

Eliot Abramo

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EDUCATION

Ecole Polytechnique Federal de Lausanne (EPFL) - Lausanne, Switzerland

2022 – 2025

- Bachelors in Electrical and Electronic Engineering. Fully bilingual degree in English and French.

Jumeirah English Speaking School (JESS) - Dubai, UAE

2018 – 2022

- International Baccalaureate (IB) Diploma, **43/45**.
- Completed thesis on “How effective are Lagrange Polynomial and Fourier Series in modeling the spread of COVID-19 in the UK?”

Imperial Global Summer School

2021

- Attended introductory engineering lectures and masterclasses in month-long online course.

INTERNSHIPS and WORK EXPERIENCES

Research Assistant, Laboratory of Wave Engineering (LWE) – Lausanne, Switzerland

2024 – Present

- Developed analog wave systems to function as low-power deep learning components.
- Created an optical GELU and reconfigurable radio-frequency meta-surfaces for data encoding into GHz fields.
- Utilized complex finite element simulation tools such as CST to create a meta-material to create a RF-based non-linearity system.

EPFL Xplore - Lausanne, Switzerland

Lead System Engineer – Head of Electronics & Embedded Systems

2024 – Present

- Led the electronic and control systems design for a Martian-style rover, ensuring seamless subsystem integration in a multidisciplinary 120 people team.
- Led cross-functional teams to enhance embedded systems reliability through structured testing and validation cross-functional engineering teams to improve the reliability and performance of embedded systems.

Embedded System Engineer – Team Member

2023 – 2024

- Designed and programmed PCBs utilizing STM32 and ESP32 micro-controllers, with a focus on power efficiency and fault tolerance.
- Implemented communication protocols (I2C, CAN, UART) to ensure subsystem compatibility and functionality.
- Contributed to system debugging and optimization, gaining extensive experience in hardware in the loop testing.

Head of Communication, IEEE EPFL Student Branch – Lausanne, Switzerland

2023 – 2024

- Manage all communications as well as organized various events such as the 2023 edition of the IEEEExtreme hackathon.
- Led communication efforts to promote IEEE initiatives, managing social media channels and increasing student engagement by 30%.
- Developed technical content to communicate engineering concepts, fostering increased participation within the community.

Research Assistant, American University in Dubai – Dubai, UAE

2020 – 2022

- Supported research projects for bachelor's degree students under Professor Vinod Pangracious.
- Studied blockchain and the IoT to prepare for a Dubai World Expo 2020 project.
- Supported AUD engineering students on micro-grid project in collaboration with the University of New Mexico.

Espotech Limited (Espo), Business Development Officer – Online

2020

- Interned in the Business Development Department of this e-sports fan engagement platform.
- Identified prospective clients, linked the Espo platform to their gaming interests, developed Espo's client base

Project Manager, Objective Science International (OSI) – France

2018 - 2019

- Led a team of six students to develop an electronic data-gathering device for ecological research in Mexican caves, including sensor design and data analysis.
- Presented the project at the United Nations Geneva Forum, emphasizing the impact of engineering on environmental research.

COMPETITIONS AND ACTIVITIES

4x4 in Schools - Dubai, UAE

2020 – 2021

- Designed a custom remote-controlled car, achieving a top 13 placement at the UAE National Finals.
- Won the Innovation Award for pioneering suspension dynamics and obstacle navigation design.

First Lego League (FLL) Robotics Competition - Dubai, UAE

2017 – 2020

- Awarded the Design and Innovation Award in 2020 among 250+ teams.
- Achieved top 10 placement out of 300+ teams in 2018, focusing on mechanical design and programming.

SKILLS AND INTERESTS

Core: C, C++, Python (OpenCV, ROS, Gazebo), Git.

Additional: Altium, KiCad, VHDL, Assembly, Java, Julia.

Languages: Fluent English and French; conversational Spanish.