# EL BOUYED Zainab

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ZainabElbouyed

First-year engineering student specializing in Ubiquitous and Distributed Systems – Cloud IoT. I have a strong interest in **front-end web development**. I am currently seeking a **two-month internship** to apply my skills, deepen my knowledge, and grow in a dynamic environment.

### 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

• Developed a smart bin using IoT, Arduino, and sensors for automated monitoring of fill levels, and implemented AI algorithms to optimize collection schedules. A web application was created (HTML, CSS, JavaScript) to efficiently manage and visualize collection routes.

# AirSense – Smart Air Quality Monitoring System for Schools

December 2024 - February 2025

• Developed a smart air quality monitoring system for schools using **AI**, **IoT**, and **low-power sensors**. Real-time tracking, automatic alerts, a **mobile application** (**JavaScript**, **HTML**, **CSS**, **Bootstrap**, **Express.js**, **Next.js**), and dynamic ventilation control.

## EasyCrowd - Smart Crowd Management (World Cup 2030)

January 2025 – April 2025

• Developed an intelligent platform (HTML, CSS, JavaScript, Express.js, React.js) combining AI, IoT, and geolocation to optimize crowd management during large-scale events. The platform enables real-time flow monitoring, detection of overcrowded zones, and personalized route suggestions for visitors. Organizers receive automatic alerts and visualize data through heatmaps.

#### Personal Portfolio Website l HTML, CSS, JavaScript et Bootstrap

March 2025 - May 2025

Created a first personal website, an online portfolio, to learn the fundamentals of web development and gain skills in design and layout.
 GitHub Repo Online Portfolio

## 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, Express.js, React.js. 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 & Kali).

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: (B2) English: (B1) Arabic: (C2)