

GIULIA MARCHIORI PIETROSANTI

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EDUCATION

SANT'ANNA SCHOOL - *PhD candidate in Emerging Digital Technologies*

- Ranked #1 in the international contest for admission to the PhD scholarship
 - Focusing on the challenge of generalization within Reinforcement Learning
- Pisa, Italy ●
Oct. 2023 - Present

UNIVERSITY OF TRIESTE - *MSc in Data Science and Scientific Computing*

- Major: Artificial Intelligence
 - Final Grade: 110/110 cum laude (First Class Honours)
 - Thesis: 'On the Factors Affecting the Effectiveness of Controllable Simulated Robots: Can Human Controllers Predict AI-Based Controllers?'
 - Paper: G. Marchiori Pietrosanti et al., G. Nadizar, F. Pigozzi, E. Medvet, "Human Control of Simulated Modular Soft Robots may Predict the Performance of Optimized AI-based Controllers", IEEE Access (under review)
 - Core courses: Machine Learning, Deep Learning, Reinforcement Learning, Probabilistic Machine Learning, Information Retrieval, Data Visualization, Numerical Analysis
- Trieste, Italy ●
Oct. 2020 - Mar. 2023

SAPIENZA UNIVERSITY - *BSc in Computer Science*

- Final Grade: 110/110 cum laude (First Class Honours)
 - Thesis: 'On the complexity of linear resolution proofs'
 - Core courses: Algorithm and data structure, Differential and Integral Calculus, Human-Machine Interaction, DataBase, Software engineering, Model and Optimization
- Rome, Italy ●
Oct. 2016 - Dec. 2019

EXPERIENCE

RESEARCH ASSISTANT - *Oslo Metropolitan University*

- Studied existing Cellular Automata models to find design solutions for efficiently modeling an unconventional fluid-based computational system
 - Employed Evolutionary Computation for the optimization of the Cellular Automata rules
- Python - Pytorch ●
Oslo, Norway
Aug. 2022 - Sep. 2022

TEACHING ASSISTANT - *University of Trieste*

- Held weekly recitations for 10+ 2nd-year BSc students in Computability, Complexity & Logic (propositional logic, deductive systems, and first-order-logic)
- Trieste, Italy ●
Oct. 2021 - Dec. 2021

SELECTED PROJECTS

LUNAR LANDER AGENT - *Reinforcement Learning group project*

- Development of RL agents to solve the Lunar Lander OpenAI Gym environment
 - Implemented different RL agents using TD-methods with discretization, Sarsa, and DQN
- Python - Pytorch ●
Jul. 2022

PONG - *Software Development group project*

- Development of the Pong game
 - Project carried out using Test Driven Development approach, GitHub and CircleCI
- Java ●
Jan. 2022

BIRDCLEF - *Deep Learning group project*

- Development of DL methods to perform bird call identification
 - Used three different solutions
 - Implemented one 2D-CNN and one 1D-CNN
 - Trained ResNet
- Python - Pytorch ●
Sep. 2021

HONORS

PROGRAM ATTENDEE - *Cornell, Maryland, Max Planck*

- One of the ~90 students selected to attend the Cornell, Maryland, Max Planck pre-doctoral research school 2023
 - Lectures with leading scientists from participating institutions
- Saarbrücken, Germany ●
Aug. 2023

SCHOLARSHIP RECIPIENT - *Sony AI scholarship*

- Funding to attend the 4th International Summer School on AI & Games
- Chania, Greece ●
Aug. 2022

SCHOLARSHIP RECIPIENT - *ABK Women in Games scholarship*

- Funding to attend the 2022 Game Developers Conference (GDC)
 - Mentorship by ABK and external experts
- Virtual attendance ●
Mar. 2022

SCHOLARSHIP RECIPIENT - *Collegio Universitario Luciano Fonda*

- Accommodation and funding for the university tuition for merit-based selected students
 - Offers the chance to follow a program of extracurricular and seminars
- Trieste, Italy ●
Oct. 2020 - Sep. 2022