

FADI TARKHANI

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EDUCATION

ESPRIT

Master's, Software Engineering

September 2023 - June 2026

- Web and Mobile Development: Developed interactive web applications and built a solid foundation in programming concepts.
- Team Collaboration: Engaged in group projects, taking on key responsibilities to achieve shared goals.

ISIMM

Bachelor's, Embedded Systems

September 2019 - June 2023

- Microcontroller Programming: Developed skills in C/C++ for programming microcontrollers
- IoT Systems: Built IoT prototypes and worked on data transmission between sensors and a central processing unit.

PROFESSIONAL EXPERIENCE

Tunisie Telecom

Intern

Jendouba, Tunisia

July 2024 - August 2024

- Created a project management solution using Spring Boot and React, featuring deadline tracking and task assignments.

BTA Best Technology Anywhere

Intern in Embedded Systems Development

Monastir, Tunisia

February 2023 - June 2023

- Designed and developed an intelligent agricultural supervision system utilizing the ESP32 board and LoRa technology.
- Programmed PLCs for local and remote control via the Blynk IoT mobile app, web page, and GSM phone calls.

PROJECTS

IOT Project

Ariana, Tunisia

December 2024 - January 2025

- Designed an automated pool monitoring system integrating water level, motion, and temperature sensors
- Managed a solenoid valve to maintain optimal water levels, activated nighttime lighting, and sent user notifications via MQTT
- Simulation conducted using CupCarbon and an ESP32 microcontroller.

Embedded Operating Systems Development

Ariana, Tunisia

September 2024 - January 2025

- Developed an embedded Linux system for BeagleBone Black with Buildroot/Yocto toolchain, custom kernel module, syscall, and bootable SD card.

Smart Parking System

Ariana, Tunisia

2024 - 2025

- Developed an Arduino-based parking system with sensors for temperature, color, and motion detection
- Automated access control, vehicle location, and real-time data storage using I2C, UART, and SPI protocols.

IoT-Based Vehicle Security System

Ariana, Tunisia

December 2024 - January 2025

- Developed an IoT-enabled vehicle security system integrating sensors with ESP32 microcontrollers for real-time monitoring
- Implemented ESP-NOW and MQTT communication, data processing via Raspberry Pi, and a web interface for visualization
- Achieved seamless functionality and robust testing results.

Connected Car System

December 2024 - January 2025

- Developed a smart car system with STM32F4, including temperature monitoring, obstacle detection, door security, cabin presence alerts, and real-time data transmission to ThingSpeak via ESP8266.

SKILLS

Skills: HTML/CSS, Printed Circuit Board (PCB) Design, Android Development, spring boot, C/C++, Java, ASP.NET, Firebase, MySQL, Embedded Linux, Node Red, Figma, Oracle, VHDL, STM32, ESP32

Languages: French, Arabic