

Oussama El Othmani

Tunisie, Nabeul, El Haouaria

<https://www.linkedin.com/in/ousama-el-othmani-7978011b3>

<https://oussama123-ai.github.io/Portfilio/>



Education

Tunisia Polytechnic School, University of Carthage La Marsa, Tunis

PhD in ETIC

2024 – Present

Tunisian Military Academy, Fondik Jdid

Computer Engineering

2020-2023

Tunisian Military Academy, Fondik Jdid

Preparatory Mathematics-Physics

2018-2020

Relevant Coursework

- Advanced Learning Algorithms
- Artificial Intelligence
- Computer Architecture
- Database Management
- Software Methodology
- Project Management Fundamentals
- Image processing
- Devops
- Machine Learning
- Kubernetes
- Systems administration

Professional Experience

Tunisian Ministry of National Defense

Software Engineer

August 2023 - Present | Tunisia

- Participated in the full software development lifecycle, including specifications, modeling and design, application development, unit testing, integration, formal system testing, deployment, and maintenance.
- Collaborated with system engineers, hardware designers, and integration/test engineers to develop and maintain complex software systems.
- Developed optimized code for specific hardware platforms, considering additional constraints related to the product's domain of use.
- Applied Agile development methodologies, object-oriented architectures, and debugging techniques.

Main Military Instruction Hospital of Tunis

Internship

June 2022 - August 2022 | Tunisia

- Collaborated with medical teams to enhance hospital information systems and technological infrastructure.
- Developed and implemented software solutions to improve patient data management and operational efficiency.
- Optimized data security protocols to protect sensitive patient information.
- Integrated technology effectively to enhance patient care and hospital processes.
- Tested and troubleshooted systems to ensure optimal performance and reliability.

National Center for Cartography and Remote Sensing

Internship

June 2021 - August 2021 | Tunisia

- Analyzed and interpreted geographic data using remote sensing techniques.
 - Developed cartographic products to visualize spatial information for various projects.
 - Collaborated with a team to collect, process, and manage geospatial data from multiple sources.
 - Applied GIS software and tools to enhance technical skills in cartography and data analysis.
 - Contributed to research aimed at improving data acquisition and interpretation methods.
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Projects

Rough Set Theory and Soft Computing Methods for Building Explainable and Interpretable AI/ML Models (Tunisia Polytechnic School)

April. 2025

- Developed an advanced machine learning (ML) model.
- Explored the integration of rough set theory and soft computing techniques to enhance the explainability and interpretability of AI/ML models, particularly in high-stakes domains.
- <https://www.mdpi.com/2076-3417/15/9/5148>

Skills: Machine Learning, Explainable AI, Interpretable ML, Rough Set, Soft Computing.

Oussama ChatBot V2 (En association avec MDNT)

Oct. 2023

- Advanced large language model (LLM) designed for medical consultations.
- Utilized real-world physician data to fine-tune the model.

Skills: React.js, LLM, NLP, Data Science, Machine Learning, Python.

Oussama ChatBot V1 (In collaboration with MDNT)

Sept. 2023

- Chatbot based on advanced natural language processing techniques, providing an extensive medical knowledge base.

Skills: NLP, AI, Machine Learning, Python.

Breast Cancer Logistic Regression Analysis (In collaboration with MDNT)

July. 2023

- Tool for binary classification tasks, facilitating early breast cancer diagnosis.

Skills: Data Science, Machine Learning, Logistic Regression.

Blood Anomaly Detection and Its Use in Telemedicine

January 2023 - July 2023

- Automated system for detecting blood anomalies using machine learning and computer vision.
- Designed specifically for hematology services in military laboratories.

Skills: React.js, Django, Data Science, Machine Learning, Python, Computer Vision.

Antibiotic Resistance Classification

March 2022 - August 2022

- Data preparation and annotation, neural network-based model design, and fine-tuning for improved accuracy.

Skills: Data Science, Machine Learning, Python, Computer Vision, OpenCV, Flask

Technical Skills

Languages: Python, Java, C++, HTML, CSS, JavaScript, SQL, PostgreSQL, TypeScript.

Development Tools: VS Code, Eclipse, IntelliJ IDEA, Google Cloud Platform, Docker, PyTorch, Anaconda, Spyder.

Technologies/Frameworks: Linux System Administration with IBM Power Systems, Google Cloud, Deep Learning, Supervised/Unsupervised/Reinforcement Learning, Python, Spring Boot, Angular, .NET, React, Django, DevOps, Kubernetes, Terraform, WordPress, MS Project.