



# Giulia Arwen Sabina Scuderi



## WORK AND PROFESSIONAL EXPERIENCE

- PoliTOcean**2023 - PRESENT
- Firmware and Software Developer
- Collaborated within a multidisciplinary team of engineers to design and develop a Remotely Operated Vehicle (**ROV**) for international competitions.
  - Programmed and integrated an Inertial Measurement Unit (**IMU**) sensor (gyroscope and accelerometer) in **C/C++**, enabling precise underwater stabilization of the vehicle.
  - Partnered with mechatronic engineers to implement a robust control system on a Raspberry Pi 4, derived from a Simulink model in **MATLAB**, ensuring reliable system performance.
  - Enhanced the vehicle's Graphic User Interface (**GUI**) by introducing new features to optimize user experience and streamline monitoring via multiple camera streams. Developed skills in **HTML** and **CSS** (frontend) and **JavaScript** and **Python** (backend).
  - Served as Chief Safety Officer (**CSO**) and firmware representative during the MATE ROV **World Championship** in the United States.
  - Designed a competition **strategy**, achieving record-breaking performance and setting a new benchmark for the past seven years.
  - Represented the organization at **scientific conventions**, fostering connections with industry partners, promoting its mission, and gaining insights to drive innovation.



## EDUCATION

- Bachelor degree in Computer Engineering**2022 - PRESENT
- Politecnico di Torino
- Joined the Firmware & Software division of the **PoliTOcean** student team, contributing to innovative projects in **underwater robotics**.
  - Selected for the prestigious **Samsung Innovation Campus**, completing an intensive program focused on **Machine Learning**, **IoT** and **Cybersecurity**. The program included hands-on learning, a collaborative group project, and culminated in a final pitch presentation at Samsung's headquarters in Milan.

- Scientific diploma**2017 - 2022
- Liceo A. Avogadro Biella
- Score: 100/100



## LANGUAGES

- **Italian** (C2 Native language)
- **English** (C2 Cambridge CPE)
- **French** (Intermediate proficiency)

## CONTACTS

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## PROFESSIONAL PROFILE

Motivated and detail-oriented undergraduate in Computer Engineering with a strong foundation in programming and hands-on experience in firmware and software developing. Passionate about leveraging technology to solve real-world problems and eager to contribute to innovative projects. Proven ability to work both independently and collaboratively, with excellent analytical and problem-solving skills. Currently seeking opportunities to apply technical knowledge and gain industry experience.

## HARD SKILLS

### Programming languages

- C/C++
- Python
- MATLAB
- Javascript
- HTML/CSS
- MIPS Assembly
- SQL (DBMS)

### Operating systems

- Windows
- Linux

### Office package

- Microsoft word
- Microsoft Excel
- Microsoft Powerpoint