CONTACT

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Sfax,Tunisia

NETWORKS

https://www.linkedin.com/in/ahmad-ayedi/

https://github.com/AhmadAyedi

https://ahmadayedi.github.io/

EDUCATION

2019 - 2020 | Sadok Fkih high school
Baccalaureate in mathematics

2020 - 2022 | IPEIS
Two years at IPEIS in the Physics-Chemistry section

2022 - 2024 | ENIS
Electrical and Electronics Engineering

PASSIONS

- Public Motivational Speaker (English)
- Chess (Ranking: 1400 ELO)
- Hands-on Embedded Electronics
- Physics (Electromagnetism)
- Mathematics (Rigorous integrals and series calculus)

LANGUAGES

- English (Fluent)
- French (Fluent)
- Arabic (Native)

Ahmed AYADI

Embedded Automotive Systems Engineer

SKILLS

- **Embedded Systems:** C/C++, Assembly, STM32, AVR, ESP32, ARM Cortex
- **Communication Protocols:** USART, SPI, I2C, CAN, LIN, MQTT
- **Platforms & OS**: Raspberry Pi, Linux (Debian)
- **Debugging Tools:** JTAG/SWD, ST-Link, GDB, Logic Analyzers
- **Automotive Systems:** AUTOSAR, ISO 26262, Vector tools (CANdb++, LDF Explorer, CANalyzer)
- **Software Development:** JavaScript (ES6+), Python, Node.js, Express, REST APIs, WebSocket, Angular
- **Dev Tools & Integration:** Docker, Flask, Node-RED, Prometheus, Grafana, InfluxDB
- **Databases:** MongoDB, MySQL, SQLite, Firebase
- **Version Control:** Git, GitHub
- **Electrical Engineering:** Automated Systems, Electrical Machines, Power Semiconductors, Renewable Energy

RELEVANT PAST EXPERIENCE

Internships

Primatec Engineering ***2024-2025***

- Developing a multi-ECU automotive system implementing CAN/LIN protocols with STM32, Arduino, ESP32, and Raspberry Pi. Built OOP-based LIN library, system requirements, and master/slave communication for actuators and HMI integration.
- ***Tools:*** C/C++, Python, STM32, Arduino, ESP32, Raspberry Pi, Logic Analyzer, MySQL, CANdb, LDF Explorer, Shift Register

TDS Society ***2023-2024***

- Building an Industry 4.0 LabWebShop website for clients to place orders and track real-time manufacturing progress.
- ***Tools:*** HTML, CSS, JavaScript, PHP, MySQL, XAMPP

X4IN Society ***2022-2023***

- Developing an IoT webserver using ESP32 to control devices and monitor sensors remotely.
- ***Tools:*** ESP32, C++ , HTML, CSS, JavaScript, Firebase

Personal Projects

- **Web Development:** ***2023-2024***
  - Developing bookstore, chat-app, and task management websites.
  - ***Tools:*** Node.js, Express, MongoDB, Angular, REST APIs, Websocket, WSL, Redis
- **Wiper Control System :** ***2024-2025***
  - Building a distributed wiper control system using two Raspberry Pis communicating via CAN and LIN. Integrated Node.js/Express backend, Angular frontend, and actuator control based on user inputs and sensor data.
  - ***Tools:*** Raspberry Pi, CAN, LIN, Angular, Node.js, Express, MongoDB, Python, Logic Analyzer, Vector Tools
- **Network KPI Monitoring :** ***2024-2025***
  - Designing a Raspberry Pi-based system to monitor real-time network KPIs and inspect traffic-level activity using DNS filtering and packet analysis tools.
  - ***Tools:*** Raspberry Pi, Wireshark, Pi-hole, DNS, Tkinter
- **IoT Monitoring System :** ***2024-2025***
  - Developing a real-time sensor monitoring system with Raspberry Pi and ESP32, featuring data streaming, visualization, and a custom interactive dashboard.
  - ***Tools:*** Raspberry Pi, ESP32, MQTT, Node-RED, Flask, InfluxDB, Prometheus, Grafana, HTML, TailwindCSS, JavaScript