

Daniel Luzzatto

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LinkedIn | Portfolio | GitHub

EDUCATION

University of California, Los Angeles (UCLA)

Los Angeles, CA

M.Eng. in Robotics & Autonomous Systems

Sep 2025 – Aug 2026 (expected)

- Relevant Coursework: Robotic Systems, Dynamic Systems and Control, Deep Learning, Embedded Systems.

Technion - Israel Institute of Technology

Haifa, Israel

B.Sc. Mechanical Engineering - Robotics track

Jan 2021 – Feb 2025

- Main coursework: Robotics (95), Control Systems (95), AI and Machine Learning (99), Electrical Actuators (90).
- President's List, Winter 2023-2024 (Top 3% of Students in the Faculty).

EXPERIENCE

Fusmobile

Tirat Carmel, Israel

Automation & Mechanical Engineering Intern

Feb 2025 – Aug 2025

- Automated acoustic calibration using C++ and Python, reducing process time from 30 to 5 minutes.
- Developed a Python tool to track hardware maintenance with real-time notifications, improving system readiness.
- Diagnosed electromechanical faults and performed precision manual calibrations on test systems.
- Redesigned mechanical handles in SolidWorks, improving ergonomics for clinical use.

Flow Control Lab – Technion

Haifa, Israel

Research Assistant - Supervisor: Prof. David Greenblatt

Nov 2024 – Aug 2025

- Designed and built a motor-pump testbed in SolidWorks to emulate oscillatory flow for wind-driven desalination.
- Implemented PID control maintaining 10 bar pressure stability under dynamic wind-like oscillations.
- Automated real-time data acquisition using LabVIEW; analyzed results in Python/MATLAB for system stability.
- Validated performance across all wind-profile test cases; contributed to a peer-reviewed publication.

STMicroelectronics

Milan, Italy

MEMS Testing Intern

Dec 2023 – Dec 2023

- Collaborated on a 5-person team to perform pressure, temperature, and inertial tests on MEMS sensor.

PROJECTS

Autonomous Mobile Robot (prototype)

Aug 2025 – Present

- Developing a mobile robot with IMU, ultrasonic, lidar, and camera sensors for navigation and perception.
- Testing obstacle detection and line tracking; integrating multi-sensor fusion with C++/Python on Arduino & Raspberry Pi using I²C communication protocols and ROS-based data streaming.
- Developing real-time embedded control systems and contributed to the autonomy stack via ROS integration.
- Configured headless Linux on Raspberry Pi for autonomy; added remote logging and diagnostics tools.

Self-Balancing Robot (Graduation Project - Technion)

Jan 2025 – Feb 2025

- Modeled and controlled an inverted-pendulum robot using PID/LQR controllers with state-space modeling.
- Designed a complementary filter for IMU sensor fusion enabling precise angle estimation and stable control.
- Validated MATLAB simulations on hardware; LQR achieved over 2 min of stable balance, outperforming PID.

Rocketry Club – Software / Avionics

Mar 2023 – Jun 2024

- Worked in a 5-member avionics team integrating MPU6050 on STM32/Arduino for flight-control data acquisition and telemetry; verified performance during test launches.

TECHNICAL SKILLS

Programming & Embedded

Python, C/C++, MATLAB, Arduino, STM32

Tools & Systems

Git, Docker, Linux, ROS, LabVIEW, SolidWorks
Jupyter, Mujoco

Robotics & Control Concepts

PID, LQR, Kalman Filtering, Sensor Fusion, Motor Control
Perception (OpenCV), PyTorch, TensorFlow, RL,
Real-Time Systems, I²C/SPI

LANGUAGES

Italian (Native), English (Fluent), French (Fluent), Spanish (Fluent), Hebrew (Proficient)