

Jury Andrea D'Onofrio

Graduate Student in Artificial Intelligence

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Education

Università della Svizzera Italiana, MSc in Artificial Intelligence Sept 2022 - Sept 2024

- **Master Thesis:** Developed a CNN-based obstacle avoidance system integrating ultrasonic sensors and vision-depth fusion for nano-drones in low-visibility environments at the IDSIA Robotics Lab, achieving real-time accuracy on resource-limited hardware.

Università degli Studi di Milano-Bicocca, BSc in Informatics Sept 2019 - Mar 2022

- **Bachelor Thesis:** Developed an online tool to analyze dataset similarity, enabling researchers to assess the reliability of predictive models. Enhanced visualization and usability for more intuitive data insights.

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

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