

# Rafael Riber

Lausanne, Switzerland

---

## EDUCATION

---

**École Polytechnique Fédérale de Lausanne (EPFL)**

MSc, Electrical Engineering

Lausanne, Switzerland

**Graduation: June 2026**

BSc, Electrical Engineering

**2018-2023**

- Bachelor Thesis : *Design and characterisation of a 24 GHz RADAR Ground Speed Sensor antenna array*

**High School: Collège Madame De Staël**

**2014-2018**

Swiss Maturity diploma - *Advanced physics and mathematics option*

## EXTRA-CURRICULAR EXPERIENCE

---

- EPFL Racing Team - Formula Student International Competition
  - Head of Low-Voltage Electronics: Led a team of 10 people in the design of all safety, indication, battery monitoring, sensors and other low-voltage systems to the successful manufacturing and rules compliance of EPFL's first fully driverless-capable electric race-car, running in four week-long competitions throughout Europe (2022-2023).
  - Part of the driverless research division, working on solutions for electronic safety systems (2021-2022).
- EPFL Hyperloop research team (2020-2021): Successfully implemented a 3kW battery testing test-bench controlling various devices through NI CompactRIO hardware using LabView for use by the Battery Energy Storage System division for lithium cell characterisation.

## PROFESSIONAL EXPERIENCE

---

**World Trade Organisation (WTO)**

**June – July 2018**

Summer Intern - Information Technology Solutions, Systems and Operations Section

Geneva, Switzerland

Contributed to the restructuration of around 500 generic mailboxes, using Active Directory and Powershell scripting for repetitive tasks while contacting reference persons in all WTO divisions for coordination.

## PERSONAL PROJECTS

---

- Designed, assembled, and programmed a quadcopter ("drone") 4-layered flight controller PCB as an end of high-school project, based on the Arduino platform running on an ARM Cortex M0 microcontroller using an accelerometer and gyroscope over I<sup>2</sup>C and implementing PID control principles.
- Designed, assembled, and programmed wristwatches based on the Arduino platform, using ARM Cortex M0 microcontrollers, OLED displays via SPI, and environment sensors and other peripherals over I<sup>2</sup>C.
- Designed and assembled a fully analog two-channel DJ mixer.

## RELEVANT SKILLS & LANGUAGES

---

- **Relevant skills:** Power Electronics (converters and drives), Analog circuit design, LabView, NI sbRIO/cRIO, MatLab, Logic Design (VHDL), C++, Python, PCB design & layout (Altium Designer, KiCAD), PCB assembly and rework (SMD reflow), FEM simulation (Ansys HFSS), LaTeX, Arduino, MacOS, Linux, Microsoft Office
- **Languages:**
  - English - fluent
  - French - fluent
  - Portuguese - fluent
  - German - Swiss High-School level

## EXTRA-ACADEMIC EXPERIENCE & INTERESTS

---

- **Extra Academic Experience:**
  - President, Vice-President and Technical manager of the Electrical Engineering Students Association (2019-2024)
  - SuperCoach for first year students (2020-2021): Coordinated a team of 21 coaches for first year students to integrate them as best as possible to the campus and university life
- **Interests:** music, audio hardware, vinyl collecting, flight simulation, swimming

References available upon request