# Daniel Luzzatto

Los Angeles, CA | (213) 289-7998 | luzzattod@gmail.com LinkedIn | Portfolio | GitHub Machine Learning & Robotics Engineer: LLM systems, computer vision, embedded AI, and full-stack prototyping.

## EDUCATION

#### University of California, Los Angeles (UCLA)

Los Angeles, CA

M.Eng. Robotics & Autonomous Systems

Sep 2025 - Aug 2026 (In Progress)

- Core Coursework: Deep Learning, ML Algorithms, Embedded Systems, RL, Autonomous Robots.

### Technion - Israel Institute of Technology

Haifa, Israel

B.Sc. Mechanical Engineering - Robotics track

Jan 2021 - Feb 2025

- Core Coursework: Neural Networks (99), Robotics (95), Control Systems (95), Signal Processing (92).
- President's List Winter 2023–2024 (Top 3%).

#### Experience

# Fusmobile - Biomedical Startup

Tirat Carmel, Israel

Feb 2025 - Aug 2025

Automation Engineering Intern

- Automated acoustic calibration in C++/Python, cutting process time 30 to 5 minutes across 10+ devices.
- Built a Python maintenance tracker integrated with Arena/Google Calendar, improving uptime and scheduling efficiency for a 10-person engineering team.
- Diagnosed hardware faults and ran precision calibrations, collaborating with engineers to refine test procedures.

### Flow Control Lab - Technion

Haifa, Israel

Research Assistant - Supervisor: Prof. David Greenblatt

Nov 2024 - Aug 2025

- Automated data acquisition in Python/LabVIEW, replacing picoscope with NI card to capture real-time signals.
- Developed PID controllers and analysis scripts producing datasets supporting ongoing peer-reviewed research.

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

### Agentic Privacy for Smart Sensors - UCLA Embedded Systems

Oct 2025 - Present

- Building an LLM-driven privacy hub that converts natural-language policies into multi-stage data-sanitization pipelines with planning, execution, and verification agents. Github Repo
- Implemented agentic planning and adaptive tool selection (ReAct + LangChain) integrating OpenCV, Whisper, Kalman Filtering, and PyTorch models.
- Added closed-loop verification and audit logging for automated policy enforcement and GDPR-style provenance tracking.

## Value Verdict - Sports Analytics Platform

Aug 2025 - Present

- Built full-stack analytics app (React/TS, Python, SQL) processing 220k+ events with interactive EV/variance dashboards.
- Implemented probabilistic models (Shin method) and Kelly staking logic, achieving 6.87% ROI over 1300 events.
- Deployed on Fly.io/Supabase/Clerk, using REST APIs for real-time odds ingestion and analysis.

## GPT-2 Reproduction - Technion Machine Learning

Jan 2025 - Feb 2025

- Reimplemented GPT-2 (124M) transformer architecture from scratch in PyTorch with BPE tokenization and FlashAttention; trained on FineWeb and achieved 26% accuracy on HellaSwag vs GPT-2's 28.9%. Github Repo
- Optimized GPT-2 training on an A6000 GPU using cosine LR decay and AdamW, matching baseline performance.

# TECHNICAL SKILLS

#### Languages & Frameworks

Python, C/C++, MATLAB, Py-Torch, TensorFlow, scikit-learn, NumPy, Pandas, OpenCV

#### Tools & Systems

Git, Docker, Linux, ROS, Jupyter, SQL, Hugging Face, Arduino, Raspberry Pi

#### **Core Concepts**

Deep Learning, Reinforcement Learning, Control Systems, Real-Time Systems, Transformers & Attention, Tokenization (BPE), Generative Models, Data Analysis

#### LANGUAGES