CARLO ROMEO

Ph.D. Student

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EDUCATION

05/2025 - 11/2025

PhD Visiting, Universitat Autònoma de Barcelona (UAB), Barcelona, Spain
Computer Vision Center (CVC)
Topics of research: Reinforcement Learning, Token Pruning, Transformer
Advisors: Dimosthenis Karatzas, Andrew D. Bagdanov

2022 - ongoing

PhD in Artificial Intelligence, University of Pisa / University of Florence
Media Integration and Communication Center (MICC), Pisa/Florence, Italy
Topics of research: Reinforcement Learning, Offline Reinforcement Learning, Computational Efficiency
Advisors: Andrew D. Bagdanov

2018 - 2020

M.Sc in ICT Engineering, Mediterranean University, Reggio Calabria,
Grade: 110/110 cum laude
Thesis: Evaluation of Natural Language Processing basic techniques from a computational requirements point of view, and development of a conversational chatbot for resource-constrained systems.

2014 - 2018

B.Sc in ICT Engineering, Mediterranean University, Reggio Calabria
Grade: 88/110
Thesis: Created a mini First-Person-Shooter videogame in Unreal Engine 4, focusing on the development of NPC behavior using state machines.

WORK EXPERIENCE

2022 - 2023

Adjunct Professor, Mediterranean University, Reggio Calabria
Job Duties: teaching Machine Learning and Deep Learning techniques using TensorFlow and evaluating students' group projects.

04/2021 - 10/2022	**Junior Machine Learning Engineer,** Relatech Ithea, Cosenza Job Duties: Design and deploy AI techniques to meet customers' needs as part of an R&D team. Topics: Anomaly Detection and Recommendation Systems.
10/2020 - 02/2021	**Machine Learning Engineer Intern,** Accenture, Milan Job Duties: Develop AI solutions to meet customers' needs within the Salesforce environment.

SELECTED PUBLICATIONS

2025	C. Romeo*, G. Macaluso*, A. Sestini, A. Bagdanov. SPEQ: Offline Stabilization Phases for Efficient Q-Learning in High Update-To-Data Ratio Reinforcement Learning. Reinforcement Learning Conference **(RLC)**
2025	C. Romeo, A. Bagdanov. NTRL: Encounter Generation via Reinforcement Learning for Dynamic Difficulty Adjustment in Dungeons and Dragons. Conference of Games **(CoG)**
2024	C. Romeo, A. Bagdanov. Offline Reinforcement Learning with Imputed Rewards. Reinforcement Learning Conference @ RLBrew Workshop **(RLC)**

TECHNICAL SKILLS

Frameworks and Tools	OpenAI Gymnasium, PyTorch, NumPy, Scikit-learn, Pandas, Matplotlib
Programming Languages	Python
Miscellaneous	Unity, Unreal Engine, Git, Bash

LANGUAGES

Italian	Native
English	Full professional proficiency

(Last update: July 2025)