# Adnan Amara

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## EDUCATION

**Master of Engineering - Electrical Engineering** — Montréal, Canada
*École de Technologie Supérieure* — *January 2024 - Now*
**Courses:** *Energy Quality, Market Analysis, Creativity and Innovation.*

**Master of Engineering - Electronics and embedded systems** — Algeria
*École Nationale Polytechnique d'Oran Maurice Audin* — *December 2020 - July 2023*
**Courses:** *Analog and Digital Electronics, Advanced Processor, Discrete Control Systems, Software Engineering, Embedded Systems, Radio Frequency Systems, Antenna, Artificial Intelligence, Robotics, Radar, Telecommunication.*

**Preparatory classes in science and technology** — Algeria
*École Nationale Supérieure d'Hydraulique* — *September 2018 - November 2020*
**Courses:** *Analysis, Algebra , Organic Chemistry, Physics, Rational Mechanics, Fluid Mechanics, Strength of Materials, Economics.*

## SKILLS SUMMARY

- **Languages**: Python, C, C++, SQL, VHDL, Octave, Latex, Matlab, Assembly
- **Frameworks**: Scikit-learn, TensorFlow, Arduino, Mbed, ROS
- **Tools**: GIT, MySQL, Microsoft Office
- **Platforms**: Linux, Windows, Arduino, Raspberry
- **Soft Skills**: Leadership, Writing, Public Speaking, Time Management

## EXPERIENCE

**Instrumentation Intern** — Algeria
*Sonatrach* — *March 2023 - April 2023*

- Gained in-depth experience in instrumentation and industrial processes.
- Analyzed the Mark V lubrication system and the oil temperature control loop.
- Advanced practice with WinCC.
- Enhanced understanding of the oil and gas industry.

**Automation and Electrical Systems Intern** — Algeria
*LM Electric* — *June 2022 - July 2022*

- Designed and installed an electrical power supply system.
- Used EPLAN software for electrical schematics.
- Gained operational expertise with Tia Portal.
- Held full responsibility for setting up the electrical system.
- Acquired advanced skills in electrical engineering and automation.

**Maintenance Intern** — Algeria
*Shariket Kahraba El-Djazair-SKE* — *March 2021 - April 2021 & December 2021 - January 2022*

- Actively participated in the operations of the electrical service.
- Directly involved in the repair of electrical machines and the installation of electrical cabinets.
- Performed deep analysis of batteries and learned about protocols and digital communication systems.
- Practical learning in industrial automation processes.

## VOLUNTEER EXPERIENCE

**Muhandis Club** — Oran, Algeria
*October 2022 - July 2023*

- **Role**: Main task involved creating and managing content for Facebook, Twitter, and LinkedIn, in line with the club's mission and message.

**American Corner Oran** — Oran, Algeria
*October 2021 - October 2023*

- **Role**: Organized an electronics workshop and participated in cultural events to promote cultural exchange and engagement.

## Projects

- **Design and Implementation of an embedded electronic and computer interface for localization and navigation of a mobile robot in an unknown environment**: Developed an autonomous navigation system for an indoor mobile robot using the Robot Operating System (ROS). The project involved three key modules: mapping (SLAM algorithm with 2D/3D sensor data), localization (AMCL approach for pose estimation), and planning (utilizing the navigation stack for collision-free trajectory generation and control commands).

- **Temperature Indicator**: A system that takes into account both external and internal temperatures, equipped with two temperature probes, one to be placed outside and the other inside the habitat (both to be kept in the shade). The motivation behind the development of this system stems from periods of high temperatures, during which it is recommended to ventilate the rooms at night and keep them closed during the day.

- **Arduino Based CNC Plotter Machine**: Numerous CNC machines exist globally, with some being highly technical and complex to manufacture or operate successfully. Due to this, the decision was made to construct a straightforward CNC machine based on the Arduino platform, which is by far the easiest to construct.

## Language proficiency

- English - Fluent
- French - Fluent
- Arabic - Native