# Amir Chaieb

*3rd Year Embedded Systems Engineering Student*

Tunisia | amirrchaieb@gmail.com | +216 29 506 403 | LinkedIn: Amir Chaieb

## Profile

As a final-year embedded systems engineering student, I'm looking for an internship in automotive embedded systems. I have strong skills in C/C++ and embedded software, and I'm building more experience with ECU communication protocols like CAN and LIN, along with software simulation.

## Education

**National School of Electronics and Telecommunication of Sfax** — Embedded Systems Engineering

- **Coursework:** IoT, Artificial Intelligence, C/C++, Java, Microcontrollers and Microprocessors, Wireless Communication, Mobile and Web Development

**Preparatory Institute for Engineering Studies of Sfax** — Technology Section

- **Coursework:** Mathematics, Physics

## Experience

**Web Developer Intern**, Prestacode — Sfax, Tunisia

Worked on full-stack web development using Angular and Spring Boot. Contributed to designing dynamic UIs, developing RESTful APIs, and optimizing MySQL database interactions.

**Tools Used:** Angular, Spring Boot, MySQL, REST API, Git, Postman, UML, SWAGGER.

**AI Developer Intern**, Proximind — Sfax, Tunisia

Developed an AI-powered job search and recommendation platform integrating web scraping, classification, and CV–offer matching. Designed backend logic and embedding-based search using vector databases.

**Tools Used:** Django, Python, LangChain, HuggingFace Embeddings, FAISS, Flask, HTML/CSS/JavaScript, GitHub, UML, SWAGGER.

## Projects

**Smart Agricultural Monitoring and Management System – End-of-Year Project**

- Developed a real-time monitoring system using ESP32 and LoRa for long-range communication. Visualized sensor data (temperature, humidity, light) on an Angular dashboard and integrated AI via Flask for signal-based analysis.

  **Tools Used:** ESP32, LoRa Shield v1.4, Angular, Flask, Python, Embedded C/C++, Firebase.

**Intelligent Visual Inspection System – Vision-Based Quality Control Project**

- Built a prototype for defect detection using OpenCV and Python, performing real-time analysis via an IP camera feed and TCP/IP communication with a simulated PLC.

  **Tools Used:** Python, OpenCV, PyQt5, TCP/IP, Flask.

**CAN Bus Communication Simulation – Automotive Embedded Project**

- Designed and implemented a CAN communication simulator in C/C++ for ECU message exchange, including frame structure, arbitration, and error handling.
- Simulated ECU-to-ECU communication for early software validation without physical hardware. **Tools Used:**

C/C++, CAN protocol, Linux SocketCAN, Automotive communication concepts.

## Technologies

**Languages:** Java, Embedded C/C++, JavaScript, TypeScript, Python, VHDL, SQL.

**Software:** MATLAB, LabView, Figma, ISIS, ModelSim, Altium.

**Frameworks:** Angular, Flutter, Spring Boot, Node.js.

**Databases:** MySQL, MongoDB, Firebase.

**Embedded Electronics:** ESP32, STM32, Arduino, Raspberry Pi, Renesas.

**Version Control:** Git, GitHub.

**Communication Protocols:** CAN, TCP/IP, LoRa.

## Community Life

**President of Tunisian Programming Lovers (TPL)**, ENET'Com

- Organized national coding competitions and technical workshops.
- Mentored students in problem solving and competitive programming.

## Additional Information

- **Languages:** Arabic (Native), English (Professional), French (Good)
- **Interests:** Robotics, Automotive, Artificial Intelligence, Web and Mobile Development, New Technologies