Mohamed Khayri Allala

Software Developer

(+216) 54 192 964 | mohamedkhayri.allala@ensi-uma.tn | LinkedIn | GitHub | Portfolio

English: Professional, **French:** Professional, **Arabic:** Native

Professional Experience

ToCodePro - Graduation Internship

Software Developer - Intern — Jan 2024 – June 2024
Monastir, Tunisia

- Created **Automated Data Extraction Module** with OCR technology using **Tesseract and Azure Cognitive Services** for accurate text extraction from scanned documents.
- Implemented **Document Classification Module** with Machine Learning models **(Support Vector Machine)** for precise classification; allowed user-defined categories.
- Implemented **Document Indexing Module** using **Algolia API solution** with full-text search and logic-based indexing for efficient retrieval.
- Developed and Integrated **Chatbot** with **Fine-Tuning technique** using **Entreprise h2oGPTe** into User Interface for user guidance, troubleshooting, and support with context awareness in insurance domain.
- Implemented **batch processing** for injecting documents into the system, streamlining the data ingestion process and **reducing processing time processing by 10%**.

Proxym Group - Summer Internship

Software Developer - Intern — July 2023 – Sep 2023
Sousse, Tunisia

- Spearheaded the development of **role-based access control** and **user authentication** for the developers' dedicated mobile application, **resulting in a 25% decrease in login errors**.
- Developed **RESTful APIs** using **Kotlin** to facilitate communication between front-end and back-end parts and implemented **CRUD operations** to handle database interactions efficiently.
- Utilized the **MVC (Model-View-Controller)** architecture to maintain separation of concerns and ensure code modularity & **optimized API performance through caching and asynchronous programming**.

Projects

TV Channel Mobile App — Flutter, Firebase, Provider — Oct 2023 – Dec 2023

- This mobile app is a comprehensive news platform for a TV channel, providing users with **real-time news updates** and **video streaming**.
- Integrated **Firebase** for backend services, enabling secure user authentication, real-time database management, and cloud storage.
- Utilized the **Provider package for state management**, allowing seamless data sharing across different components and **Flutter Cupertino** for developing intuitive user interface, optimizing user experience and accessibility.

Predictive Student Dropout Risk App — Angular, Flask, Microservices — Dec 2022 – May 2023

- Designed and built a predictive **Machine Learning student dropout risk model** to identify students at risk of dropping out using data analysis and machine learning techniques.
- Utilized **Angular framework for the front-end development** to create an interactive user interface for educators to view and analyze student risk scores.
- Developed **Flask-based microservices** to handle data processing, model training, and prediction tasks.

Technical Skills

Javascript, HTML5, CSS, SQL, Kotlin, C++, Docker, Firebase, Git, Flutter, ReactJs, Flask, NodeJs, ExpressJs, MongoDB

Education

Preparatory Engineering Institute — Monastir, Tunisia
Master degree, Mathematics and Physics — Sep 2019 – July 2021
National School of Computer Science-ENSI — Manouba, Tunisia
Bachelor degree, Computer Science and Engineering — Sep 2021 – July 2024

Extracurricular Activities

- **Project Manager – Open Source Software ENSI Club** — Sep 2022 – Sep 2023
- **Beta Microsoft student ambassador** — Nov 2021 – Oct 2023

- **Project Manager – Open Source Software ENSI Club** — Sep 2022 – Sep 2023
- **Beta Microsoft student ambassador** — Nov 2021 – Oct 2023