

Aryan Madan

amadan@ethz.ch | [LinkedIn](#) | [Portfolio](#) | Swiss Citizen

EDUCATION

ETH ZÜRICH

MSc. in Mechanical Engineering

⇒ *Focus on Robotics, Control and Deep Learning*

Zürich, Switzerland

Feb. 2025 - present

ETH ZÜRICH

Bsc. in Mechanical Engineering

⇒ *Participated in Focus-Project **Swissloop***

Zürich, Switzerland

Sep. 2021 – Feb. 2025

KANTONSSCHULE WETTINGEN

Swiss Matura

Wettingen, Switzerland

Sep. 2016 – June 2020

RESEARCH

SEMESTER THESIS – CENTER FOR PROJECT BASED LEARNING

Optimizing Wind Turbine Blade Aerodynamics Using MEMS Pressure Sensors and Machine Learning on the Edge

- ⇒ *Applied transfer learning with a compact CNN + MLP*
- ⇒ *Estimated aerodynamic parameters from data collected on the edge*
- ⇒ *Supervised by Dr. Tommaso Polonelli and Prof. Dr. John Lygeros*

Zürich, Switzerland

Sep. 2025 – Feb. 2026

BACHELOR THESIS – ROBOTICS SYSTEM LAB

Optimizing Wind Turbine Blade Aerodynamics Using MEMS Pressure Sensors and Machine Learning on the Edge

- ⇒ *Built a Simscape model of a hydraulic excavator arm*
- ⇒ *Improved force prediction accuracy and established the foundation for a full digital twin.*
- ⇒ *Supervised by Dr. Filippo Spinelli and Prof. Dr. Marco Hutter*

Zürich, Switzerland

Sep. 2024 – Feb. 2025

EXPERIENCE

ASCENTO AG

Robot Supervisor

- ⇒ *Supervised and maintained autonomous security robots in live deployments,*
- ⇒ *Diagnosed hardware, sensor, and software faults using ROS 2, Docker and structured log triage*

Zürich, Switzerland

Feb. 2026 - present

SWISSLOOP

Treasurer

- ⇒ *Managed the team's finances end-to-end across two build cycles*
- ⇒ *Budgeting, sponsor negotiations, procurement, and cost tracking.*
- ⇒ *Secured external funding through targeted sponsor outreach.*

Zürich, Switzerland

Sep. 2024 – Sep. 2026

SWISSLOOP

Team Lead

- ⇒ *Led a team of 15 engineers, keeping a nine-month prototype schedule on track and delivering a competition-ready pod.*
- ⇒ *Managed the team's finances end-to-end — budgeting, sponsor negotiations, procurement, and cost tracking.*

Zürich, Switzerland

Sep. 2024 – Sep. 2025

SWISSLOOP**Thermal and Integration Engineer**

- ⇒ *Developed CFD simulations, thermal management strategies, and heat sink Designs for high-power electronics under vacuum conditions.*
- ⇒ *Served as the system-level integration owner, responsible for understanding how every mechanical, electromechanical, and electrical component on the pod interacted.*

Zürich, Switzerland

Sep. 2023 – Sep. 2024

ETH ZURICH**Teaching Assistant for IMES, ED+C and D-HEST**

- ⇒ *Tutored students across three ETH departments — Mechanics, Medical Technology, and Engineering Design*
- ⇒ *Developed a strong ability to read how people think and adjust communication accordingly.*

Zürich, Switzerland

Sep. 2022 – Feb. 2026

PROJECTS**AI CONSULTING****FOUNDER**

- ⇒ *Partnered with businesses in Switzerland to identify and implement practical AI use cases.*
- ⇒ *Built custom solutions including RAG pipelines, chatbots, and automation workflows.*

Zürich, Switzerland

Sep. 2025

SKILLS**PROGRAMMING**

Python, C++, MATLAB, Typescript, HTML, JavaScript

LANGUAGES

English (Native), German (Native), Swiss German (Native), French (B2)

INTERESTS**SPORTS**

Football, tennis, skiing and snowboarding, running, fitness

OTHER INTERESTS

Law and economics, global politics, nature and the environment