Mohamed Gharab

mohamed.gharab@ensi-uma.tn linkedin.com/in/mohamed-gharab-4a4b0825a
github.com/MOHAMMED75G +21625401554

Education

Master's Degree in Smart Systems and IoT, *National School of Computer Science (ENSI)*, 2024 - Present
National Diploma of Engineering in Computer Science *National School of Computer Science (ENSI)*, 2022 - Present
Diploma of First Cycle University Studies *Preparatory Institute for Engineering Studies(IPEIM)*, 2020 - 2022

Contributions

- **Logistics Manager** at *Citizens Positive* (2023): Responsible for organizing and managing logistics operations, ensuring smooth and efficient support for events and activities.
- **Expert Member** at *ENSI Competitive Club*: Actively involved in supporting the club's mission, helping peers prepare for competitive programming contests and enhancing problem-solving skills.

Skills

Programming: Rust, C/C++, Java, Assembly, Python, JavaScript, PHP, VHDL
Web/Mobile Development: HTML, CSS, React.js, Node.js, MongoDB, Flutter, Dart, Firebase
Embedded Systems: nRF52, ESP32, STM32, UART, SPI, BLE
Tools: Windows, Linux, VS Code, Eclipse, Git/GitHub, Android Studio

Experience

Summer Internship - Actia ES *July - August 2024*
Implemented multi-protocol communication and control in Rust for the nRF52832 microcontroller, enhancing real-time data processing and embedded system performance.
Summer Internship - Wanderz, Paris *June 2024*
Developed the frontend of the "Wanderz for Partners" website using React.js, improving user interaction and dynamic features.

Projects

Multi-Protocol Communication in Rust *July - August 2024*
Engineered seamless communication for the nRF52832 microcontroller by implementing UART, SPI, and BLE protocols in Rust, enabling smooth data exchange across devices for enhanced interoperability.
Keywords: Rust, UART, SPI, BLE, nRF52832

Wanderz for Partners Website *June 2024*
Developed a dynamic, responsive frontend for Wanderz's partner platform using React.js. Prioritized interactive components and adaptive design to enhance user experience and engagement.
Keywords: React.js, Frontend, Responsive Design, Interactive Components

Hexapod Robot and HexaSwift App *Jan 2024 - Present*
Led the development of a six-legged hexapod robot, integrating a Raspberry Pi for central control and an Arduino Mega for precise leg movement. Designed to traverse diverse terrains and perform automated delivery tasks, with remote control via a Flutter app.
Keywords: Hexapod, Raspberry Pi, Arduino Mega, Robotics, Flutter, Dart, Flask, Remote Control

Achievements

- Competed in the TCPC Tunisian Collegiate Programming Contest, representing ENSI in both the 2024 and 2023 editions, demonstrating advanced problem-solving and programming skills.
- Awarded **Second Place** at EPC 3.0 (Dec 2023), recognizing excellence in embedded systems and coding.
- Secured **First Place** in the CRbot Challenge ISIMM (Nov 2023) for designing a high-performance line-following robot.

Certifications

- IEEEXtreme 16.0, 17.0, and 18.0: Programming Competition Participant
- Meta Hacker Cup: Advanced to Round 2 (2024)

Languages

- French, English, Arabic