

Nicola Saltarelli, Automation Engineer

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About me

My name is Nicola Saltarelli, I was born in Foggia on June 2, 2001, and I am a recent graduate in Automation Engineering from the Politecnico di Bari.

Throughout my academic journey, I took part in several projects, both academic and personal, which allowed me to apply my theoretical knowledge in practice and develop key soft skills such as problem solving and teamwork. I consider myself a determined, goal-oriented individual, driven by a strong desire for continuous learning. I aspire to contribute to the development of innovative technologies capable of making a positive impact on the future.

Education

- 2023 – 2025
- 📘 **Master degree** in Automation Engineering at Politecnico di Bari.
Thesis title: *Online Reinforcement Learning for Adaptive Gain Tuning in Image-Based Visual Servoing* — [\[View Thesis\]](#).
Vote: 110/110 with honors.
- 2020 – 2023
- 📘 **Bachelor degree** in Computer and Automation Engineering at Politecnico di Bari.
Thesis title: *Identification and Fractional Order Control of DC Motors*.
Vote: 110/110 with honors.

Skills

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| Coding | 📘 Java, Python, R, SQL, JavaScript, C++, HTML, CSS, NodeJS, ReactJS, VHDL, L ^A T _E X |
| Automation | 📘 Matlab, Simulink, Solidworks, LabView, Fritzing, NI Multisim, ROS, Docker. |
| Languages | 📘 Italian: native speaker. English: level B2. |

Projects

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| Online RL for Adaptive Gain Tuning in IBVS | 📘 Implementation of an adaptive IBVS controller for the UR5e manipulator based on Reinforcement Learning. |
| Turtlebot3 autonomous exploration | 📘 Implementation of an autonomous exploration system based on TurtleBot3, ROS2, and Gazebo. |
| Motion control with Neural Network | 📘 Motion control of a 6 degree of freedom (DOF) robotic manipulator with neural network. |
| Snake on FPGA DE10-Lite | 📘 Implementation of the Snake game on the FPGA DE10-Lite platform using the VHDL. |
| Position control of linear actuator | 📘 This repository presents the implementation of a system for controlling the position of a linear actuator. |
| Trajectory Planning for Niryo Ned 2 | 📘 Trajectory planning project for the Niryo Ned2 robot. |
| JustChat | 📘 Project for a web-based messaging application similar to WhatsApp Web. |