TOMMASO FERRARIO

tommasoferrario81@gmail.com — (+39) 348 258 1596 — LinkedIn — TommasoFerrario18 — tommasoferrario.netlify.app

Profile

AI-driven MSc Computer Scientist with a proven track record in driving deep learning, advancing reinforcement learning, and developing simulation initiatives. I build scalable ML pipelines and translate complex models into practical, real-world solutions, delivering impactful results across international research projects and within agile development teams.

Experience

Junior Machine Learning Engineer, Intesa Sanpaolo Oct 2025 – Now

Designed and deployed ML pipelines integrating OCR and LLM-based models for automated document parsing and anomaly detection across financial workflows.

Research Fellow, University of Milano-Bicocca Sep 2024 – Dec 2024

Developed a **reinforcement learning** model for dynamic user profiling in tourism applications, integrated with a recommendation engine (Python, Docker). Co-authored peer-reviewed paper (AINA 2025, Springer) presenting model architecture and experimental results.

Selected Projects

Fine-Grained Food Classification

Built a 251-class food image classifier using CNN and KNN, with GAN-based restoration for degraded inputs and an object proposals network. Achieved consistent accuracy across varied input quality, showcasing a resilient multi-modal approach.

FloodNet: Semantic Segmentation for Disaster Response

Developed flood detection models (U-Net, DeepLab) using drone imagery captured after Hurricane Harvey. Improved accuracy through data augmentation and fine-tuning, supporting disaster response by reliably mapping affected areas.

Self-Driving Car Simulation

Built a Unity-based self-driving car simulator using reinforcement and curriculum learning. Engineered reward structures that enabled agents to generalize to unseen tracks, outperforming standard RL models.

Education

University of Milano-Bicocca Sep 2023 – Sep 2025

MSc in Computer Science - Final grade: 110/110 cum laude

Thesis: *Doob-Meyer Decomposition and AI for Dynamic Scenario Generation*

Thesis research conducted at **Stevens Institute of Technology**, Hoboken, New Jersey, USA

University of Milano-Bicocca Sep 2020 – Jul 2023

BSc in Computer Science — Final grade: 107/110

Thesis: *Automatic traffic analysis: machine learning approaches for the analysis of traffic flows on road networks*

Relevant Technical Skills

AI/ML Skills
Neural Networks, Deep Learning, Computer Vision, TensorFlow, PyTorch, NLP

Programming
Python, Java, Dart, Julia, MATLAB

Database
SQL, MySQL, MongoDB, Postgress

Tools
Git, Docker, CI/CD, Flutter, Azure, OpenShift

Publications

Ferrario, T., Fersini, E., Messina, E., Sormani, G. (2025). "*Dynamic User Profiling for Personalized Tourism Recommendations Using Reinforcement Learning Models*." Advanced Information Networking and Applications (AINA 2025), Springer. DOI: 10.1007/978-3-031-87781-0_21

Languages

Italian (native), English

Personal Interest

Mountain Hiking: Passionate about exploring mountain trails and challenging hikes. I find that the discipline, problem-solving, and endurance required in hiking translate well to tackling complex technical challenges in my work.

Formula 1: I'm a dedicated F1 enthusiast, fascinated by the use of aerospace-grade innovations in motorsport. I enjoy exploring complex topics such as telemetry, simulations, and data-driven race strategies.