

# AYOUB ACHAK

SOFTWARE ENGINEERING STUDENT

## ABOUT ME

Sharing was the key for me to learn So much in the tech field. Helping People Helped Me practice My knowledge.

## PROFESSIONAL EXPERIENCE

### SOFTWARE ENGINEERING INTERNSHIP

05/23 - 09/23 | cbi.ma | Internship

I spearheaded the development of an innovative Cisco Router / Switch automation project, resulting in the creation of a versatile automation device powered by a Raspberry Pi Zero W, Achievements:

- Designed and created a groundbreaking automation device using Raspberry Pi Zero W and a 4-inch LCD screen to streamline operations for Cisco devices.
- Implemented versatile connectivity options including Serial, Telnet, and SSH, enabling users to collect and manage device logs, execute upgrade procedures, and run automated network commands, with logs tracked and stored for reference.
- Addressed a critical company challenge by providing a user-friendly graphical interface for clients, reducing the need for manual command execution and on-site visits.
- Deployed the application as a Linux service, powered by a Flask server and a React (TypeScript) frontend, delivering updates via CI/CD pipelines and ensuring seamless communication through WebSocket technology.
- Revolutionized operational efficiency, enabling remote automation for clients and eliminating the need for on-site personnel.

### PROJECT MANAGER | FULL STACK DEVELOPPER

04/22 - 01/23 | Kezakoo.com | Part Time

Making UI/UX/DX and backend improvements, to make the experience usable and enjoyable for Millions of Moroccan Students, Achievements :

- Accelerated feature delivery by 40% through streamlined deployments (BitBucket, AWS).
- Increased student engagement by 30% with a gamification system (PHP, WordPress, JS).
- Improved resource accessibility, reducing search time by 50% (AjaxSearchPro, ElasticSearch, Kibana).
- Efficiently managed the Dev Team, achieving a 20% productivity boost.
- Enhanced mobile app performance, resulting in a 25% increase in user satisfaction with responsive APIs.

### PROJECT MANAGER | IOT, ANDROID AND FULLSTACK DEVELOPPER

05/22 - 09/22 | mirattibags.com | Part Time

Leading the next generation of IoT-connected Luxurious Leather bags in Morocco, Achievements :

- Created an IoT Android app with Gatt Server for BLE, incorporating Nrf, RFID, GPS, and 3G connectivity. Built using open-source solutions and technologies including Android Studio, Bitbucket, Java, and was hosted on Github.
- Collaboration with protomain.com for the hardware. Ensure the meet of quality to our customers.
- Creation and deployment of a portfolio website me.mirattibags.com for the Miratti community.
- Adding User Auth and SMTP Setup on mirattibags.com for sharing data between apps via WordPress RestAPI.

## CONTACTS

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🌐 github.com/ayoubachak

🌐 linkedin.com/in/ayoubachak/

## EDUCATION

2019 - 2023

CS AND AI ENGINEER'S DEGREE

ENSAM Casablanca Engineering School

2023 - PRESENT

SOFTWARE ENGINEER'S DEGREE

Brest National School of Engineering

## PROGRAMMING LANGUAGES

Python3 . C . C++ . Rust . Java . JEE . PHP . Ruby . JavaScript . TypeScript . MATLAB . R . Bash

## DATABASE

PL SQL/ORACLE SQL . MySQL . SQLite . MongoDB . Neo4j . SurrealDB

## DEPLOYMENTS AND CD / CI

AWS . Github . Git . BitBucket . Docker . Kubernetes

## MACHINE LEARNING TOOLS

Tensorflow . PyTorch . SKlearn . OpenCV . Neat . Pandas . Numpy . Matplotlib . SciPy . Keras

## WEB TECHNOLOGIES

- Backend : Django - NodeJS/ExpressJS - WordPress - Laravel - Flask - Spring Boot - GraphQL . web sockets . REST APIs . web security.
- Frontend: React - vite - HTML - CSS - Angular - JQuery - vanillaJS - D3.js - Three.js

## BIG DATA

Kafka . Map Reduce . ElasticSearch . Hadoop . Spark . Zookeeper . LogStach . Kibana

## FRAMEWORKS

Electron JS . React Native . Android Studio . PyQt5

## NON PROGRAMMING LANGUAGES

Arabic . English . French.

## EMBEDDED SYSTEMS

Arduino . Raspberry Pi . Esp32/82

## DESIGN AND 3D MODELING

Catia . Blender . Figma . Canva

## PROJECT MANAGEMENT

ClickUp . Scrum . Trello . Slack . Discord

## OTHER

System Design . Networking . Bots.

# ACADEMIC EXPERIENCE

## **VICE PRESIDENT | TRAINING MANAGER | SPONSORING MANAGER**

09/21 - 06/23 | @ciamcasablanca | Part Time

- Training 200+ members in Software skills: Python, AI, ML, DL, C, Web Dev, Catia.
- Contacting Tech Sponsors. Mentioning: Binance, IBM... .
- Management of the club's comities.
- Contestant and Representant in the Moroccan National Programming Contest 2022.

## **TRAINING MANAGER | TECHNICAL CONSULTANT**

09/21 - 06/23 | @aem.mechatronics | Part Time

- Training 200+ members in Robotics: C/ C++, Arduino, Python, Esp32/82, Raspberry Pi 4, Catia...etc, and Supervising Projects.
- 1. **ExtraConnect** : Led and managed the development of comprehensive fleet management solutions, enabling real-time data collection using TCP communication on a central server.
- Utilized a diverse tech stack, including Python for backend development, OpenCV for image processing, Django for web applications, Tensorflow for machine learning, Pandas and Numpy for data analysis, CNN and YOLO for object detection, Sockets for network communication, Mapbox API for mapping, Raspberry Pi 4 for edge computing, PyQt5 for the user interface, and Firebase for cloud integration.
- Implemented robust cryptographic techniques and hashing algorithms to ensure data security.
- Designed and developed a data visualization system to provide valuable insights to stakeholders.
- Efficiently managed server instances, ensuring high availability and scalability.
- 2. **Silent Storm (3rd Prize Winner)**: Pioneered the development of a native IoT watch tailored for individuals with speech impairments, enabling them to send text messages to a mobile app using Bluetooth communication.
- Employed Esp32 microcontroller and MIT App Inventor for seamless device-to-app integration.
- Created an intuitive TFT screen interface for user interaction.
- 3. **FireBuster** : Played a pivotal role in the development of a sophisticated Gas and Flame detection system that transmits real-time data and sends SMS alerts upon detecting fires.
- Leveraged XAMPP for web server hosting, PHP for server-side scripting, and MySQL for data management.
- Utilized Esp32 microcontroller, SIM 800 module for SMS communication, Gas Sensor, Flame Sensor, and EPROM for initial configuration setup .
- 4. **Minho (3rd Prize Winner - MazeRunner Competition, 2020)**: Led a highly skilled team in the programming of a robot to excel in solving complex mazes efficiently (3rd Prize Winner - MazeRunner Competition, 2020).
- Demonstrated expertise in algorithm design and optimization strategies to achieve the shortest completion time.
- Leveraged Arduino microcontrollers and C/C++ programming to control the robot's navigation and decision-making processes.

# COMPETITIONS

- Orange Digital Transformation AI and Cloud Competition (2023): 1st Prize Winners for the developpement and Deployment of a Deep Learning Model On a Mobile App wich gives full recovery plan based on a picture of a Plant, using Python and Flutter and Google Colab with tensor flow for model training, Fine tuning the model to achieve 94% accuracy, the project was recognized by the Minister of Education and Digital Transformation in Morocco.
- AMSA6 Hackathon by Alten Maroc (2022): Prototype of V2X ( V2P and V2N ) technology, Made it to finals.
- Orange Digitale Center Hackathon by Orange : Participated with ExtraConnect and made it to finals.
- Techaton 2021 by Capgemini Engineering Maroc : Prototype of Vehicule Automation using Python and Raspberry pi, made it to finals.
- Oreal BrandStorm 30 by l'Oreal (2022): Prototyped a Massaging Digitale FaceMask Controlled by a Mobile App with Deep learning model for Face-Care type.
- Acquisition Days at Ensam Casablanca (2022) ( Won The Best Project Manager Award) : Participated with FireBuster (Finals) and Silent Storm (3rd Prize winner).
- MNPC2022 by OCP, 1337 and UM6P (2023): 20/130 teams in the whole nation.

# GAMES

- Dijkstra Visualizer: Python, PyGame.
- Minecraft 1.16+ Forge Modding: Java, Open source Minecraft Forge Code.
- AR Snake Game: Python, Mediapipe, OpenCV, PyGame.

# VOLUNTEERING

- Ambassador for Huawei HCIA AI and HCIA Big Data

# CERTIFICATIONS

HCIA AI . HCIA Big Data . HCIA 5G