E Asia F	0.28
22	0.42 ± 0.03	0.15 ± 0.01	0.43 ± 0.03	0.34 ± 0.02	0.12 ± 0.02	0.44 ± 0.04	0.58 ± 0.03	0.19 ± 0.02	0.38 ± 0.04	0.50 ± 0.02	0.22 ± 0.03	0.55 ± 0.04	E Africa M	S E Asia F	0.26
23	0.43 ± 0.03	0.18 ± 0.01	0.52 ± 0.02	0.41 ± 0.02	0.16 ± 0.02	0.53 ± 0.04	0.66 ± 0.03	0.25 ± 0.02	0.51 ± 0.04	0.60 ± 0.02	0.30 ± 0.03	0.63 ± 0.04	E Africa M	S E Asia F	0.24
24	0.52 ± 0.03	0.21 ± 0.01	0.63 ± 0.02	0.46 ± 0.02	0.22 ± 0.02	0.54 ± 0.03	0.71 ± 0.03	0.32 ± 0.02	0.60 ± 0.03	0.69 ± 0.02	0.37 ± 0.03	0.72 ± 0.03	W Africa M	E Asia F	0.22
25	0.57 ± 0.03	0.25 ± 0.01	0.68 ± 0.02	0.53 ± 0.02	0.25 ± 0.02	0.59 ± 0.03	0.77 ± 0.03	0.41 ± 0.02	0.70 ± 0.03	0.76 ± 0.02	0.47 ± 0.03	0.75 ± 0.03	E Africa M	S E Asia F	0.19
26	0.59 ± 0.03	0.30 ± 0.01	0.75 ± 0.02	0.58 ± 0.01	0.31 ± 0.02	0.60 ± 0.03	0.84 ± 0.02	0.48 ± 0.02	0.73 ± 0.02	0.82 ± 0.01	0.56 ± 0.03	0.82 ± 0.02	E Africa M	E Asia F	0.18
27	0.64 ± 0.02	0.35 ± 0.01	0.80 ± 0.01	0.62 ± 0.01	0.38 ± 0.02	0.66 ± 0.02	0.85 ± 0.02	0.56 ± 0.02	0.83 ± 0.02	0.85 ± 0.01	0.62 ± 0.03	0.85 ± 0.02	S Asia M	E Asia F	0.15
28	0.69 ± 0.02	0.41 ± 0.01	0.85 ± 0.01	0.67 ± 0.01	0.43 ± 0.02	0.69 ± 0.02	0.89 ± 0.02	0.64 ± 0.02	0.89 ± 0.02	0.879 ± 0.009	0.68 ± 0.03	0.86 ± 0.02	E Europe M	E Asia F	0.13
29	0.73 ± 0.02	0.48 ± 0.01	0.89 ± 0.01	0.72 ± 0.01	0.49 ± 0.02	0.73 ± 0.02	0.93 ± 0.01	0.71 ± 0.02	0.92 ± 0.01	0.914 ± 0.008	0.76 ± 0.02	0.91 ± 0.01	E Africa M	E Asia F	0.12
30	0.77 ± 0.02	0.52 ± 0.01	0.93 ± 0.01	0.77 ± 0.01	0.57 ± 0.02	0.76 ± 0.03	0.93 ± 0.01	0.78 ± 0.01	0.94 ± 0.01	0.932 ± 0.006	0.82 ± 0.02	0.92 ± 0.01	E Europe M	E Asia F	0.10
31	0.79 ± 0.02	0.59 ± 0.01	0.945 ± 0.009	0.80 ± 0.01	0.60 ± 0.02	0.79 ± 0.02	0.96 ± 0.01	0.82 ± 0.01	0.96 ± 0.01	0.950 ± 0.006	0.85 ± 0.02	0.94 ± 0.01	E Europe M	E Asia F	0.09
32	0.84 ± 0.02	0.64 ± 0.01	0.957 ± 0.009	0.843 ± 0.009	0.67 ± 0.02	0.79 ± 0.02	0.96 ± 0.01	0.86 ± 0.01	0.976 ± 0.007	0.963 ± 0.005	0.89 ± 0.02	0.95 ± 0.01	E Europe M	E Asia F	0.07
33	0.83 ± 0.02	0.70 ± 0.01	0.969 ± 0.008	0.874 ± 0.009	0.71 ± 0.02	0.85 ± 0.02	0.976 ± 0.008	0.89 ± 0.01	0.984 ± 0.007	0.973 ± 0.004	0.91 ± 0.02	0.965 ± 0.009	E Europe M	E Asia F	0.06
34	0.88 ± 0.02	0.75 ± 0.01	0.978 ± 0.006	0.909 ± 0.008	0.76 ± 0.02	0.86 ± 0.02	0.982 ± 0.007	0.918 ± 0.010	0.992 ± 0.005	0.979 ± 0.004	0.94 ± 0.01	0.973 ± 0.008	E Europe M	E Asia F	0.05

Table 188. *For algorithm youverse-000 with Border images, Challenge-25 accept rate by age, sex and region of birth. The final columns give groups that give the highest and lowest accept rate and the Gini summary of variability. Gini is computed over the 12 accept-rate values to its left; lower values are better.*

Age	F E Africa	F E Asia	F E Europe	F S Asia	F SE Asia	F W Africa	M E Africa	M E Asia	M E Europe	M S Asia	M SE Asia	M W Africa	max Accept	min Accept	Gini
14	0.31 ± 0.07	0.046 ± 0.009	0.06 ± 0.02	0.20 ± 0.02	0.04 ± 0.02	0.28 ± 0.07	0.48 ± 0.08	0.09 ± 0.01	0.10 ± 0.03	0.25 ± 0.02	0.11 ± 0.03	0.50 ± 0.09	W Africa M	S E Asia F	0.45
15	0.37 ± 0.07	0.065 ± 0.009	0.11 ± 0.03	0.24 ± 0.03	0.07 ± 0.02	0.35 ± 0.07	0.65 ± 0.07	0.13 ± 0.01	0.13 ± 0.03	0.35 ± 0.03	0.12 ± 0.02	0.63 ± 0.07	E Africa M	E Asia F	0.43
16	0.44 ± 0.06	0.073 ± 0.010	0.15 ± 0.03	0.27 ± 0.02	0.08 ± 0.02	0.41 ± 0.06	0.72 ± 0.06	0.16 ± 0.01	0.19 ± 0.03	0.43 ± 0.03	0.18 ± 0.03	0.70 ± 0.06	E Africa M	E Asia F	0.41
17	0.44 ± 0.05	0.082 ± 0.008	0.22 ± 0.03	0.30 ± 0.02	0.06 ± 0.02	0.45 ± 0.06	0.83 ± 0.05	0.21 ± 0.01	0.25 ± 0.04	0.50 ± 0.03	0.22 ± 0.03	0.77 ± 0.05	E Africa M	S E Asia F	0.39
18	0.53 ± 0.05	0.102 ± 0.008	0.22 ± 0.02	0.33 ± 0.02	0.07 ± 0.01	0.50 ± 0.05	0.87 ± 0.04	0.25 ± 0.01	0.34 ± 0.04	0.56 ± 0.02	0.27 ± 0.03	0.84 ± 0.04	E Africa M	S E Asia F	0.37
19	0.58 ± 0.05	0.117 ± 0.007	0.25 ± 0.02	0.32 ± 0.02	0.10 ± 0.01	0.56 ± 0.04	0.84 ± 0.04	0.28 ± 0.01	0.38 ± 0.03	0.64 ± 0.02	0.33 ± 0.03	0.88 ± 0.03	W Africa M	S E Asia F	0.35
20	0.59 ± 0.04	0.143 ± 0.008	0.30 ± 0.02	0.36 ± 0.02	0.11 ± 0.01	0.59 ± 0.04	0.91 ± 0.03	0.33 ± 0.01	0.46 ± 0.03	0.71 ± 0.02	0.37 ± 0.02	0.89 ± 0.03	E Africa M	S E Asia F	0.32
21	0.62 ± 0.04	0.156 ± 0.008	0.35 ± 0.02	0.40 ± 0.02	0.14 ± 0.01	0.64 ± 0.04	0.92 ± 0.02	0.38 ± 0.01	0.55 ± 0.03	0.74 ± 0.01	0.40 ± 0.02	0.93 ± 0.02	W Africa M	S E Asia F	0.30
22	0.64 ± 0.04	0.176 ± 0.007	0.40 ± 0.02	0.43 ± 0.01	0.14 ± 0.01	0.65 ± 0.03	0.95 ± 0.02	0.42 ± 0.01	0.62 ± 0.02	0.80 ± 0.01	0.48 ± 0.03	0.92 ± 0.02	E Africa M	S E Asia F	0.28
23	0.68 ± 0.03	0.199 ± 0.007	0.47 ± 0.02	0.47 ± 0.01	0.19 ± 0.01	0.67 ± 0.03	0.96 ± 0.02	0.46 ± 0.01	0.70 ± 0.02	0.83 ± 0.01	0.54 ± 0.03	0.94 ± 0.02	E Africa M	S E Asia F	0.25
24	0.70 ± 0.03	0.223 ± 0.007	0.52 ± 0.01	0.51 ± 0.01	0.21 ± 0.01	0.71 ± 0.03	0.96 ± 0.02	0.51 ± 0.01	0.73 ± 0.02	0.862 ± 0.009	0.56 ± 0.02	0.95 ± 0.01	E Africa M	S E Asia F	0.23
25	0.73 ± 0.03	0.246 ± 0.007	0.59 ± 0.01	0.56 ± 0.01	0.24 ± 0.01	0.74 ± 0.02	0.98 ± 0.01	0.55 ± 0.01	0.79 ± 0.02	0.881 ± 0.008	0.62 ± 0.02	0.96 ± 0.01	E Africa M	S E Asia F	0.21
26	0.76 ± 0.03	0.278 ± 0.007	0.63 ± 0.01	0.59 ± 0.01	0.28 ± 0.01	0.78 ± 0.02	0.977 ± 0.010	0.60 ± 0.01	0.83 ± 0.01	0.906 ± 0.006	0.65 ± 0.02	0.971 ± 0.008	E Africa M	S E Asia F	0.20
27	0.77 ± 0.02	0.305 ± 0.007	0.69 ± 0.01	0.623 ± 0.009	0.32 ± 0.01	0.78 ± 0.02	0.975 ± 0.010	0.64 ± 0.01	0.87 ± 0.01	0.921 ± 0.006	0.72 ± 0.02	0.977 ± 0.008	W Africa M	E Asia F	0.18
28	0.78 ± 0.03	0.341 ± 0.008	0.724 ± 0.010	0.645 ± 0.008	0.35 ± 0.02	0.81 ± 0.02	0.982 ± 0.008	0.67 ± 0.01	0.89 ± 0.01	0.935 ± 0.005	0.73 ± 0.02	0.976 ± 0.007	E Africa M	E Asia F	0.17
29	0.82 ± 0.02	0.374 ± 0.007	0.77 ± 0.01	0.685 ± 0.008	0.38 ± 0.01	0.83 ± 0.01	0.982 ± 0.008	0.707 ± 0.009	0.907 ± 0.010	0.943 ± 0.004	0.78 ± 0.02	0.981 ± 0.006	E Africa M	E Asia F	0.15
30	0.83 ± 0.02	0.416 ± 0.007	0.793 ± 0.009	0.708 ± 0.007	0.43 ± 0.01	0.83 ± 0.02	0.986 ± 0.007	0.743 ± 0.009	0.931 ± 0.008	0.954 ± 0.004	0.81 ± 0.02	0.991 ± 0.004	W Africa M	E Asia F	0.14
31	0.84 ± 0.02	0.451 ± 0.007	0.837 ± 0.009	0.751 ± 0.007	0.47 ± 0.01	0.86 ± 0.02	0.986 ± 0.007	0.782 ± 0.009	0.946 ± 0.008	0.963 ± 0.003	0.83 ± 0.02	0.990 ± 0.004	W Africa M	E Asia F	0.12
32	0.86 ± 0.02	0.490 ± 0.007	0.871 ± 0.008	0.784 ± 0.007	0.51 ± 0.02	0.85 ± 0.02	0.986 ± 0.007	0.809 ± 0.009	0.962 ± 0.006	0.968 ± 0.003	0.84 ± 0.02	0.988 ± 0.004	W Africa M	E Asia F	0.11
33	0.88 ± 0.02	0.530 ± 0.008	0.881 ± 0.008	0.804 ± 0.007	0.54 ± 0.01	0.89 ± 0.01	0.991 ± 0.005	0.842 ± 0.007	0.969 ± 0.005	0.977 ± 0.002	0.88 ± 0.02	0.991 ± 0.004	W Africa M	E Asia F	0.10
34	0.89 ± 0.02	0.566 ± 0.007	0.907 ± 0.008	0.827 ± 0.006	0.57 ± 0.02	0.91 ± 0.02	0.991 ± 0.005	0.868 ± 0.007	0.979 ± 0.005	0.980 ± 0.002	0.89 ± 0.01	0.989 ± 0.004	E Africa M	E Asia F	0.09

Appendix A.4. Age Verification

This section gives age verification performance for those developers who have elected to implement the verifyAge() function described in section 4.3.5 of the FATE AEV API.

In the figures that follow the legal age threshold is set to 18. We exercised the function at several other age thresholds also but, in the interests of brevity, we do not include results here.

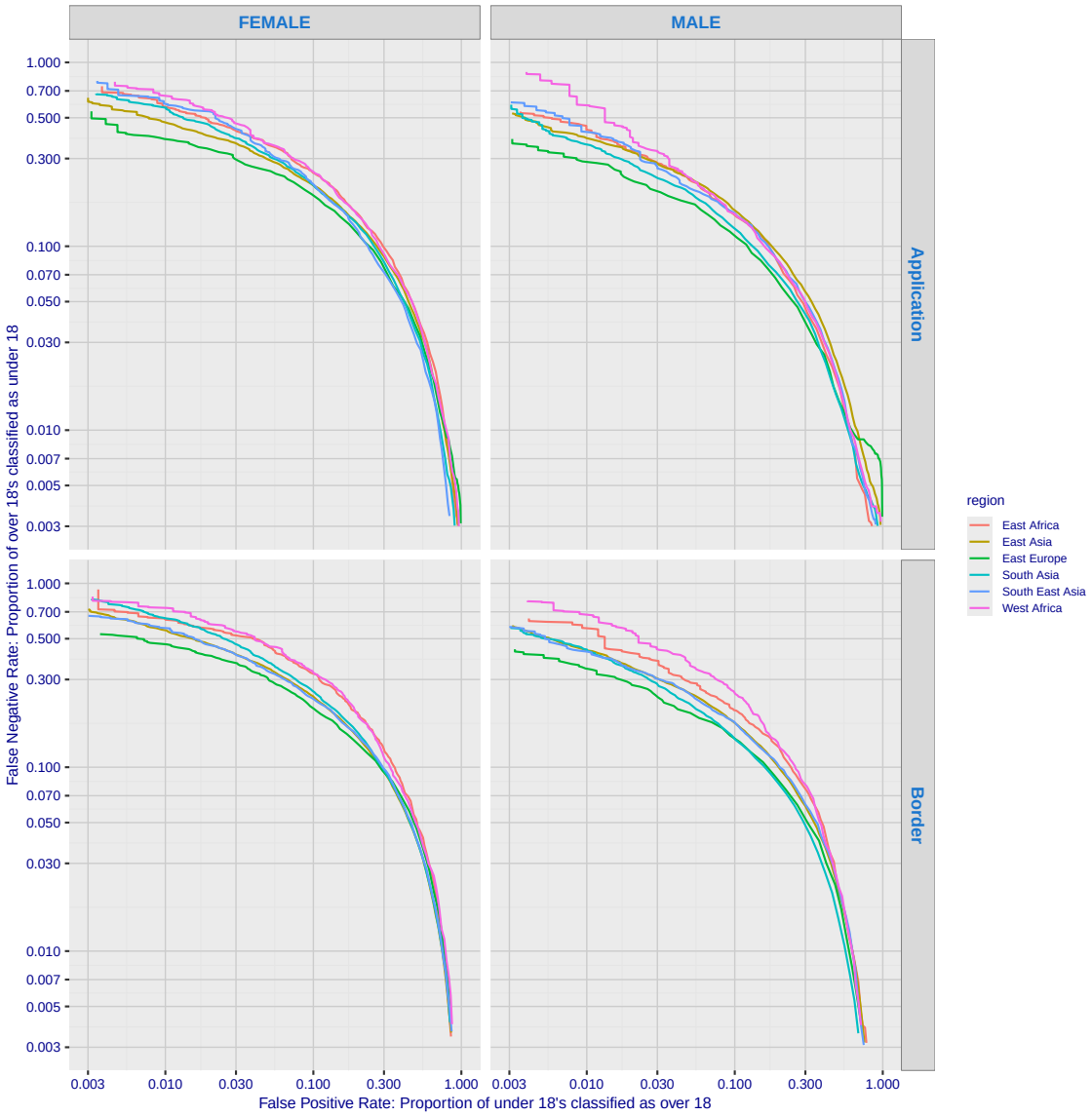

Fig. 107. *Hello*

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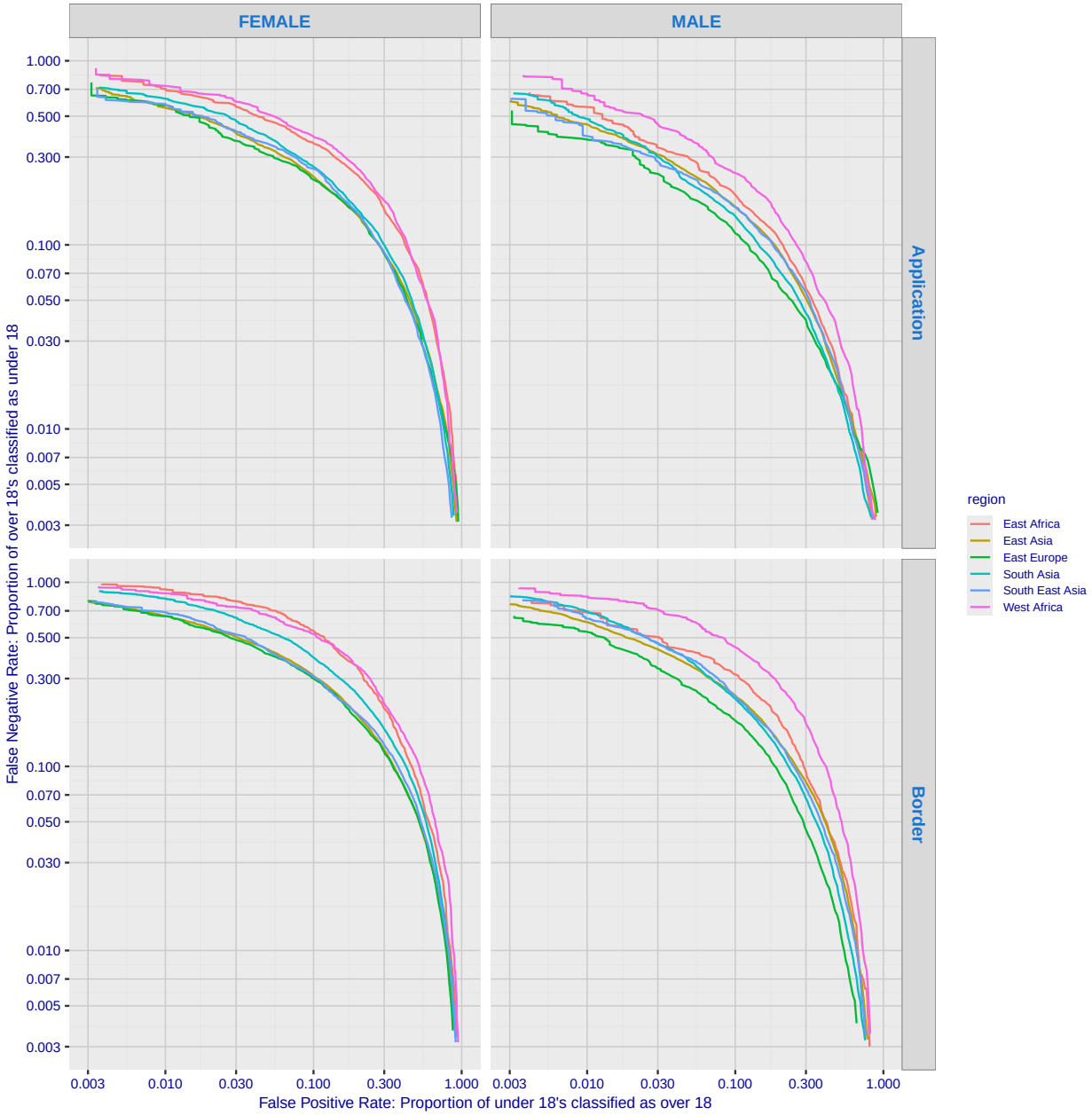

Fig. 108. *For algorithm cognitec-000 the error tradeoff characteristics show tradeoff between false positive and negative rates as the score confidence threshold is swept across it's full range. FPR quantifies how often the underage are classified above 18; FNR quantifies how those over age are not.*

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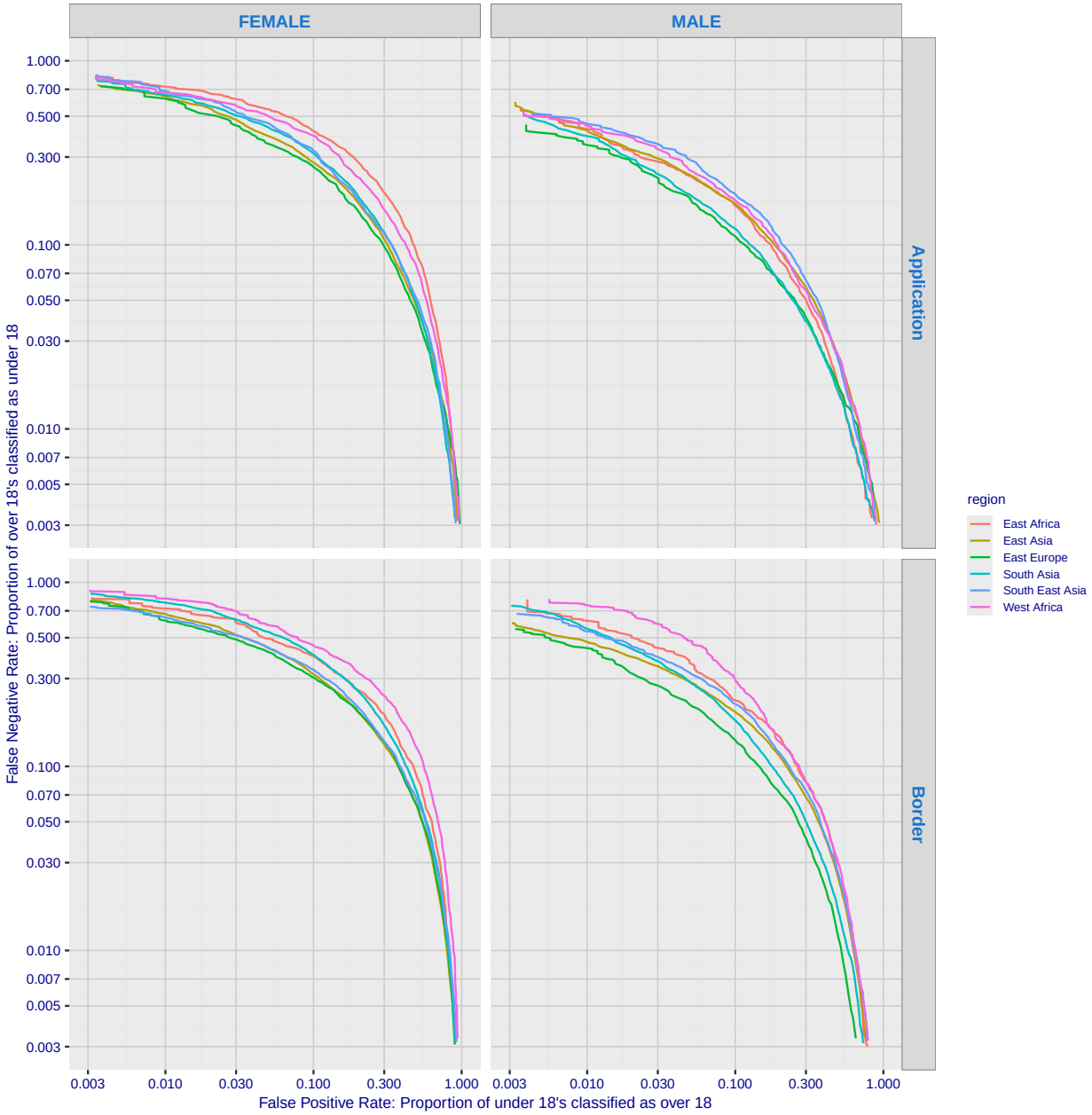

Fig. 109. *For algorithm cvut-003 the error tradeoff characteristics show tradeoff between false positive and negative rates as the score confidence threshold is swept across it's full range. FPR quantifies how often the underage are classified above 18; FNR quantifies how those over age are not.*

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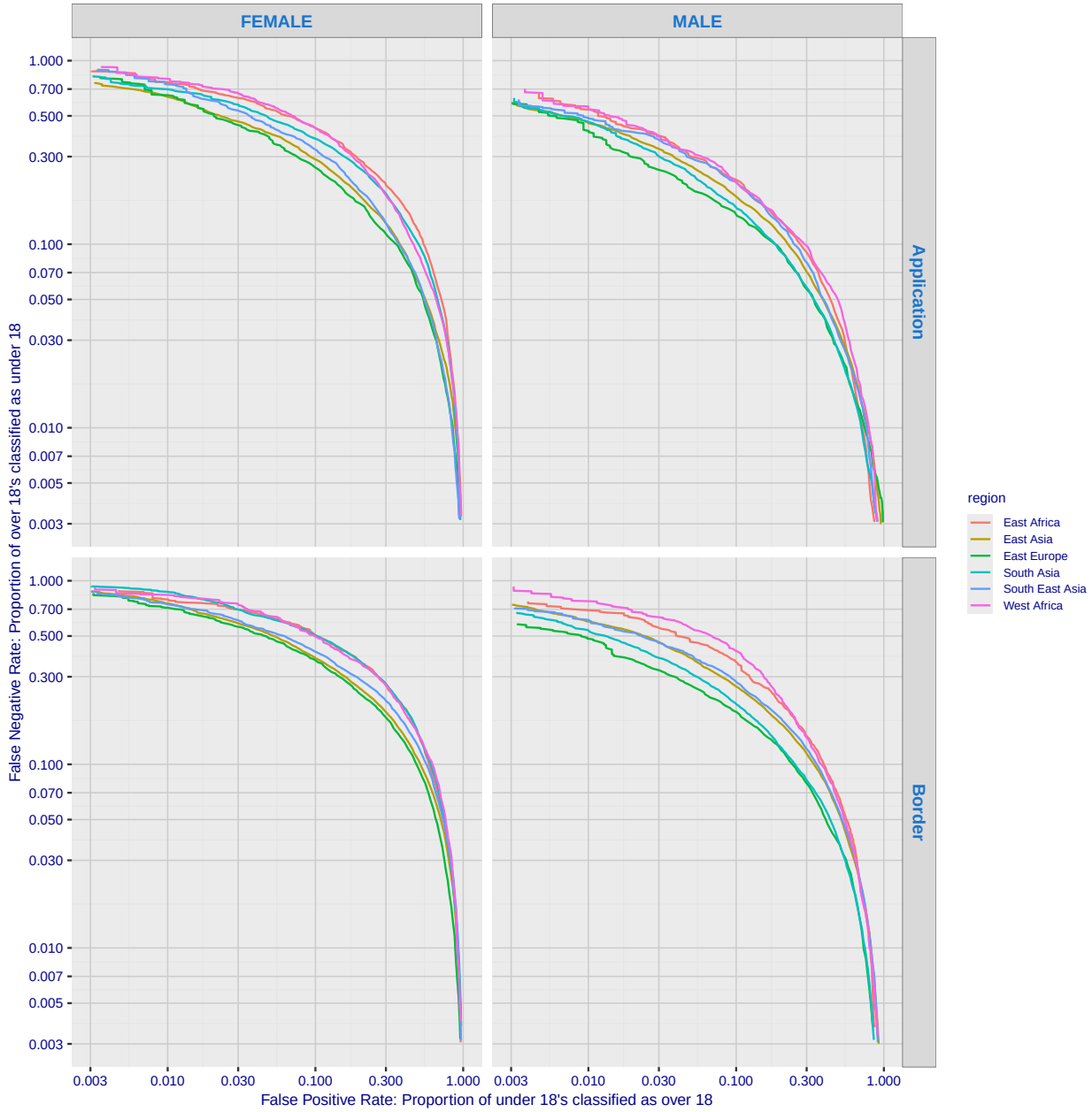

Fig. 110. *For algorithm cyberlink-001 the error tradeoff characteristics show tradeoff between false positive and negative rates as the score confidence threshold is swept across it's full range. FPR quantifies how often the underage are classified above 18; FNR quantifies how those over age are not.*

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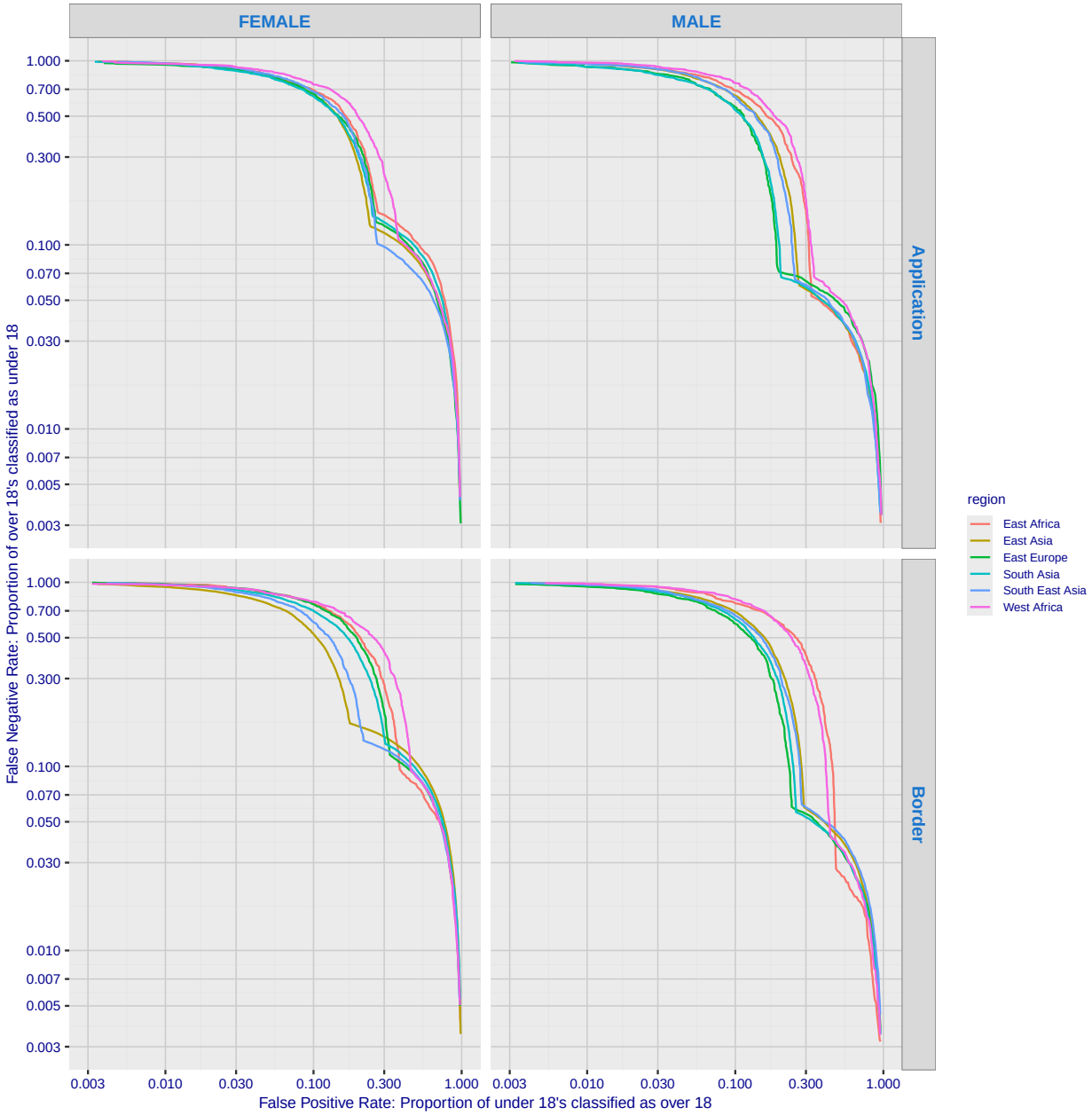

Fig. 111. *For algorithm idemia-002 the error tradeoff characteristics show tradeoff between false positive and negative rates as the score confidence threshold is swept across it's full range. FPR quantifies how often the underage are classified above 18; FNR quantifies how those over age are not.*

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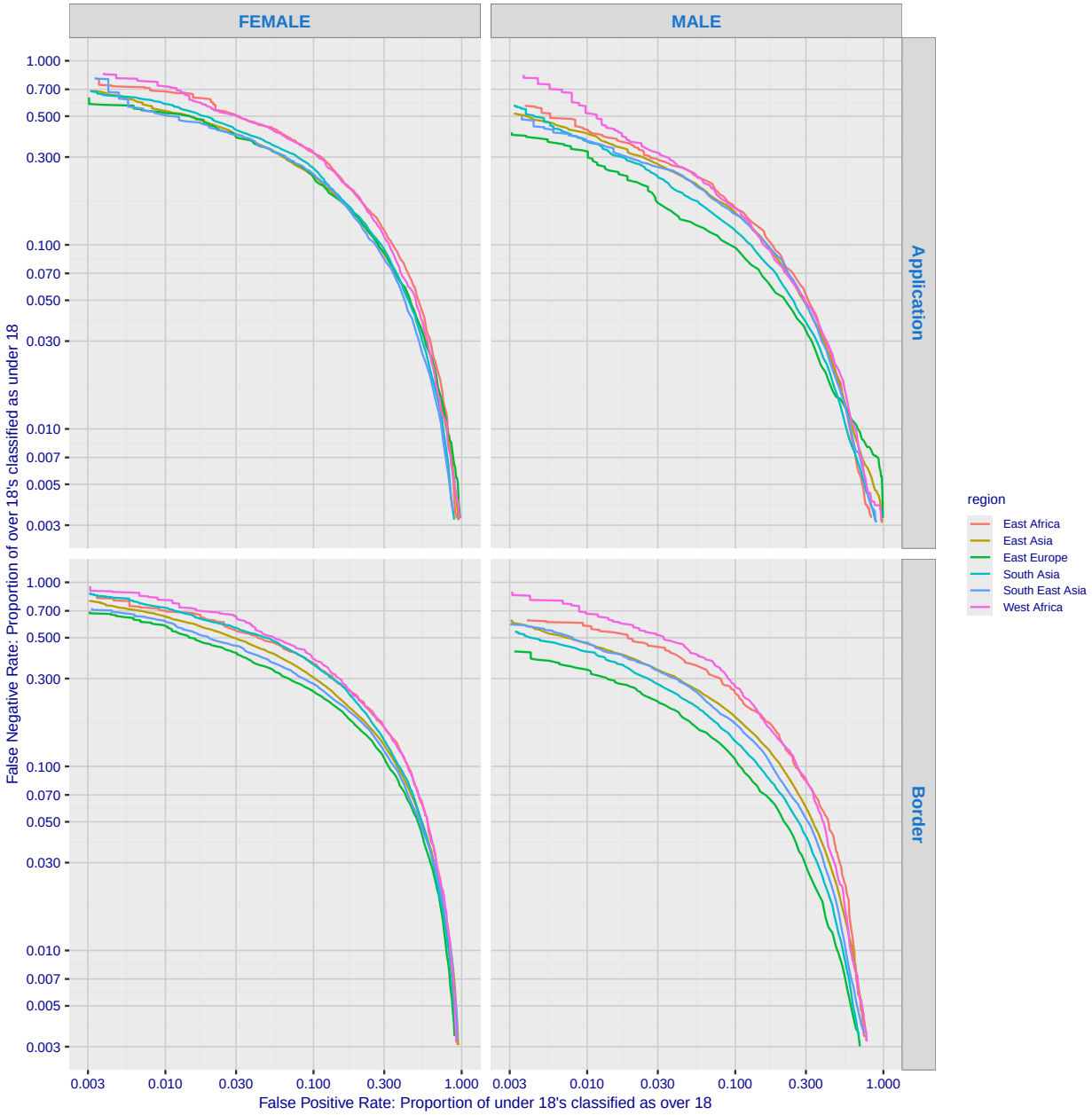

Fig. 112. *For algorithm innovatrics-001 the error tradeoff characteristics show tradeoff between false positive and negative rates as the score confidence threshold is swept across it's full range. FPR quantifies how often the underage are classified above 18; FNR quantifies how those over age are not.*

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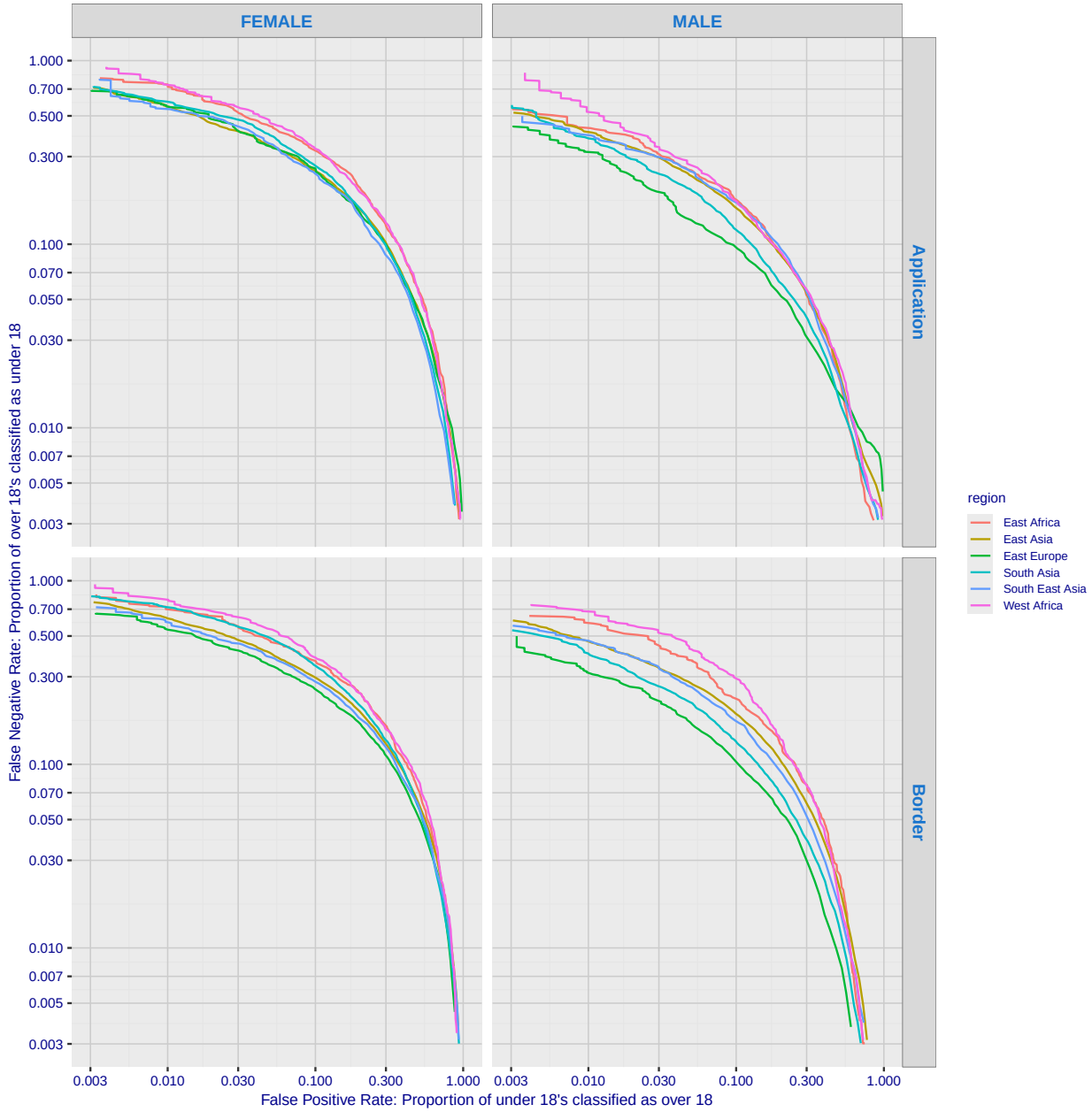

Fig. 113. *For algorithm innovatrics-002 the error tradeoff characteristics show tradeoff between false positive and negative rates as the score confidence threshold is swept across it's full range. FPR quantifies how often the underage are classified above 18; FNR quantifies how those over age are not.*

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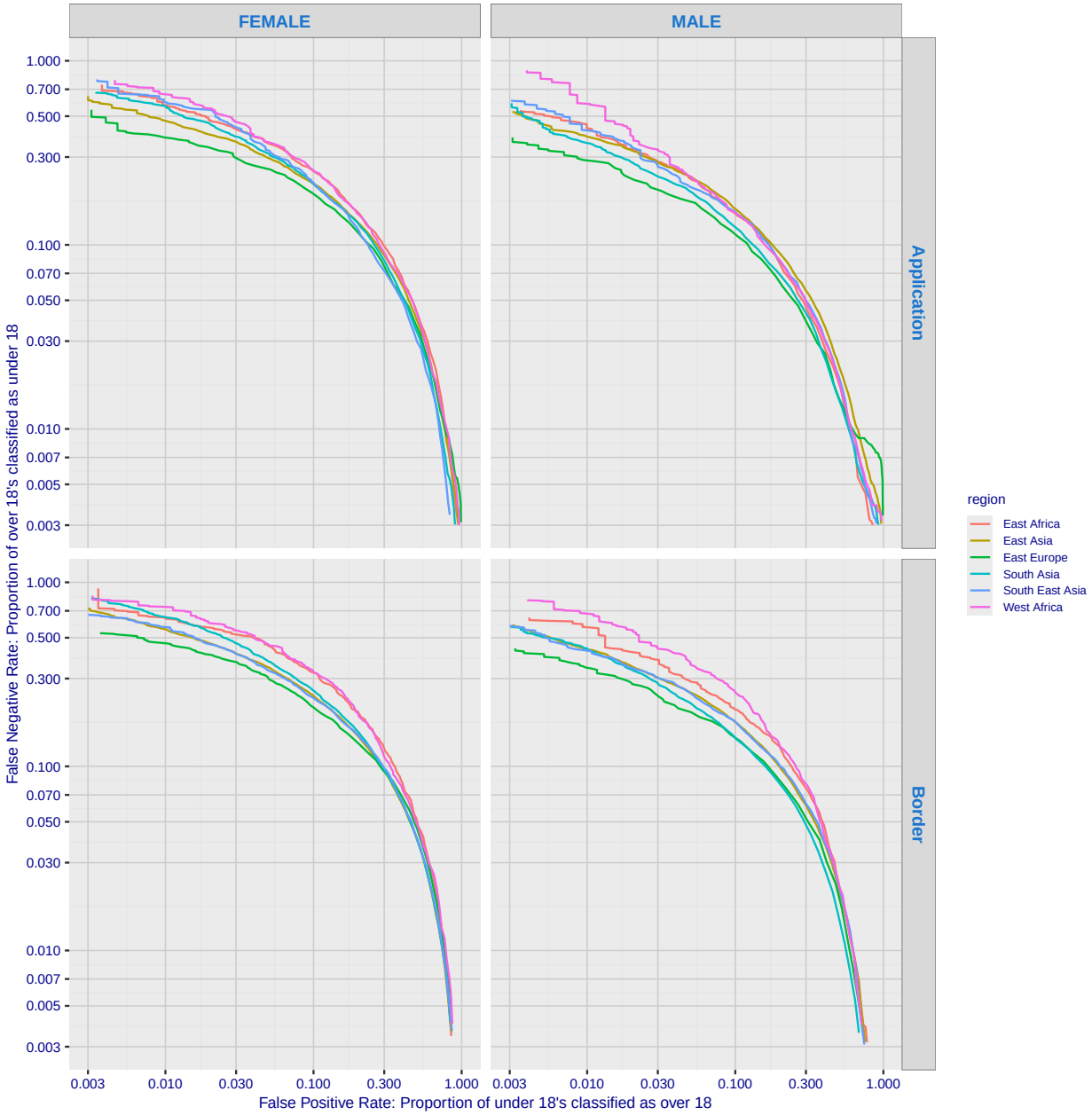

Fig. 114. *For algorithm roc-002 the error tradeoff characteristics show tradeoff between false positive and negative rates as the score confidence threshold is swept across it's full range. FPR quantifies how often the underage are classified above 18; FNR quantifies how those over age are not.*

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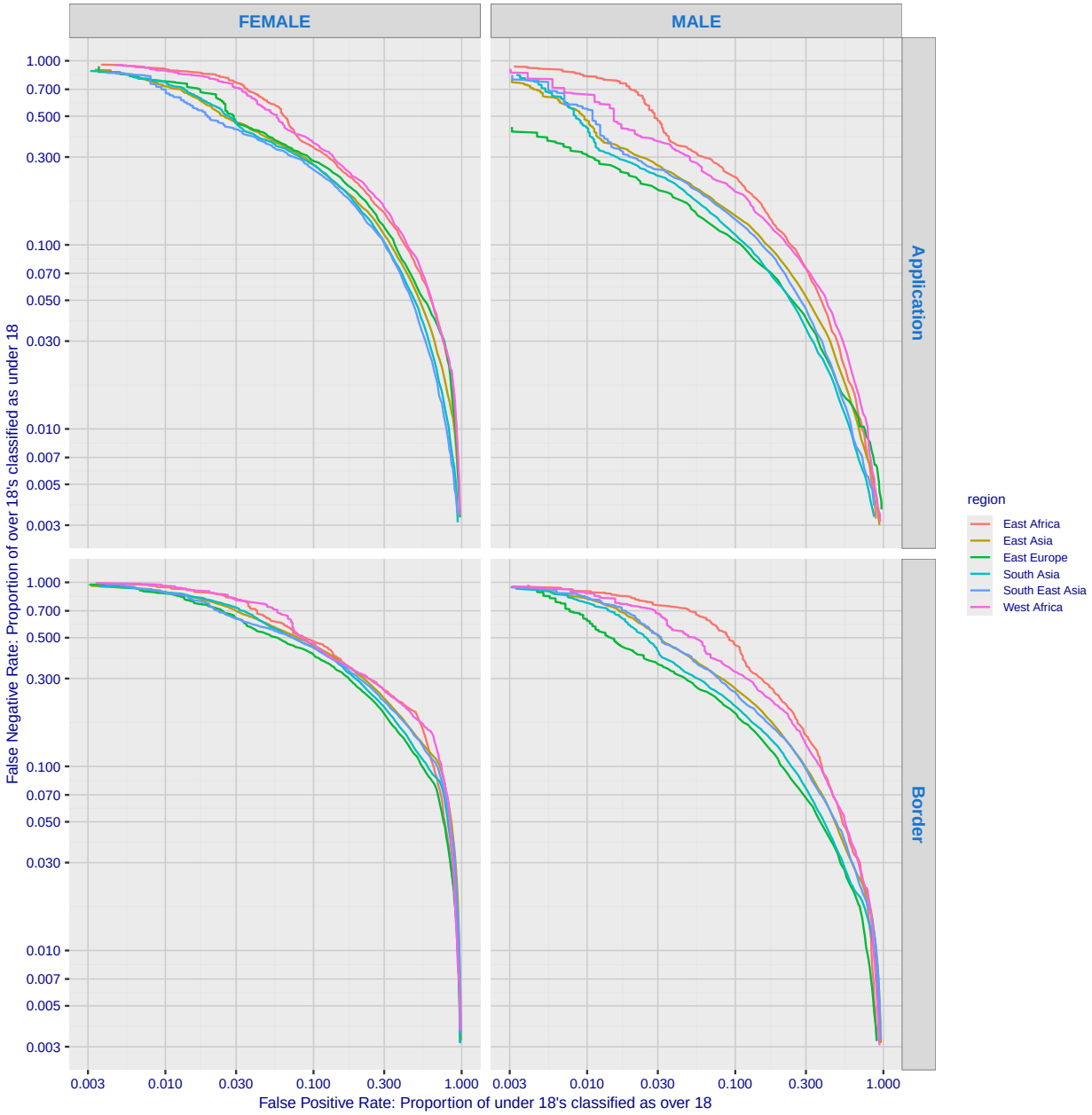

Fig. 115. *For algorithm shufti-000 the error tradeoff characteristics show tradeoff between false positive and negative rates as the score confidence threshold is swept across it's full range. FPR quantifies how often the underage are classified above 18; FNR quantifies how those over age are not.*

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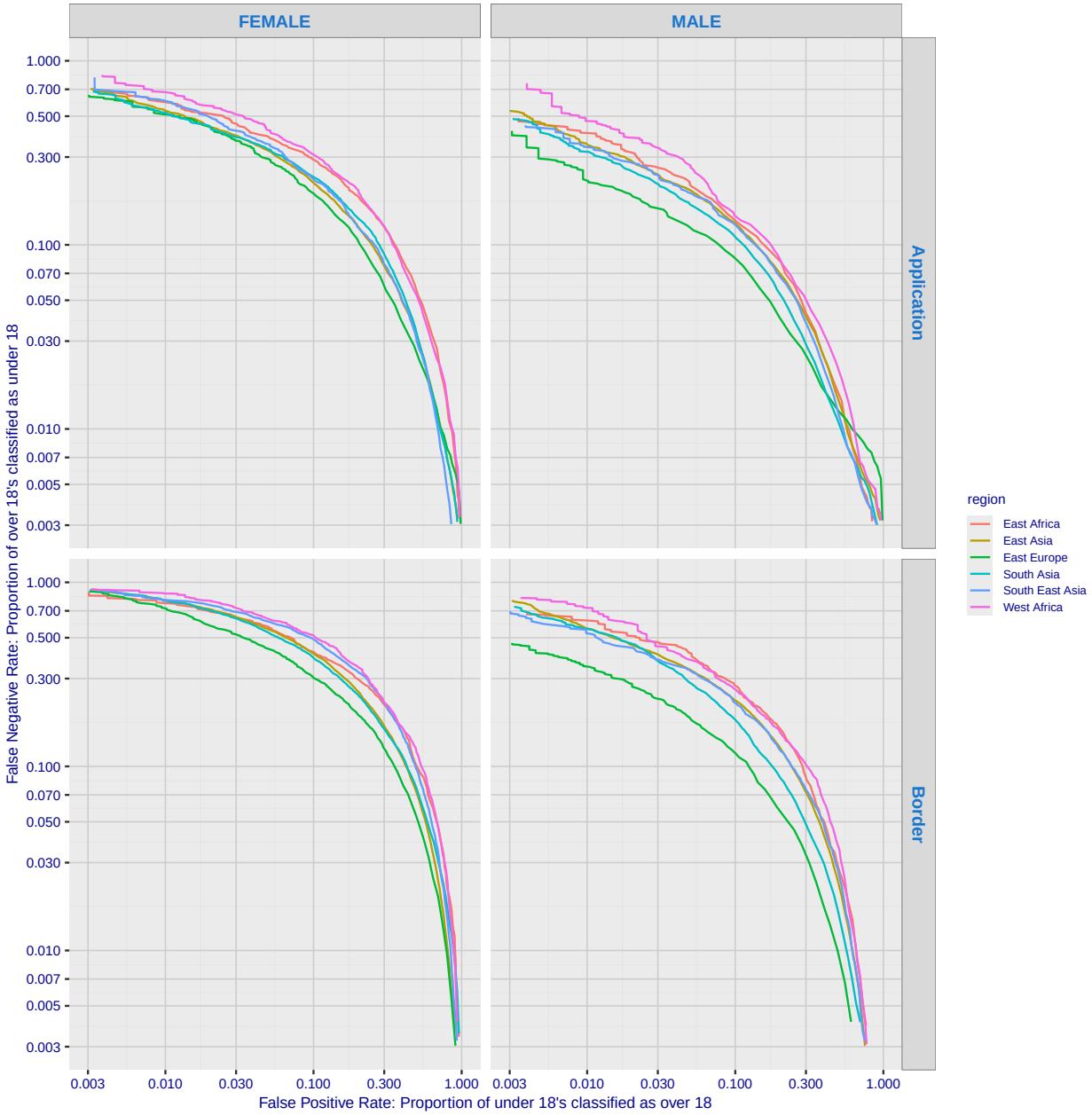

Fig. 116. *For algorithm yoti-003 the error tradeoff characteristics show tradeoff between false positive and negative rates as the score confidence threshold is swept across it's full range. FPR quantifies how often the underage are classified above 18; FNR quantifies how those over age are not.*

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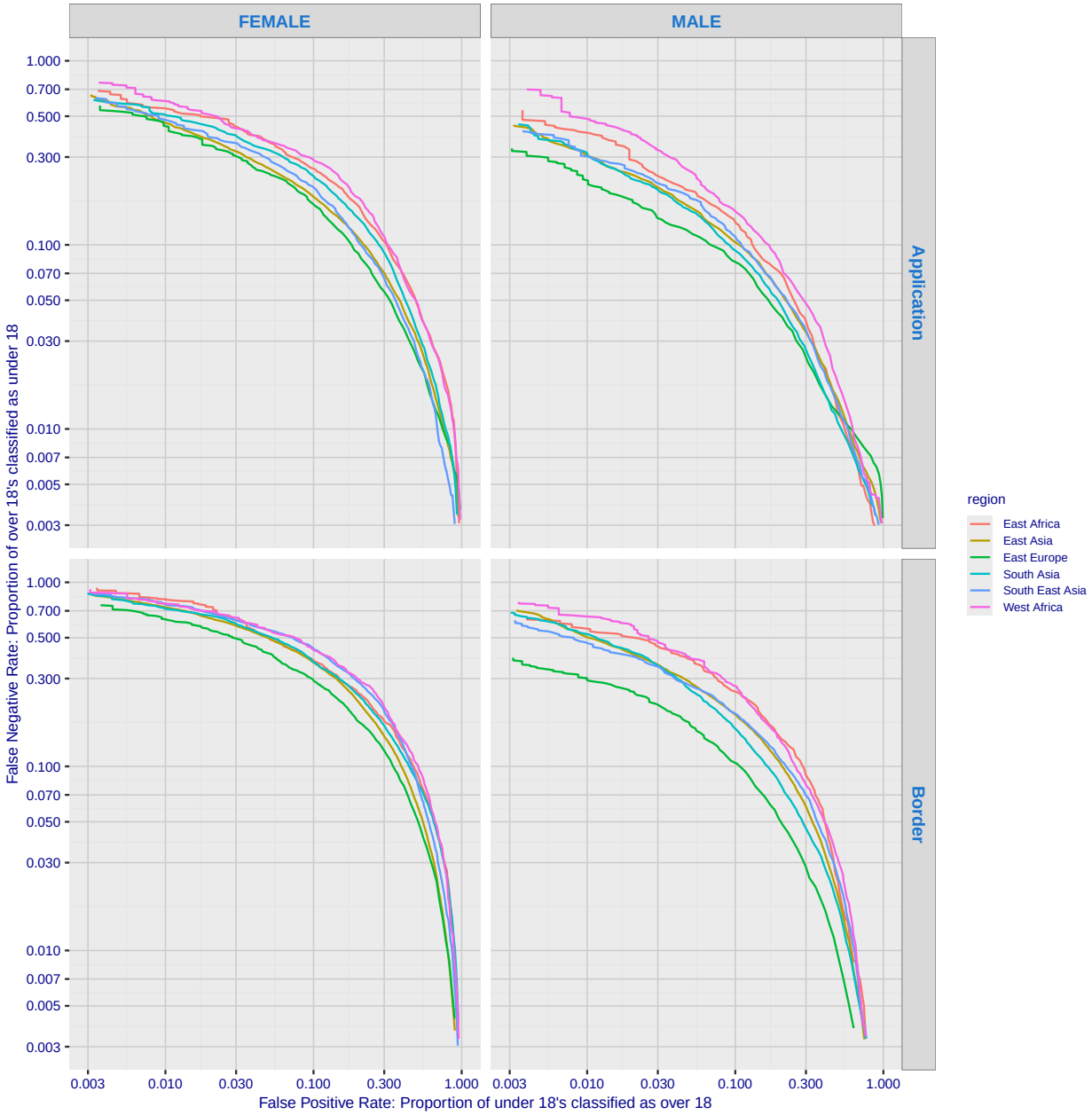

Fig. 117. *For algorithm yoti-004 the error tradeoff characteristics show tradeoff between false positive and negative rates as the score confidence threshold is swept across it's full range. FPR quantifies how often the underage are classified above 18; FNR quantifies how those over age are not.*

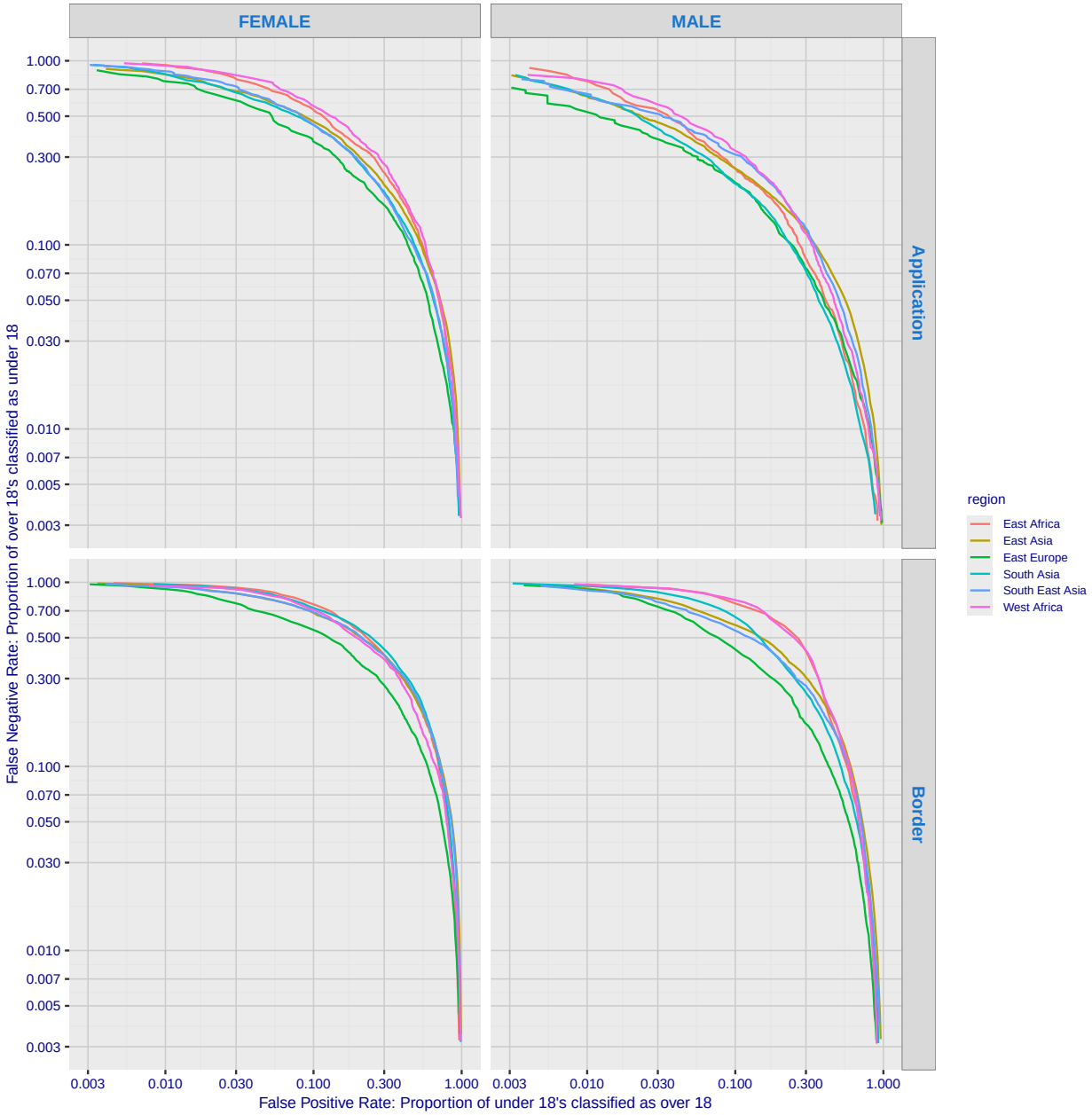

Fig. 118. *For algorithm youverse-000 the error tradeoff characteristics show tradeoff between false positive and negative rates as the score confidence threshold is swept across it's full range. FPR quantifies how often the underage are classified above 18; FNR quantifies how those over age are not.*

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