







BAHAEDDINE MELKI

CYBER SECURITY ENGINEERING
STUDENT AT EURECOM

CONTACT

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SKILLS

Web development :
HTML / CSS / Bootstrap / Angular /
Php / NodeJs

Mobile development :
Flutter / Firebase / ReactJs

Programming languages :
C / C++ / Python / Matlab / RUST /
Java / C#

Data Base :
MySQL / Oracle / MongoDB

Machine Learning :
Tensorflow / Keras / Pytorch /
Sklearn

Security :
Network Protocols / Cryptography /
OSINT Analysis / Reverse engineering

SUMMARY

Dual-degree postgraduate in Security of Computer Systems and Communications, specializing in cybersecurity, cryptographic protocols, and deep learning. Aiming to become a digital forensics and incident response specialist or application-based penetration tester, with hands-on experience building deep learning models and a drive to leverage AI to enhance security measures

EXPERIENCE

Intern

KPMG Tunisia | July - August 2023 :

- Diagnosed and resolved technical issues for over 30 users within the company's internal network, enhancing user productivity and reducing average support resolution time.
- Performed network troubleshooting and privilege management, maintaining system security and ensuring proper access controls.
- Provided hands-on support for PC configurations, software installations, and technical troubleshooting, reducing recurring issues by 15% through preventative maintenance and awareness sharing.

Intern

IEEE Tunisia Section | July - September 2023 :

- Developed machine learning models for validating payment receipts using Computer Vision (CV) and Convolutional Neural Networks (CNN), achieving 89% accuracy and reducing manual verification time.
- Integrated machine learning solutions into IEEE Tunisia's accounting platform, streamlining financial verification and enhancing operational efficiency.

PROJECTS

Implementation of zero-knowledge SNARK :

Eurecom | October 2024 - January 2025

- Engineered a ZK-SNARK protocol in Rust to create secure cryptographic proofs.
- Optimized cryptographic processes for faster proof generation, enabling secure, private data transactions in compliance with best practices.
- Conducted extensive testing and debugging to ensure robust protocol performance, reducing error rates and improving stability.

Keywords : ZK-SNARK, Rust, cryptography, data privacy, proof generation.

Energy Consumption Prediction:

SFM Technologies | January 2024 - May 2025

- Designed and implemented predictive models using LSTM and GRU for time-series analysis of energy consumption data from SFM's smart meter "Voltix," achieving a prediction accuracy of 91% and helping optimize energy management.
- Analyzed energy trends to identify high-consumption patterns, providing actionable insights that could improve efficiency by 70% for company clients.
- Collaborated with data teams to preprocess and validate input data, improving model reliability and reducing data noise impact by 40%.

Keywords : LSTM, GRU, time series analysis, energy prediction, data preprocessing.

Opport'une – Internship and Job Opportunities Mobile App :

Sup'Com | October 2023 - February 2024

- Developed Opport'une, a mobile app that connects job seekers and recruiters, leveraging Flutter for a sleek frontend and Firebase for secure backend functionality.
- Built essential features such as job listings, user profiles, and application tracking, enhancing user experience and engagement.
- Integrated real-time notifications for job postings, resulting in faster application responses and increased platform activity.

Keywords : Flutter, Firebase, mobile app development, android studio, android and ios emulation.

EDUCATION

Post-Master's Degree in Security of
Computer Systems and Communications
EURECOM | 2026

- Keywords: Cybersecurity, Cryptography, AI in Security, DFIR, Penetration Testing, Network Security, Secure Systems Design

National Engineering Degree: ICT
Higher School of Communication of Tunis
(SUP'COM) | 2025

- Keywords: Information and Communication Technology, Network Protocols, Telecommunications, Data Analysis, System Design.

Preparatory Degree in Mathematics-
Physics (DEUPC)

EI-Manar Preparatory Institute for
Engineering Studies | 2022

- Keywords: Advanced Mathematics, Physics, Engineering Foundations.

LANGUAGES

• Arabic :	• English :
Maternal	C2 (CAE - Toeic)
• French :	• German :
C1 (bilingual)	B1

SOFT SKILLS

- Analytical Thinking
- Attention to Detail
- Communication
- Problem-Solving
- Adaptability
- Team Collaboration

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DIE LUX – Luxury Clothing Website :

Sup'Com | September 2023 - November 2023

- Led the development of DIE LUX, an e-commerce platform for luxury clothing, focusing on user experience and high-end design.
- Integrated a secure payment system and custom product categorization, improving transaction security and user browsing experience.

keywords : HTML, CSS, ReactJs, NodeJs.

Voronoi Diagram Generator :

Sup'Com | January 2023 - March 2023

- Implemented algorithms in C to generate Voronoi diagrams based on spatial data points, allowing analysis and visualization of data distributions.
- Enhanced performance for large datasets, reducing computation time by 30% and enabling real-time visualizations for applications like wealth distribution analysis.

keywords : Voronoi diagram, C programming, data visualization.

CERTIFICATIONS

- Microsoft AI-900 : Azure AI Fundamentals
- Qubits By Qubits X IBM Quantum : Introduction to Quantum Computing
- GoMyCode : Introduction to Cybersecurity
- Cisco CCNA2 Certified
- Cambridge Advanced English (CAE) Certificate

EXTRACURRICULAR ACTIVITIES :

NOPS cybersecurity association | Sup'Com Cybersecurity Club | 2024 :
Actively competing in international CTF competitions on a weekly basis.

IEEE SUP'COM SB | 2023 - 2024 :

Member of the HR committee - Member of the organizing committee of some important events : MTS 2.0, Deep Learning IndabaX.

High School of L'Aouina Youth Club | 2018-2019 :

Member and active organizer of different club related events locally in the school and out of it.