



Matteo Tafuro

Artificial Intelligence Student



About Me

Versatile, passionate and excelling AI student with a strong multidisciplinary background. My main area of interest lies at the intersection between Deep Learning and Computer Vision.



Contact

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Languages

Italian ••••• German •••••
English ••••• French •••••



Education

2021 – Present (Current GPA: 8.42)

- MSc. Artificial Intelligence
University of Amsterdam (NL)
2018– 2021 (*Cum Laude*)
- BSc. Advanced Technology
University of Twente (NL)



Achievements

MSc. Artificial Intelligence

- ELLIS Honors Program

MSc. Thesis under the co-supervision of Ivana Išgum (University of Amsterdam) and Alison Noble (University of Oxford).

ML Reproducibility Challenge 2021

- Outstanding Paper Award

BSc. Advanced Technology

- Cum Laude graduation



Certifications

- Microsoft Azure AI Fundamentals
- Advanced English (C1 Level)

Relevant Experience

November 2022 – Ongoing (qurAI research group, Amsterdam UMC, NL)

- Research Intern at qurAI (MSc. Thesis)

Using deep learning image registration on echocardiograms to improve downstream performance of segmentation algorithms.

(Python, Pytorch Lightning, Image Registration, Medical Imaging, Ultrasound Imaging)

April 2022 – Ongoing (University of Amsterdam, NL)

- Research Intern

Employing AI algorithms to explore whether the diversification of gender in the social world predates, concurs, or postdates portrayals of gender in visual artworks.

(Dataset generation, Data scraping, BeautifulSoup, Selenium, Pandas, Numpy)

30 November 2022 (New Orleans, Louisiana, USA)

- Roundtable moderator for Toloka at NeurIPS 2022.

Moderated one of the roundtable discussions regarding bias in ML, data annotator empowerment and data excellence.

(Flexibility, Pressure management, Time management, Content Curation, Problem solving)

June 2022 – November 2022 (University of Amsterdam, NL)

- Teaching Assistant of the Computer Vision 1 Course.

Prepared the contents of the course, helped with seminars and labs, supervised students and graded assignments/exams.

(OpenCV, Lesson planning, Communication skills, Leadership, Multitasking, Resourcefulness)

Publications

Matteo Tafuro, Gino Jansen, Ivana Išgum. (2023)

- Temporally consistent segmentations from sparsely labeled echocardiograms using IR for pseudo-label generation

Submitted to MICCAI 2023

(Pytorch, Image Segmentation, Image Registration, Unsupervised Learning, Temporal consistency)

Matteo Tafuro, Andrea Lombardo, Tin Hadži Veljković, Lasse Becker-Czarnetzki. (2022)

- [Re] Exacerbating Algorithmic Bias through Fairness Attacks

Rescience C, 8(2), #22 DOI: 10.5281/zenodo.6574669

- Presented at NeurIPS 2022 in the inaugural Journal Showcase Track
- Awarded Outstanding Paper Award in ML Reproducibility Challenge 2021

(Machine Learning, Pytorch Lightning, Tensorflow, Interpretability, Fairness, Adversarial attacks)

Sameer Ambekar, Matteo Tafuro, Ankit, Diego van der Mast, Mark Alence. (2022)

- SKDCGN: Source-free Knowledge Distillation of Counterfactual Generative Networks using cGANs

Accepted at ECCV 2022 Workshop VIPriors. DOI: 10.48550/arXiv.2208.04226

(Deep Learning, Generative Models (GANs), Independent Research, Team working, GIT)

Noteworthy academic projects

- CAMUS challenge: echocardiographic image segmentation and volume estimation.
- CX-Learn: a multimedia analytics solution to support the diagnosis of chest diseases from X-ray images.
- Developing an agent-based simulation of COVID-19 spread.
- NMT for low-resource languages: fighting catastrophic forgetting in hierarchical transfer learning.



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github.com/matteo-tafuro



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