

Adam Saidane

adam.saidane@insat.ucar.tn - (+216) 56 179 434 - LinkedIn - GitHub - Portfolio

Software Engineering student at INSAT with hands-on experience in backend systems, full-stack development, and applied AI. Built scalable web applications and machine learning systems, including reinforcement learning solutions and production-grade APIs. Seeking a software engineering internship.

EDUCATION

National Institute of Applied Sciences and Technology (INSAT) – Tunisia <i>Software Engineering – Ranking: 37/377</i>	Since September 2023
Menzah 8 Pioneer High School (LPM8) – Tunisia <i>Baccalaureate, Mathematics Section - Highest Honors - 18.21/20</i>	September 2019 – June 2023

WORK EXPERIENCE

International Information Development (IID) - Tunis, Tunisia <i>Analyst Developer Intern</i>	July 2025 - August 2025
<ul style="list-style-type: none">Built Spring Boot REST APIs for banking systems (credit card lifecycle, e-commerce payments) used in production environmentsIncreased API reliability by achieving 96%+ test coverage using JUnit & Mockito, ensuring robust edge-case handling.Led 'Edeal' CRM migration, resolving any post-deployment issues.Collaborated with engineers to deliver production-ready backend services. Stack: Java, Spring Boot, Swagger, JUnit, Mockito, REST APIs	

PROJECTS

Open-Source Contributions

- Contributed to **Keras** by implementing input validation for PReLU and LeakyReLU activation layers (PR #22162).
- Diagnosed backend-specific failure in **OpenVINO** during testing, isolating it as a pre-existing issue.

AI Traffic Lights Manager – Deep Reinforcement Learning

Python, PyTorch, SUMO/TraCI

- Built and trained RL agents (Q-Learning, DQN, PPO) for traffic optimization using SUMO simulation.
- Reduced average vehicle waiting time by ~60% (1692s → 680s) vs fixed-timing baseline.
- Designed environment with 16 lanes & real-time state tracking, improving policy generalization.
- Benchmarked multiple algorithms and identified DQN as best-performing model.

xG Model – Football Goal Prediction with Machine Learning

Python, Streamlit

- Trained ML models on **10k+** football shots dataset for goal probability prediction.
- Engineered **10+** spatial and contextual features to improve model accuracy achieving **96%** accuracy.
- Built interactive Streamlit app for real-time xG predictions.

HR Management System – Full Stack Web Application

C#, ASP.Net Core 8, MySQL

- Developed enterprise HR platform covering employee lifecycle, payroll, and recruitment workflows.
- Implemented role-based access control (RBAC) and modular service-layer architecture.
- Built **40+** analytics dashboards for HR insights (headcount, hiring trends, salary distribution).

CERTIFICATIONS

IBM AI Engineering Professional Certificate · IBM	2026
CS50x — Introduction to Computer Science · Harvard University	2024

VOLUNTEERING

Securinets INSAT

Since September 2025

- Active member engaged in technical workshops on reverse engineering and cybersecurity conferences, enhancing practical and theoretical expertise.

Institute of Electrical and Electronics Engineers (IEEE)

Since September 2023

- Active member involved in programming, algorithms, and AI workshops; competed in multiple competitive programming contests, developing strong analytical and problem-solving abilities.

Tunisian International Model United Nations (TIMUN)

September 2020 – July 2022

- Represented states in UN simulations; prepared resolutions and negotiated on global issues. Developed public speaking, leadership, and formal writing skills in an international context.

SKILLS

- Soft Skills:** Time management - Critical thinking - Team spirit - Sense of responsibility
- Programming Languages:** Python - Java - C# - PHP - SQL - C / C++
- Backend:** Spring Boot - ASP.NET Core 8 - Symfony 6
- ML / AI:** PyTorch - TensorFlow - Keras - Scikit-learn - Pandas - NumPy
- Tools:** Git - Docker - Postman - Swagger - Jupyter - TensorBoard
- Languages spoken:** Arabic - English - French