Gianluca Pandolfi

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▸ Computer engineering graduate specialized in automation and robotics, with a strong drive for innovation and a passion for tackling cutting-edge challenges. Eager to continuously explore new fields, face complex problems, and develop optimized solutions tailored to real-world needs.

Professional Experience

Junior testing and integration engineer *2025*
ConnectLab S.R.L. *Milan, Italy*

- Supported development and testing of an IoT tracker device for AT&T and other international partners.
- Conducted a 2 weeks on-site test follow-up in Atlanta (USA), validated performance results, and assisted engineering teams in refining hardware and system behavior.

Education

Bachelor's degree in Electronic and Computer engineering *2020 – 2023*
Università L. Vanvitelli · 109/110 *Italy*

- Thesis: Design, implementation, and deployment of an LQR controller for the stabilization of an inverted pendulum on a Meca500 robotic arm
  - ▸ Designed EE for pendulum based on Meca500 flange
  - ▸ Simulated system behaviour in Simulink

Master degree in Computer engineering *2023 - 2026*
Università L. Vanvitelli · 110/110 cum laude *Italy*

- Robotics exam project: Development of an integrated human-robot collaborative cell with skeleton tracking and deployment on a Franka Emika Panda arm.
  - ▸ Implemented impedance controller for human-robot interaction
  - ▸ Integrated YOLO model for human skeleton tracking, along with Kalman filter for occlusion handling
  - ▸ Simulated all pipeline on Gazebo platform
- Thesis: Design, implementation, and deployment of a language-conditioned task planning pipeline with active object perception for robotic manipulation on a Franka Emika Panda arm
  - ▸ Implemented vision module for object shape and pose estimation using geometric primitives
  - ▸ Integrated LLM for task planning from natural language to grounded set of available tasks
  - ▸ Developed a perception pipeline to handle partially occluded objects
- One-week **Erasums BIP** program at THWS Würzburg (Germany), focused on robotics

Skills

Languages: Italian (Native) | English (C1)

Programming: C/C++ | Python | Rust | MATLAB | Java | SQL

Embedded: ESP32 | Arduino | EtherCAT

Robotics stack: ROS2 | Moveit | Gazebo

Robotics & Control: Kinematics & Dynamics | Motion planning | Pose estimation | Control theory (LQR, impedance)

Tools & Platforms: Docker | Git | Simulink | Labview | Linux systems