Meriem Ouerghi

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SUMMARY

I am a final year computer science engineering student with strong problem solving skills and a solid foundation in IT. I am actively seeking an end-of-study internship to officially launch my professional career.

EDUCATION

Higher Institute of Computer Science (ISI Ariana) Ariana, Tunisia
Engineering Degree in Engineering and Development of Communication Infrastructures and Services *2022 – 2025*

Faculty of Sciences (FST Manar) Manar, Tunisia
Bachelor's Degree in Information and Commmunication Technologies (Mention : Good) *2019 – 2022*

TECHNICAL SKILLS

Languages: Python, C/C++, Java, SQL (MangoDB), Solidity
Frameworks: React, Node.js, Flask, JUnit,
Developer Tools: Git, Docker, Google Cloud Platform, VS Code, PyCharm, Eclipse, Android Studio, Postman, VirtualBox, Remix, Wireshark
Libraries: OpenCV, pandas, NumPy, Matplotlib, Tensorflow, keras, pytorch

EXPERIENCE

Talan Tunisia Charguia I, Tunisia
Summer Camp intern *July 2024 – Sep 2024*

Built the "Microscan" platform to automate microbiome analysis and implement access controls tailored to roles like doctors, research labs, and analysis labs.

- Built an interactive dashboard for labs to predict health status from microbiome data (accuracy =94percent).
- Integrated the chatbot for personalized health recommendations.
- Implemented a subscription model allowing labs to securely purchase microbiome data.

Technologies used: IA, RNN, LSTM, Gemini, Flask, Node JS, Angular, Postman.

This project was awarded the Bronze Prize at the Summer Camp.

Elite Consulting Tunis, Tunisia
Artificial Intelligence intern *July 2023 - Sept 2023*

Optical Character Recognition (OCR) Software Implementation

- Developed an Optical Caracter Recognition software system to extract text from images.
- blended image preprocessing techniques using OpenCV for better accuracy.
- Used Pytesseract to detect and convert printed or handwritten text into a digital format.
- Implemented data extraction workflows to process tabular content efficiently (excel format)

Technologies used: Python, OpenCV, Tessaract OCR, IA .

Adwya Marsa, Tunisia
End-of-study intern *Feb 2022 - Jun 2022*

Intelligent System for Real-Time Compliance Detection of Tablets

- expanded an intelligent system for real-time monitoring and automatic detection of tablet non-conformance.
- Constructed a real-world dataset from the industry, including data collection, adjustment, and labeling.
- enhanced a machine learning model using YOLOv5 for recognizing non-compliance in tablets (accuracy = 91percent).
- Utilized computer vision techniques to enhance the accuracy of compliance detection.

Technologies used: YOLOv5, Flask, Python, Computer Vision, CRISP .

PROJECTS

University Chatbot – Empowering ISI Hackathon | *Vue.js, Google Gemini LLM, ChromaDB, NLP, gTTS.*

- Created an AI-powered university chatbot to improve information accessibility, supporting detailed search across various document types (PDFs, images, CSVs).
- Integrated Google Gemini LLM for generating accurate, contextually relevant responses, leveraging NLP for precise text segmentation.
- Enhanced search accuracy with ChromaDB for vector-based similarity search, enabling relevant document retrieval.

Generative Cryptography – DeepFlow Hackathon | *SVM, Deep Reinforcement Learning, Cryptography, Network Security*

- Developed an AI-driven architecture to enhance cybersecurity against quantum threats, using Generative Cryptography to adapt cryptographic keys based on real-time risk assessment.
- Built a Support Vector Machine (SVM) to analyze network packets and firewall logs, classifying them as risky or non-risky, ensuring precise threat detection.
- Integrated Deep Reinforcement Learning (DRL) to autonomously modify cryptographic keys in response to identified risks, creating a self-adaptive security model.
- Implemented a continuous learning process for non-risky cases, maintaining system improvement over time.

Project Planning for the "Allo Taxi" Application | ***Jira, Agile, Scrum***

- Definition of epics.
- scheduling dates.
- creation of user stories and task management.

CI/CD Pipeline Setup for a Web Application | *Jenkins, Docker, Kubernetes, Linux, GitHub*

CERTIFICATION

Openclassrooms Secure Your Network with VPN and Firewall — 2024

Microsoft Azure Data fundamentals — 2024

CCNA 1 —2024

Microsoft Azure AI —2023

Microsoft Excel —2023

VOLUNTEERING

IEEE — CS Member
Competitive Programming Workshops and Competitions
TedX FST — Sponsoring Team
Communication with Societies and Sponsors