Davide Paglieri

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Experience

Student Researcher June 2025 – Nov 2025
Google DeepMind *United Kingdom*
- Researching LLM agent-based modeling of synthetic personas with diverse behaviors, opinions and preferences.
- Contributed to the AlphaEvolve codebase with features to improve generation diversity & large-scale evaluations.

AI Research Engineer Oct 2021 – Jan 2023
Bending Spoons *Italy*
- Conceptualized and led the development of Dawn AI, a mobile app using diffusion models to create AI avatars. The app reached #1 in the US App Store downloads for 3 consecutive days (∼2M daily downloads at peak) before being merged into Remini AI.
- Researched, prototyped and deployed deep learning models on several company apps (Remini, Splice, Dawn AI), focusing on diffusion generative models, image enhancement and artificial slow motion.

Education

PhD Candidate Jan 2023 - present
University College London *United Kingdom*
- Researching LLM/VLM agents, Reinforcement Learning, Open-Endedness, and Multi-Agent Systems, advised by Tim Rocktäschel and Jack Parker-Holder
- PhD candidate funded by the Computer Science department

MSc Computing AI & ML Oct 2020 - Oct 2021
Imperial College London *United Kingdom*
- Graduated with Distinction
- Relevant modules include Mathematics for Machine Learning, Introduction to ML, Reinforcement Learning, Deep Learning, Computer Vision, ML for Imaging, NLP, Robotics
- Research thesis on Open-Ended RL for Dynamic Robot Locomotion (GitHub).

BSc Computing Engineering Sep 2017 - July 2020
Politecnico di Torino *Italy*
- Graduated with 110/110 cum laude
- Relevant modules include Computer Science, Advanced Algorithms and Programming, OOP, Databases, Operating Systems, Calculus 1-2, Linear Algebra and Geometry, Mathematical Methods for Engineers

Papers

- Learning When to Plan: Efficiently Allocating Test-Time Compute for LLM Agents (preprint)
- BALROG: Benchmarking Agentic LLM and VLM Reasoning on Games (ICLR 2025) (balrogai.com)
- Outliers' effects on quantization of modern LLMs (ES-FoMo-II @ICML 2024)
- Adversarial examples to Multi-Agent RL (Oral AAMAS 2024)

Teaching

- Open-Endedness and General Intelligence - (TA, UCL) - (Spring 2025)
- Applied Deep Learning - (TA, UCL) - (Spring 2024)
- Deep Representations and Learning - (TA, UCL) - (Fall 2023, 2024)
- Reinforcement Learning - (TA, UCL) - (Spring 2023)
- Algorithms and Programming - (TA, Politecnico di Torino) - (Fall 2019)

Technical Skills

Languages: Python (5 years), PyTorch (5 years), JAX, C/C++ (1.5 years), Java, Swift, Lua, SQL, ARM Assembly

Awards

Young Talent Project (2018 – 2020): Scholarship awarded to the 200 best students of the academic year.