Nicola Saltarelli, Automation Engineer

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🌐 https://sltncl.github.io

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

Coding	Java, Python, R, SQL, JavaScript, C++, HTML, CSS, NodeJS, ReactJS, VHDL, LaTeX
Automation	Matlab, Simulink, Solidworks, LabView, Fritzing, NI Multisim, ROS, Docker.
Languages	Italian: native speaker. English: level B2.

Projects

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	This repository describes the implementation of the Snake game on the FPGA DE10-Lite platform using the VHDL hardware description language.
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.