

Michele Tufano

AI/COMPUTER VISION ENGINEER

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EXPERIENCE

May 2023 - Present

Research affiliate *Massachusetts Institute of Technology*

- Led the research project to perform data-driven analysis in large dataset, using web scraping, SQL, NLP, BERT, LLM, RAG, and resulting in publication on Nature Foods.

January 2021 – January 2025

Ph.D. Candidate in AI and Computer Vision *Wageningen University and Research*

- Trained and optimized deep learning models (CNN, LSTM, Transformers) in PyTorch for video classification to predict human eating behavior and count eating and drinking events with 96% accuracy.
- Deployed computer vision models with PyTorch and Transformers on AWS using ECR, Docker, and S3 to build a scalable API for video analysis.
- Designed and implemented algorithms for video analysis to count bites with 80% accuracy, for object and event recognition using OpenCV, TensorFlow, Keras, YOLO, and Mediapipe key points to track movement in Python, resulting in a publication on Frontiers in Nutrition
- Developed software for video data collection using object-oriented programming in Python and JavaScript and performed dataset annotation using CVAT.
- Supervised MSc student to train CNN and GANs model for emotion detection in children.
- Lecturer for Data Science and Machine Learning course for MSc students in Nutrition and Health

September 2019 – September 2020

Research affiliate and Data Scientist *University of Illinois at Chicago*

- Performed statistical analysis of clinical large dataset in schizophrenia patients using R.

January 2018 – July 2018

Research affiliate *A*Star, Genome Institute of Singapore*

- Performed bioinformatics analysis on SNPs genotyping and GWAS in B-cell lymphoma using bash and Linux

EDUCATION

2021-2025

Ph.D. Degree AI for innovations in eating behavior, Wageningen University and Research

2016-2018

Honors MSc Degree Top Master Biomolecular Sciences, University of Groningen

2013-2016

BSc Degree Biotechnology, Sapienza University of Rome

AWARDS

2025

Road to Innovation Grant Wageningen University and Research

2023

MIT Visiting Ph.D. Student Senseable City Lab

2023

VLAG Ph.D. Fellowship Wageningen University and Research

2021

Pride and Prejudice Science Slam Award 4TU, Dutch Design Week

2018

Singapore International Pre-Graduate Award A*Star, Genome Institute of Singapore

2018

Master's Honours Programme 'Leadership: making the difference' University of Groningen

SKILLS

Project management, Communication, Leadership, Problem-solving, HTML, CSS, React.js, Typescript, Full-stack developer, AWS