

Jury Andrea D'Onofrio

Graduate Student in Artificial Intelligence

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Education

Dalle Molle Institute for Artificial Intelligence USI-SUPSI (IDSIA), Master Thesis	AY 2023 - 2024
Università della Svizzera Italiana, MSc in Artificial Intelligence	Sept 2022 - Sept 2024
Università degli Studi di Milano-Bicocca, BSc in Informatics	Sept 2019 - Mar 2022

Experience

Sales Business Supporter, Lenovo – Segrate, IT Feb 2022 - Aug 2022

- **Activities:** Generated statistical performance analysis, (Pre-) processed data for B.I. - Tool depiction
- **Skills:** CoData database, Microsoft Office

Projects

Master Thesis AY 2023 - 2024

- Developed an autonomous obstacle avoidance system for nanodrones using sensor fusion on the Crazyflie 2.1 platform.
- Integrated vision-based CNNs with an ultrasonic sensor for navigation in low-visibility environments
- Created a custom simulation dataset in Webots, enabling robust testing in varying visibility scenarios.
- Tools: Python, Webots

Graph Deep Learning Spring 2024

- Verified stability claims and anti-squashing properties of the Anti-Symmetric Deep Graph Network (A-DGN) on the PubMed dataset
- Tools: Python

Robotics Spring 2023

- Developed algorithms for mapping unknown spaces with Robomaster S1 in CoppeliaSim
- Focused on sensor-based room mapping, visualization, and path-finding for real-time processing and accuracy.
- Tools: Python, Matplotlib, Seaborn, ROS2

Knowledge Search & Extraction Fall 2023

- PROJ-01
 - Optimized search in a knowledge management system by processing large Python codebases
 - Trained models (LSI, TF-IDF, and Doc2Vec), achieving 95% precision with LSI.
 - Used t-SNE for performance visualization and insights
- PROJ-02
 - Developed a Python test generator using Fuzzer and Genetic Algorithm (GA) to enhance branch coverage
 - Designed custom test cases, achieving strong mutation scores
- Tools: Python, ast, deap, Gensim, JSON, Matplotlib, Numpy, nltk, os, Pandas, random, Seaborn, shutil, Sklearn, sys

Edge Computing in the IoT Fall 2022

- Developed a smart intrusion detection system integrating ToF sensors, a camera, and fingerprint authentication for real-time occupancy monitoring
- Tools: Arduino

Technologies

Programming: C, C++, C#, CSS, Java, Javascript, HTML, \LaTeX , Matlab, PHP, Python, SQL.

Tools: Android Studio, Arduino, Cytoscape, GAP8, Gephi, Git, Linux, PHPStorm, ROS2, Tableau, VS Code.

Methodologies: Agile, Scrum.

Languages

English: Professional proficiency

Italian: Native proficiency