

# LORENZO UTTINI

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## EDUCATION

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**University College of London, UK**

*September 2024 - Present*

*MSc in Robotics and Artificial Intelligence*

GPA: 89%

Relevant Courses: Reinforcement Learning, Robotics Navigation, Robotics Manipulation

**San Francisco State University, USA**

*August 2023 - December 2023*

*Exchange Semester*

GPA: 4.0/4.0

Relevant Courses: Machine Learning for Healthcare, AI Explanability

**University of Pavia, Italy**

*September 2021 - July 2024*

*BSc in Artificial Intelligence*

Graduated: 110/110 cum Laude

Relevant Courses: Machine Learning, Deep Learning, Natural Language Processing

Joint Degree: University of Pavia, University of Milan, University of Milan-Bicocca

## WORK EXPERIENCE

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**University College of London, London (UK)**

*November 2024 - Present*

*Graduate Research Intern - Supervised by Prof. Valerio Modugno*

- Designing and training robust walking policies for the PAL Robotics Kangaroo robot using reinforcement learning in Isaac Lab, with successful sim-to-sim transfer to MuJoCo. Focus on closed-chain kinematic control, cross-simulator generalization, and agile locomotion. Research paper in preparation.

**Cy4gate, Rome (Italy)**

*February 2024 - May 2024*

*Machine Learning Engineer Intern*

- Hybrid internship under an Italian Cybersecurity and Cyberintelligence company.
  - Developed different machine learning models to detect malign website domains generated by Domain Generation Algorithms (DGAs) employing Keras.
  - Collected and processed data from built-in logs and external databases (200k+ domains) using Scikit-Learn for feature extraction.
  - Built an interactive web application for the best model using StreamLit, aimed at industrial deployment.

## SELECTED PROJECTS

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**Autonomous Robot Navigation with EKF and MPC** - [link](#)

- Built an autonomous navigation system using Extended Kalman Filter (EKF) for precise localization and Model Predictive Control (MPC) for optimized trajectory tracking, by employing PyBullet as simulation environment.
- Integrated EKF-MPC to improve navigation accuracy and stability, evaluated through metrics like steady-state error and noise resilience.

**3D Point Cloud Table Detection and Segmentation** [link](#)

- Built classification and segmentation pipelines using DGCNN and point cloud processing from RGB and depth data.
- Integrated ZoeDepth for monocular depth estimation and evaluated performance on SUN3D and RealSense datasets.

## EXTRA-CURRICULAR & SCHOLARSHIPS

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**LeadTheFuture:** Among the few Italian students selected to be mentees for a leading mentorship non-profit organization for students in STEM with a rate admission of 15%.

**San Francisco State University:** Selected as Italian Country Ambassador for international events and meetings.

**ManiTese Onlus:** Remote volunteering for an Italian organization.

**Unipv Scholarship:** Classified third among 300+ students to obtain a merit scholarship of 5000\$ to study one semester in San Francisco awarded by University of Pavia.

## SKILLS

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Python, Scikit-Learn, Keras, PyTorch, MATLAB, R, MJX, MuJoCo, IsaacLab, Git