



Massimiliano Falzari

Email: massimiliano@falzari.dev

Mobile: +393476773189

LinkedIn:

[linkedin.com/in/massimiliano-falzari](https://www.linkedin.com/in/massimiliano-falzari)

GitHub: github.com/vimmoos

Website: <https://vimmoos.github.io>

EXPERIENCE

AI & Data Scientist

Wide group Srl

April 2025 - Current

Remote, Milan, Italy

- Develop end-to-end AI-based solutions

AI Engineer

Bluegreen

March 2025 - Current

Remote, Trieste, Italy

- Architected and developed a Retrieval-Augmented Generation (RAG) system.
- Integrated Langchain and LangGraph for advanced AI workflows.
- Built interactive UIs using Streamlit.
- Deployed scalable AI applications with FastAPI.

Data & Artificial Intelligence Researcher

Engineering Ingegneria Informatica Spa

December 2024 - April 2025

Hybrid, Rome, Italy

- Research & Innovation projects at both national and international levels
- Implement innovative methodologies and tools to optimize projects outcomes
- Design, develop and finetune prototypes in the context of LLMs
- Focus on MLOps and LLMOps.

Teaching Assistant

University of groningen

April 2021 - August 2024

Groningen, Netherlands

- Coordination and Organization of course
- Teach seminar group
- Grade assignments and exams
- Supervised courses:
 - Languages and Machine (Computer Science Bachelor)
 - Cognitive Robotics (Artificial Intelligence Master)
 - Deep Learning (Artificial Intelligence Master)
 - Reinforcement Learning (Artificial Intelligence Bachelor)
 - Deep Reinforcement Learning (Artificial Intelligence Master)

AI Consultant and Backend Developer

Basis

April 2021 - September 2021

Remote

- Backend development (in Clojure)
- Propose potential Machine Learning approaches
- Coordinate with frontend developers

PUBLICATION

Fisher-Guided Selective Forgetting:

Mitigating The Primacy Bias in Deep Reinforcement Learning 2025

- Deep Reinforcement Learning, Pytorch, Tianshou, Wandb, Gymnasium
- Developing a new algorithm to mitigate the Primacy Bias
- Adapting forgetting mechanism for Deep Reinforcement Learning

The Primacy Bias Through the Lens of the Fisher Information Matrix 2024

- Published and Presented at BNAIC/BeNeLearn 2024
- Deep Reinforcement Learning, Pytorch, Tianshou, Wandb, Gymnasium
- Analysing and explaining the Primacy Bias phenomena using the Fisher Information Matrix
- Implementing forgetting mechanism for Neural Networks
- Connecting Primacy bias to Transfer Learning

Upside-Down Reinforcement Learning for More Interpretable Optimal Control 2024

- Published and Presented at ICAART 2025 and BNAIC/BeNeLearn 2024
- Reinforcement Learning, Supervised Learning, Pytorch, Scikit-Learn
- Implementing innovative Upside-Down RL framework using tree-based ML methods
- Focus on interpretable approaches to reinforcement learning

PROJECTS

Fine-Tuning of LLMs for Internal Enterprise projects | *Engineering Ingegneria Informatica Spa* 2024/25

- Huggingface, FSDP, TRL, MLflow, SLURM
- Finetuning of LLM (70+ Billions Parameters) using different low-rank adapters (LoRA, DoRA, X-LoRA)
- Multi-GPU training using FSDP on CINECA Leonardo HPC
- Focus on LLM Ops and production-ready systems

Investigating LoRA for Cross-Lingual Adaptation in Word Inflection *University of Groningen, Research* 2024

- Fine-tuned ByT5 model for morphological inflection, achieving state-of-the-art results.
- Demonstrated effectiveness of Low Rank Adapters (LoRA).
- Showed benefits of related language pre-training and multi-lingual LoRA models.

Boundary Equilibrium GAN *University of Groningen, Research* 2023

- BEGAN addresses the mode collapse issue in GANs by promoting diverse sample generation
- Replication of the original paper.
- Implementation utilizes PyTorch, TorchVision, and Numpy.

Sport statistics website | *G.S.V.V. Kroton* 2021

- MariaDB, Docker, R, R-Shiny
- Show game statistics for all players
- Analyze and display trends and points for potential improvement
- Organize data for faster retrieval

Echo State Network for Percussion-based music generation *University of Groningen, Research* 2020

- Project combines Particle Swarm Optimization and ESNs to enhance music generation tasks.
- Implementation utilizes Python, NumPy, SciPy, and Matplotlib.

Database and management platform | *STETHOS Italy*

2019

- MongoDB, Javascript, React,
- Restructuring and Migration of Excel sheet to Database
- Implemented a User-based platform for interact with the data

EDUCATION

Master of Science, Groningen | *Artificial Intelligence and Computational Intelligence* 2024

- Grade: 8.8 Cum Laude
- Thesis Grade: 10
- University of Groningen
- Related Coursework:
 - Deep Learning, Deep reinforcement learning
 - Natural Language Modelling
 - Science Communication
 - Machine Learning, Neural Networks, Robotics
 - Data Science

Bachelor of Science, Groningen | *Artificial Intelligence*

2021

- Grade: 7.5
- University of Groningen
- Related Coursework:
 - Coding (C, C++, Python, Java, Haskell) (OOP, Functional and Imperative)
 - Math (Calculus, Multivariable Calculus, Linear Algebra, Probability theory)
 - Old Fashion AI (Symbolic AI, Knowledge systems, statistical modeling)
 - Cognitive Psychology and related studies
 - Machine Learning and Reinforcement Learning

SKILLS

Programming Languages Python, C, C++, Java, R, Common Lisp, Clojure, Haskell, Go, Bash

Tools & Library & Frameworks GIT, Emacs, GNU-Linux, Docker, SLURM, Pre-commit, Poetry | MongoDB, SQL, Redis | HuggingFace, FSDP, Gymnasium, Stable-Baseline3, Pytorch, Keras, Scikit learn, Numpy, Pandas, Scipy, Matplotlib | ROS, OpenCV, PyBullet | Wandb, MLflow, DVC

Language English and Italian bilingual proficiency

Interests Volleyball, Waterpolo, Chess

BIOGRAPHY

Massimiliano is a results-oriented machine learning (ML) developer and data scientist with a passion for innovation and a diverse skill set. His expertise spans various ML fields, including Natural Language Processing, Computer Vision, Robotics, and Knowledge Systems. He thrives on tackling complex challenges and developing effective ML models. His experience includes roles as a Backend Developer and AI consultant for startups, demonstrating his ability to translate ML concepts into real-world solutions. He is a skilled communicator and collaborator, adept at conveying technical concepts and working with diverse teams.