

EDOARDO GHINI

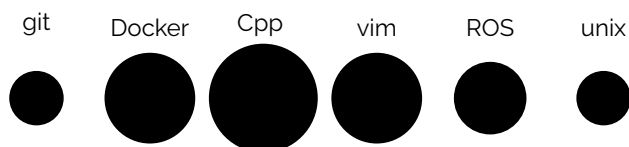
Robotics and AI engineer

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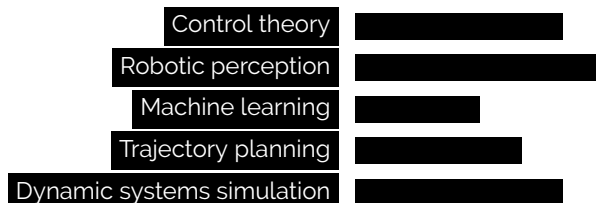
WHO AM I?

Curious and self-confident person.
Passionate about programming and believing it to be a form of art.
Fascinated by mysteries of science and firm believer in technological progress.
Enthusiastic about the latest academic discoveries in my field of expertise.
Looking forward to learning more about Neuroscience and Human Consciousness and combine them together with Artificial Intelligence and Robotics.

TOOLS



THEORETICAL SKILLS



PROGRAMMING SKILLS



EXPERIENCE

- 10/2020 – 03/2022 **Robotics Engineer** Inria , French national research institute for digital science and technology
Developed a system from the ground up to teleoperate an industrial robot in hazardous environments.
- 2/2019 – 10/2019 **Master's Thesis** La Sapienza, University of Rome
Implemented a robotic system to achieve **autonomous navigation** (SLAM) in a urban environment of a mobile robot equipped with a **3D-LIDAR** laser sensors.
The whole project has been implemented in C++ adopting the ROS build system.
High-level features are extracted from the 3D-point cloud and categorized in geometric primitives.
The sensor data is processed using the primitives in order to compute the trajectory of the robot.
The work has been developed in collaboration with the university Robotics Lab.
Master thesis link
- 3/2016 – 7/2016 **Back-end developer** Translated
During this internship, I was responsible for the codebase of a web application: **Matecat**, written in PHP.
I developed unit-tests to certify the correctness of the core of the application.
Worked with databases and client-server communications: **MySQL** and **Apache**.
Brought code coverage percentage from 0% to 25%.
Learned how to work in **agile** teams, following **scrum** principles.
Acquired deep knowledge of advanced testing techniques: **Mock objects**, **Reflection**, and **TDD**.
Bachelor thesis link

EDUCATION

2016 – 2019	Master's Degree - final grade 103/110 Master in Artificial Intelligence and Robotics Automation and Control / Mobile Robotics / Machine Learning / Neural Networks	La Sapienza, University of Rome
2013 – 2016	Bachelor's Degree - final grade 95/110 Computer Engineering Operating Systems / Algorithms / Physics / Architectures / Software design	Roma Tre University

MASTER'S DEGREE THESIS

My Master Degree Thesis entailed the implementation of a mobile robotics SLAM system for **autonomous navigation** which performs 3D LIDAR Odometry and Tracking.

In particular the system extrapolates information about the **trajectory** of the robot carrying the laser sensor from the clouds of points that approximate the external environment.

The whole problem was solved using a probabilistic approach that involves using the **Gaussian assumption** and a **Least Square** formulation.

The entire project was developed in C++ using ROS and CMake and it had to address the compatibility with the robotics utility framework developed by the academic department.

3D-Lidar-Odometry GitHub Repository
Master's Degree thesis link

LANGUAGES

Italian - native
English - IELTS academic cert.
Overall band score 7.0
CEFR level C1

HOBBIES

I love sports:
Tennis, Basket, Football and Chess.
Keen reader of sci-fiction novels.

OTHER

Standard driving license, type B.
Car owner.

PRIVACY

"In compliance with the GDPR and Italian Legislative Decree no. 196 dated 30/06/2003, I hereby authorize the recipient of this document to use and process my personal details for the purpose of recruiting and selecting staff and I confirm to be informed of my rights in accordance to art. 7 of the above mentioned Decree".