



Raed Mohamed Amine Hamrouni

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👤 Profile

Future Data Science engineer, specialized in Artificial Intelligence and predictive analytics, with a versatile background including software development experience. Passionate about new technologies and leveraging data to create innovative solutions, I combine technical rigor, collaborative spirit, and the ability to effectively solve complex problems.

🎓 Education

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| Polytechnic School of Sousse , Engineering Degree | 2024–Present |
| • Specialization in Data Science | |
| Higher Institute of Computer Science and Communication Technologies (ISITCOM) , Professional Master's Degree | 2023–Present |
| • Specialization in Web Services and Multimedia | |
| Higher Institute of Computer Science and Communication Technologies (ISITCOM) , Bachelor's Degree in Computer Science | 2020–2023 |
| • Specialty: Computer Science and Multimedia | |

🛠 Professional Experience

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| Data Science Intern , ARSII - Sousse, Tunisia | Jul 2025–Sept 2025 |
| • Designed a supervised classification model to predict postoperative complications following pediatric circumcision, enabling early identification of risk factors and improved medical follow-up. | |
| • Technologies: Python, TensorFlow, NumPy, Pandas | |
| Software Developer Intern (Bachelor's Final Project) , VIVIA - Sousse, Tunisia | Jan 2023–Jun 2023 |
| • Developed a customer complaints management module for the company's CRM system. | |
| • Objective: Efficiently manage complaints and reduce processing time. | |
| • Technologies: Node.js, React.js, PostgreSQL, Express.js | |
| Software Developer Intern , SASTEC-SKILLS - Sousse, Tunisia | Jul 2022–Aug 2022 |
| • Developed an online art gallery web application allowing users to sell their artworks. | |
| • Technologies: React.js, Node.js, MongoDB, Express.js | |
| Software Developer Intern , TUS - Sousse, Tunisia | Aug 2021–Sept 2021 |
| • Developed a game (Wheel of Fortune) allowing customers to win prizes. | |
| • Technologies: HTML, CSS, JavaScript | |

🔗 Projects

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| StudyPal (Gamified Learning Platform with Local AI) - GitHub | Nov 2025–Dec 2025 |
| • Objective: Design a personalized learning platform that generates quizzes adapted to each user's level. | |
| • Features: Automatic question generation, intelligent feedback, progressive difficulty, evolving avatars, point system, and leaderboard. | |
| • Technologies: Python, FastAPI, SQLite, React, JavaScript, Ollama (Llama 3.2) for local AI. | |

Hotel Microservices Project - GitHub

Mar 2025–May 2025

- Hotel booking application based on microservices architecture with independent services (users, bookings, rooms, notifications) interconnected via gRPC, GraphQL, REST, and Kafka.
- Technologies: Node.js, Express, Apollo Server, gRPC, Kafka, Docker, OpenRouter (LLM)

Angular Club Management - GitHub

Apr 2025–May 2025

- Web application for managing football clubs with complete CRUD functionalities for clubs, players, stadiums, and intuitive user interface.
- Technologies: Angular, Node.js, Express.js, MongoDB, HTML5, CSS3

Biological Age Estimation - GitHub

Feb 2025–May 2025

- Developed a regression model to predict biological age from dermatological data, testing 7 algorithms (Linear/Polynomial Regression, Random Forest, Lasso, Ridge, SVR, Neural Network).
- Technologies: Python, Pandas, NumPy, Scikit-learn, TensorFlow/Keras, Matplotlib, Seaborn

TNDB - The Movie Database - GitHub

Sept 2023–Dec 2023

- Developed a full-stack movie database management web application with JWT authentication, allowing users to browse movies, manage personal lists (watchlist/favorites), rate and comment on movies.
- Technologies: Node.js, Express.js, MongoDB, JWT, HTML, CSS3, JavaScript, RESTful API

Technical Skills

Programming Languages: Python, JavaScript, TypeScript, SQL, R

Frameworks & Technologies: Angular, React.js, Node.js, Express.js

Databases: SQL systems (PostgreSQL, MySQL), NoSQL systems (MongoDB)

Data Science & Machine Learning: Data exploration, descriptive statistics, supervised and unsupervised learning, regression, classification, clustering

Deep Learning: Neural networks, TensorFlow, Keras

Development Tools: Visual Studio Code, IntelliJ, Android Studio, Jupyter Notebook, Google Colab

DevOps: Docker, Kubernetes, GitHub Actions, Git

Python Libraries: Pandas, NumPy, Scikit-learn, Matplotlib, Seaborn

Data Processing: Data cleaning, preparation, and transformation

Activities

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| • Volunteer during the Coronavirus period at Red Crescent | 2020 |
| • Organization team member at Nuit de l'Info at ISITCOM | 2022 |
| • Participant in NODE-JS bootcamp organized by IEEE at ESSTHS Sousse | 2022 |
| • Participant in IEEEExtreme organized by IEEE at ESSTHS Sousse | 2022 |
| • Team member at Nuit de l'Info at Polytechnic School of Sousse | 2024 |
| • Team leader at Nuit de l'Info at Polytechnic School of Sousse | 2024 |
| • Team leader at TWISE NIGHT CHALLENGE at Polytechnic School of Sousse | 2025 |
| • Organization member of AAICE – African Agribusiness Incubation and Acceleration Investment at University of Sousse | 2025 |

Languages

Arabic: Native language

French: Advanced

English: Intermediate

German: Beginner