Curriculum Vitae

Yuki M. Asano

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RESEARCH INTERESTS

computer vision, self-supervised learning, multi-modal learning (video, audio, text), bias in machine learning

EDUCATION

University of Oxford   Oxford, UK
DPhil in Autonomous Intelligent Machines and Systems; Visual Geometry Group (VGG)   *Oct. 2017 – Aug. 2021*
  - Supervisor: Andrea Vedaldi

University of Oxford   Oxford, UK
MSc Mathematical Modelling and Scientific Computing (overall: Pass, thesis: Distinction)   *Oct. 2015 – Sep. 2016*

University of Hagen   Hagen, Germany
BSc Business Administration and Economics (overall: 1.4, GPA = 3.6/4)   *Oct. 2012 – Aug. 2017*

Ludwig Maximilian University of Munich   Munich, Germany
BSc. Physics (overall: 1.2, GPA = 3.8/4)   *Oct. 2011 – Sep. 2014*

PUBLICATIONS

According to Google scholar, my publications have ≈230 citations and my h-index is 6.

Main Conferences/Journals

Emergent inequality and endogenous dynamics in a simple behavioral macroeconomic model
YM. Asano, JJ. Kolb, J. Heitzig, JD. Farmer
accepted to Proceedings of the National Academy of Sciences (PNAS), 2021.

Support-set bottlenecks for video-text representation learning.
M. Patrick*, PY. Huang*, YM. Asano*, F. Metze, A. Hauptmann, JF. Henriques, A. Vedaldi
International Conference on Learning Representations (ICLR) [Spotlight], 2021

Labelling unlabelled videos from scratch with multi-modal self-supervision.
YM. Asano*, M. Patrick*, C. Rupprecht, A. Vedaldi
Neural Information Processing Systems (NeurIPS), 2020

Self-labelling via simultaneous clustering and representation learning
YM. Asano, C. Rupprecht, and A. Vedaldi
International Conference on Learning Representations (ICLR) [Spotlight], 2020.

A critical analysis of self-supervision, or what we can learn from a single image
YM. Asano, C. Rupprecht, and A. Vedaldi
International Conference on Learning Representations (ICLR), 2020.

Rising adoption and retention of meat-free diets in online recipe data
YM. Asano*, G. Biermann*
Nature Sustainability, 2(7):621–627, 2019

Monte Carlo Study of the Precision and Accuracy of Proton CT Relative Stopping Power Maps
G. Dedes and YM. Asano, N. Arbor, D. Dauvergne, J. Letang, E. Testa, S. Rit, K. Parodi
Medical Physics, 3298-3298, 2015.

Workshops

Privacy-preserving Object Detection
P. He, C. Griffin, K. Kacprzyk, A. Joosen, M. Collyer, A. Shtedritski, YM. Asano
ICLR'21 Synthetic Data Generation Workshop

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*Denotes joint first-authorship

SeLaVi: self-labelling videos without any annotations from scratch
YM. Asano*, M. Patrick*, C. Rupprecht, A. Vedaldi
ICLR'21 Embodied Multimodal Learning Workshop

Preprints

Self-supervised object detection from audio-visual correspondence
T. Afouras*, YM. Asano*, F. Fagan, A. Vedaldi, F. Metze
arXiv: 2104.06401, 2021.

Space-Time Crop & Attend: Improving Cross-modal Video Representation Learning
M. Patrick, YM. Asano*, B. Huang, I. Misra, F. Metze, JF. Henriques, A. Vedaldi
arXiv: 2103.10211, 2021.

How True is GPT-2? An Empirical Analysis of Intersectional Occupational Biases
H. Kirk, Y. Jun, H. Iqbal, E. Benussi, F. Volpin, FA. Dreyer, A. Shtedritski, YM. Asano*
arXiv: 2102.04130, 2021.

Multi-modal self-supervision from generalized data transformations
M. Patrick*, YM. Asano*, P. Kuznetsova, R. Fong, JF. Henriques, G. Zweig, and A. Vedaldi
arXiv: 2003.04298, 2020.

TEACHING

Teaching Assistant / Practicals
10/19 – 01/21, Deep Learning and Machine Vision for AIMS cohort 2019, 2020 (Andrew Zisserman, Andrea Vedaldi)
01/20 – 01/20, Multiple View Geometry (Victor Adrian Prisacariu, Andrew Zisserman)
01/20 – 03/20, Design and Analysis of Algorithms (Daniel Kroening)
10/19 – 12/19, Machine Learning at CS Dept. (Phil Blunsom, Ani Calinescu)
01/18 – 03/18, Mathematics and Data Science for Development (Neave O'Cleary)

Certified Instructor workshops for the Nvidia Deep Learning Institute
3x Fundamentals of DL, at the University of Oxford Big-Data Institute and the Wellcome Centre for Human Genetics

Other Tutorials
01/2019 Introduction to (Deep) NLP at the Oxford Institute for New Economic Thinking
07/2018 Introduction to Machine Learning at Santa Fe Institute Complex Systems Summer School
07/2018 Introduction to CNNs and RNNs at Santa Fe Institute Complex Systems Summer School

SUPERVISION

2021 MSc thesis, Adrian Ziegler, TUM (ongoing)
    OxAI interdisciplinary team on investigating bias in computer vision → paper submitted to conference
    OxAI interdisciplinary team on investigating bias in NLP → paper accepted to ICLR'21 workshop
2020 MSc thesis, Carlos Roberto Medina Temme, EPFL → top-grade & paper submitted to conference
    OxAI interdisciplinary team working with Ada Lovelace Institute

TALKS

06/2021 Invited talk at Imagine group at ENPC ParisTech
05/2021 Invited talk at Computer Vision Center, Universitat Autonoma de Barcelona
05/2021 ICLR virtual talks: one spotlight, two workshop posters
03/2021 Invited talk at Zalando Data Science Community Knowledge Exchange
01/2021 Invited talk at Torr Vision Group and FiveAI
10/2020 Invited talk at UnitaryAI
12/2020 NeurIPS virtual talk: one poster
05/2020 ICLR virtual talks: one spotlight, one poster
06/2019 Robotics and Autonomous Systems CDT Conference
11/2018 EMNLP workshop poster talk on Noisy User-generated Text
03/2018 Networks seminar, Mathematical Institute, University of Oxford
01/2018 Balliol College interdisciplinary student seminar, University of Oxford
11/2017 Networks seminar, Mathematical Institute, University of Oxford
10/2017 Complexity Economics meeting, Institute for New Economic Thinking (Young Scholars)
08/2017 Transdisciplinary methods research group, Potsdam Institute for Climate Impact Research

Organization of Workshops & Tutorials

08/2021 *The Future is Unsupervised* (10 days) Introductory tutorial and project work organization for the German National Academic Foundation summer academy in Leysin, co-organized with C. Rupprecht

08/2020 Self-Supervised Learning – What is next? ECCV workshop, organized with C. Rupprecht, A. Joulin, A. Vedaldi

Work Experience

Facebook AI Research: Intern & Contractor; worked with A. Joulin	Jun. 2020 – Feb. 2021
TransferWise: Machine Learning Intern & Contractor	Mar 2017 – Jan. 2019
Rakuten: Cloud Infrastructure Engineering Intern	Aug. 2015 – Sep. 2015
Siemens Technology Accelerator: Working student	Apr. 2015 – Aug. 2015
180 Degrees Consulting Munich e.V.: President & Founder	Dec. 2016 – Jun. 2017
SOS Children's villages International: Project lead	Mar 2017 – Jun. 2017
McKinsey & Company: Fellow Intern	Apr. 2015 – Aug. 2015

Awards and funding

2021 2x Google Academic Research Credits Program (PI, Co-PI), USD2K

2020 AWS Machine Learning Research Award (Co-PI with Christian Rupprecht and Andrea Vedaldi), USD90K
Qualcomm Innovation Fellowship Winner 2020 (PI), USD40K

2019 International Computer Vision Summer School: best team essay on assistive technology

2018 Edgell Sheppee Fund from Engineering Science Dept., Oxford
Balliol College Graduate Project Grant

2017 Full PhD funding by the Engineering and Physical Sciences Research Council, 1 successful EU applicant per year
Open Data Science Conference East Scholarship

2016 Brasenose College Annual Fund

2015 MSc bursary of the University of Oxford Mathematical Institute for best applicants
National Academic Foundation study abroad scholarship for studying at Oxford

2014 Ministry of Science in Japan scholarship, awarded to <1% of international undergraduate students
DAAD, German Academic Exchange Service scholarship for studying at the University of Tokyo
National Academic Foundation scholarship, for outstanding academic achievement, awarded to <0.4% of students

2013 Max Weber scholarship (elite network Bavaria), awarded to <1% of Bavarian students
EliteAkademie scholarship, <2% acceptance rate

Reviewing

2021 TPAMI, CVPR (outstanding reviewer), ICCV

2020 ACCV, NeurIPS workshops: Self-supervised Learning, Theory and Practice; Pregistration of Experiments

Other Academic Events

2019 Alan-Turing Institute Data Study group: Object detection for microscopic cell tracking for DSTL, London
International Computer Vision Summer School (ICVSS), Sicily

2018 Santa Fe Complex Systems Summer School, Santa Fe

2016 Alan-Turing Institute Data Study group: worked on multi-spectral airborne imaging with Syngenta, London

Media/Research community

2021 Blogpost from Facebook AI about applying our method in Instagram Reels

2020 Advisor for projects at OxAI, a society to educate, build and connect an interdisciplinary AI community
Blogpost from Facebook AI about our GDT paper
Interviewed for the CTDS podcast
Community video analyses (1 2) about our ICLR 2020 paper
Community blogposts (1, 2) about our ICLR 2020 spotlight paper

Other

Languages: German (native), Japanese (native), English (fluent, IELTS 8.5/9), French (basic)
Nationality: German & Japanese
Hobbies: Hiking, Tree & Plant identification, (Ultra)-running