

ABDELLAH AFROUKH

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ABOUT ME

Master's student in IT Security and Big Data, seeking an end-of-studies internship (PFE) in cybersecurity-related fields. Passionate about web development and emerging technologies, I combine technical skills and creativity to tackle complex challenges in IT security and data analysis.

EDUCATION

Master's in IT Security and Big Data	2024 - Present
Faculty of Science and Technology, Tangier	
Bachelor's in Computer Application Development Engineering	2020 - 2024
Faculty of Science and Technology, Tangier	

EXPERIENCE

End-of-Studies Internship – Smart Automation Technologies	April 2024 - June 2024
<ul style="list-style-type: none">– Development of a full-stack web application for managing physical, legal, and organizational structures.– Implementation of a modular architecture and intuitive interface for resource administration.	

PROJECTS

NMAP-AI: Autonomous Nmap Command Generator with KG-RAG and Fine-Tuning
<ul style="list-style-type: none">– Agentic AI system converting pentest intentions into optimized Nmap commands with RAG module based on Knowledge Graph (Neo4j). LoRA fine-tuning of T5/Phi-4 for natural language to secure command translation.
AI-Driven Unified SOC with Multi-Agent Pipeline
<ul style="list-style-type: none">– Modular SOC architecture augmented with LM Studio agents. Research modules: confidence calibration, distributed SOC (Kafka/RabbitMQ), anomaly detection (Isolation Forest), and MITRE+XAI mapping for explainable detection.
Malware Analysis through Unsupervised Learning
<ul style="list-style-type: none">– Complete analysis pipeline (FastAPI, Angular, Kubeflow, Scikit-learn) with ML automation and visualization (PCA, K-Means, DBSCAN).
FinTech Platform with Microservices, Blockchain and Web3
<ul style="list-style-type: none">– Platform integrating microservices, Ethereum blockchain and MetaMask (FastAPI, Solidity, Web3.py, Docker, AWS, Kubernetes) with CI/CD deployment and Grafana/Prometheus monitoring.

TECHNICAL SKILLS

Cybersecurity: Nmap, Pentesting, SOC, Malware Analysis, Anomaly Detection
Machine Learning & AI: PyTorch, TensorFlow, Scikit-learn, Kubeflow, Fine-Tuning (LoRA), RAG, Neo4j
Big Data: Kafka, RabbitMQ, Spark, Hadoop, PostgreSQL, MongoDB
Blockchain & Web3: Ethereum, Solidity, Web3.py, MetaMask
DevOps: Docker, Kubernetes, CI/CD, AWS, Grafana, Prometheus
Development: FastAPI, Angular, React, Django, Python, JavaScript, C++, Java

CERTIFICATIONS & LANGUAGES

Certifications: Fundamentals of Deep Learning (Nvidia) — Fundamentals of Accelerated Computing Using CUDA Python (Nvidia) — Introduction to Cybersecurity (Cisco)
Languages: Arabic (Native) — French (Fluent - technical level) — English (Fluent - technical level)
Activities: Active member of CyberForce club — Member of the sports club board — Founding member of FST E-sports club