AHMED ABDELMALEK

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"Simplicity is deceptively complicated."

First-year Master's student at EPFL with a genuine passion for my field.

EDUCATION

École polytechnique fédérale de Lausanne, *MSc in Data Science* | Lausanne, CH — 2024 - Today
École polytechnique fédérale de Lausanne, *BSc in Communication Systems* | Lausanne, CH — 2021 - 2024

EXPERIENCE

Swiss Solar Boat, *Member of the Electronic Hardware Team* | Lausanne, CH — Sept 2023 - Feb 2024
- Developed the electronic interface that connects sensors to the boat's electronic system.
- Tested sensors before implementation using C++.

UBCI, *Engineer Intern* | Tunis, Tunisia — Feb 2021 - Feb 2021
- Internship in IT systems management at the UBCI group BNP Paribas.
- Learned various skills related to software development and project management.
- Understood the software development lifecycle and the various stages in creating and deploying software.
- Learned the tools and technologies used in the software development process.

SKILLS

Programming Languages	Python, C/C++, Java, R, SQL, VHDL, Assembly, Scala, Solidity
Tools and Technologies	Git, LaTeX, ROS2, Arduino, Linux, OpenCV, VSCode

PROJECTS

Real-Time SLAM with Radar | Ecole polytechnique fédérale de Lausanne — Feb 2024 - June 2024
- Developed a real-time SLAM system using ROS2 and TurtleBot4 IMU for odometry data.
- Captured radar data and executed real-time mapping to recover environments.
- Implemented noise reduction and object tracking, leveraging point cloud optimization.
- Tested and compared our system against a deep learning-based odometry method.

Simulation and Source Detection of Infectious Processes on Networks | Ecole polytechnique fédérale de Lausanne — Feb 2024 - June 2024
- Investigated infectious disease simulation using grid-based algorithms and graph-based models.
- Analyzed differential equations to determine key epidemiological metrics.
- Incorporated stochastic elements into infection spread models to enhance their realism and reliability.

CERTIFICATIONS

French Baccalaureate — highest honors

Languages

English	Professional proficiency
French	Native proficiency
Arabic	Native proficiency

VOLUNTEERING

International Relations Specialist | Interact: Rotary Sponsored Club — Jul 2019 - Jun 2020
- Focused on the strategy to strengthen relationships between our club and other international organizations, leading to collaborations and partnerships with new ones.
- Gained visibility on various motivating perspectives for future development through transnational associations.

Secretary General | Interact: Rotary Sponsored Club — Jul 2018 - Jun 2019
- Enhanced language skills and organizational abilities.
- Gathered and analyzed necessary information, selected appropriate media for information transmission, and provided detailed strategic reports.