

Simone Carletti, M.Sc.

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About Me

I'm a Computer Engineering master's student with a focus on robotics and autonomous systems. I have hands-on experience developing control systems for robots, working with embedded software, and building full-stack web applications. Over the years, I've contributed to both academic and industry projects—ranging from rover development for competitions to software platforms in the healthcare field. I'm currently studying at DTU as part of an Erasmus exchange, and I'm always keen to take on new technical challenges and learn by doing.

Employment History

- 2020 – now **Full-Stack Developer**, Genomedics S.r.l
Angular (TypeScript, SCSS, HTML), PHP, Laravel, SQL, Python.
Lead developer of three key projects that handle the release, deployment and licence management for all the company's products. Developer for the company's main project (K-Platform).
- 2023 – 2024 **Control Engineer**, DIANA student team.
Development of a martian rover for the ERC competition
- 2018 – 2022 **Web developer**, Scuolafacile, ITIS Meucci.
Development of an innovative platform that allows schools to easily manage timetables and substitute teachers

Education

- 2024 – now **M.Sc. Autonomous Systems**, Technical University of Denmark.
1 year Erasmus+ exchange.
Courses (and relevant projects):
- **Building Dependable Robot Systems:** design of algorithms and control systems with the RoboCup platform for the DTU RoboCup competition
 - **Digital Control:** design of digital controllers and implementation on embedded microcontrollers for a differential drive robot
 - **Perception for Autonomous Systems:** computer vision, 3D cloud processing, visual odometry
 - **Deep Learning:** FFNN, CNN, Autoencoders, Transformers, GAN, PyTorch. Detection of ships from satellite images using U-Net and YOLO.
 - **Advanced topics in Reinforcement Learning**
 - **Image Analysis:** introduction course with application in the medical field

Education (continued)

2023 – now  **M.Sc. Computer Engineering**, Politecnico di Torino.
Automation and Intelligent Cyber-Physical Systems - CURRENT GPA: 29.23/30

Courses (and relevant projects):

- **Sensors, embedded systems and algorithms for Service Robotics:** course on mobile robotics. Implementation of an EKF for localization in ROS2, using Python
- **Robotics:** basics of robotic manipulators. Development on Matlab.
- **Nonlinear control and aerospace applications:** implementation of a series of control architectures with application in spacecraft maneuvers
- **Estimation, Filtering and System Identification**
- **System and Device Programming:** implementation of kernel functionalities (OS161); Development of a desktop program with Rust
- **Computer architectures:** development of Quoridor game (link) on a LandTiger board with multiplayer capabilities over CAN
- **Modeling and control of cyberphysical systems:** distributed control of a multi-agent system of 7 magnetic levitators
- **Data Science and Database Technology**
- **Big data processing and analytics**

2020 – 2023  **B.Sc. Computer Engineering**, Università degli Studi di Firenze.
GRADUATED WITH 110/110 CUM LAUDE (WITH HONORS)
Thesis title: *Creation of a sensor network to monitor the greenhouses of the Botanical Garden of Florence*
Free choice courses: Discrete mathematics and code theory, Financial mathematics

2019  **CyberChallenge**, Cybersecurity course at University of Florence.
The first italian cybersecurity training program for talented university and high school students

Volunteering

2025 – now  **ESN Copenhagen & ESN DTU**: Organization of events, support for international students, and promotion of cultural exchange.

Skills

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|------------|--|
| Languages |  Strong reading, writing and speaking competencies for English. Native Italian speaker. |
| Coding |  Typescript, Javascript, C, C++, Python, Rust, Java, Matlab, PHP, SQL, HTML, CSS/SCSS, Assembly (x86, MIPS), LaTeX |
| Frameworks |  Angular, Vue.js, Laravel, Simulink |
| Misc. |  Linux (full-time user with experience in various fields), Raspberry-Pi, Arduino, Photography (digital and analog cameras), Guitar, Soldering, ESP8266, NodeMCU |

Certifications and Achievements

- 2023  **Cambridge B2 (FCE). ID: C4570372**
- 2018  **ECDL Full Standard. ID: IT 2156394**
- 2020 – 2023  **#TuttoMeritoMio Excellence Scholarship** Winner of #TuttoMeritoMio, a scholarship dedicated to the top 100 students of the University of Florence