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 Machine Learning and Computer Vision, with specific attention to (bio)medical applications.

Contact

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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)

Languages

Italian ●●●●●   German ●●○○○

English ●●●●●   French ●●○○○

Other Experience

2016 - Present
- GRAPHIC DESIGNER AND ANIMATOR
  Freelancing online

July 2017
- *RETAIL, MARKETING & ADVERTISING* EVENTS ASSISTANT
  Meridian School of English, Portsmouth (UK)

2018 – 2020
- STUDENT–FOR–A–DAY MENTOR
  University of Twente, Enschede (NL)

Certifications

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

Relevant Experience

WORK EXPERIENCE

June 2022 - November 2022 (University of Amsterdam)
- **Teaching Assistant** of the Computer Vision 1 Course.
  Preparing the contents of the course, helping with seminars and labs, supervising students and grading assignments/exams.

  `Lesson planning` `Communication skills` `Leadership` `Multitasking` `Resourcefulness`

April 2022 - Ongoing (University of Amsterdam)
- **Research Intern**
  Using 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` `Python` `Pandas` `Numpy`

NOTEWORTHY ACADEMIC PROJECTS

- **Supervision-by-registration: temporally consistent heart chamber contour detection** *(Current MSc. Thesis @ research group qurAI)*:
  - Using Image Registration as a supervision signal to extrapolate ground truth contours that remain consistent over time.

  `Python` `Pytorch Lightning` `Image Registration` `Medical Imaging` `Ultrasound Imaging`

- **Assessing the contractile properties of Engineered Heart Tissues using optical flow algorithms** *(BSc. Thesis)*:
  - Presented a novel workflow for the extraction, characterization and assessment of the contractile properties of Engineered Heart Tissues that relies on motion estimation and optical flow.

  `Python` `Pytorch` `Computer Vision` `OpenCV` `Optical Flow` `Medicine and Biology`

Publications

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

  `Machine Learning` `Pytorch Lightning` `Tensorflow` `Interpretability` `Fairness`

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`

Awards

- Invited to present my paper in the inaugural **NeurIPS 2022** Journal Showcase Track (New Orleans, USA, 28 Nov 2022 – 9 Dec 2022)
- Awarded **Outstanding Paper Award** in ML Reproducibility Challenge 2021

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