EL BOUYED Zainab

in **Zainab EL BOUYED**   ✉ **zelbouyed@gmail.com**   📱 **+212675534162**   ○ **ZainabElbouyed**

First-year engineering student specializing in Ubiquitous and Distributed Systems - Cloud & IoT, passionate about emerging technologies and their application in connected environments. Curious and motivated, I am developing skills in programming, software development, distributed system architecture, embedded system management, and cloud computing. With strong adaptability and an analytical mindset, my objective is to apply my knowledge to concrete and innovative projects that take advantage of IoT and distributed solutions to address current technological challenges while deepening my expertise in data management and system performance optimization.

Education

2024-Present	Engineering cycle at INPT - **Ubiquitous and Distributed Systems Engineering - Cloud & IoT.**
2022-2024	Preparatory classes for engineering schools (CPGE) **PSI, Okba Ibn Nafea High School - Dakhla.**
2022	Baccalaureate in Physical Sciences **with highest honour, Lalla Khadija High School - Dakhla.**

Projects

GreenTech SmartBin: Connected Solution for Sustainable Waste Management   October 2024 - Present

- **Problem Identification**: Urban waste management inefficiencies, including overflowing bins, high collection costs, and environmental impact due to inefficient routing.

- **Project Development**: Developed an intelligent waste bin using IoT, Arduino, and sensors for automated waste level tracking. Implemented AI-based algorithms for predictive waste analysis and optimized collection schedules. Created a web application using JavaScript, HTML, and CSS to manage and visualize collection routes efficiently.

- **Outcome**: Improved waste management efficiency through real-time monitoring, optimized collection routes, and reduced environmental impact by reducing fuel consumption and carbon emissions.

Technical skills

- **DevOps Tools**: Version Control (Git,GitHub), Bash scripting.

- **Programming Languages**: Java (POO), C, C++ (POO), Python.

- **Web Development**: HTML, CSS, JavaScript.

- **Frameworks**: Bootstrap.

- **Embedded & IoT Development**: Arduino, ESP32.

- **Embedded & Distributed Systems Architecture**: Software Architecture (UML: Unified Modeling Language), Embedded systems architecture, Processor and memory management (CPU, RAM, cache optimization), Hardware-software interaction.

- **Operating Systems**: Windows, Linux (Ubuntu).

- **Database Management**: Relational databases (SQL).

Soft skills

- **Teamwork**: Experienced in collaborating on group projects, actively contributing and supporting peers.

- **Communication**: Able to clearly convey ideas, both written and verbal.

- **Problem Solving**: Strong analytical thinking with a creative approach to troubleshooting.

- **Adaptability**: Quick to learn new technologies and adapt to changing environments.

- **Time Management**: Skilled at managing multiple tasks and meeting deadlines efficiently.

Languages

French: Advanced   **English**: Fluent   **Arabic**: Native