

# Daniel Luzzatto

+972 0549887786 | luzzattod@gmail.com | linkedin.com | danielluzzatto.com | github.com

## EDUCATION

### Technion - Israel Institute of Technology

Haifa, Israel

*Bachelor of Science in Mechanical Engineering - Robotics track*

*Jan. 2021 – Feb. 2025*

- Main coursework: Robotics, Control Systems, Heat Transfer, AI and Machine Learning, Electrical Actuators.
- Graduating project: Designed, simulated and implemented a self-balancing LEGO Spike robot using PID and LQR controllers with sensor fusion for precise state estimation. More info at [GitHub Repository](#)
- Machine Learning Final Project: Reproduced the GPT-2 model and trained it on Hugging Face's FineWeb dataset. Implemented BPE tokenization, flash attention, and MLP, and evaluated performance using HellaSwag. More info at [GitHub Repository](#)
- President's List, Winter 2023-2024 (Top 3% of Students in the Faculty).

### Liceo Scientifico Pascal

Milan, Italy

*High School Diploma - Math and Physics Concentration*

*Sep. 2015 – Jun. 2020*

## EXPERIENCE

### Flow Control Lab - Technion

Haifa, Israel

*Research Assistant*

*Nov. 2024 – Present*

- Designed and tested a motor-pump system to simulate oscillations in wind-powered desalination input.
- Developed and validated control strategies based on system dynamics to stabilize and optimize performance.
- Contributing to research on system dynamics and controls for wind-powered desalination, planning publication.

### Villa Eugenia Suites

Como, Italy

*Software Developer, Real Estate*

*Jan 2025 – Present*

- Developed a booking website and management system for a three-apartment Villa.
- Built tools for automating cashflow tracking and streamlining operations for property management.

### NUFiltration

Caesarea, Israel

*Engineering Intern, Water Filtration and Purification Technology*

*Aug. 2024 – Nov. 2024*

- Assisted in designing and optimizing a filtration system using recycled filters for industrial and humanitarian use.
- Assisted in troubleshooting operational inefficiencies and implementing cost-effective quality improvements.
- Conducted material testing and analysis to evaluate recycled filter performance and durability.

## PROJECTS

### Rocketry Club | Software Team Member

*Mar. 2023 – Jun. 2024*

- Integrated and tested MPU6050 on STM32 and Arduino Nano for rocket prototype control and data acquisition.
- Successfully launched and drove the rocket, learning integration of sensors and microcontrollers.

### STMicroelectronics MEMS testing | Intern

*Dec. 2023*

- Tested MEMS sensors, evaluating performance under varying inertial, pressure, and environmental conditions.
- Learned about MEMS design and applications, such as smartphones and autonomous cars.

### BME Hackathon | Developer

*Mar. 2023*

- Proposed a wearable app concept to monitor high-risk pregnancies using CTG analysis.
- Demonstrated a basic prototype and learned insights into technologies, pitching and business plan creation.

### ABCDigital | Computer Training Volunteer

*Jan. 2020 – Jun. 2020*

- Volunteered in weekly computer training sessions for elderly learners, teaching basic built-in programs.

### HaifaTeenTech Hackathon | Team Leader, Developer

*Jul. 2019*

- Led a team of 5 developers to design an app to prevent car accidents caused by sleep driving, detecting facial muscle movements using computer vision. Won first place and scholarship for Technion.

## TECHNICAL SKILLS

Python, C, C++, MATLAB, Microsoft Office Suite, Linux, CAD Modeling (Solidworks, Creo), Ansys

## LANGUAGES AND HOBBIES

**Languages:** Italian (Native), English (Fluent), French (Fluent), Spanish (Fluent), Hebrew (Proficient).

**Hobbies:** Sports (Soccer, Gym, Skiing), Science Fictions, Roman History