

# Hamza Sallemi

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## PROFESSIONAL SUMMARY

Engineering student in Applied Mathematics and Modeling with skills in AI and machine learning. Built solutions for risk prediction, customer behavior, and medical image analysis. Solves real problems using math and code.

## EDUCATION

<b>Applied Mathematics and Modeling Engineering</b> Higher National Engineering School of Tunis	<b>2023 – Present</b>
<b>Master's Degree in Data Science</b> Higher Institute of Computer Science and Mathematics, Monastir	<b>2022 – 2023</b>
<b>Bachelor's Degree in Mathematics</b> Higher Institute of Computer Science and Mathematics, Monastir	<b>2019 – 2022</b>

## EXPERIENCE

<b>CODIX TN</b> Data Scientist Intern	<b>Jun 2025 – July 2025</b> Centre Urbain Nord, Tunis, Tunisia · Hybrid
Built a credit risk prediction system during a 1-month internship using a dataset of 45,000 records. Tested Random Forest, XGBoost, and Linear Regression. Random Forest achieved the best results, improving accuracy by 15% over the baseline. Integrated the model into a Flask API and built a React web interface for real-time risk prediction.	
<b>Gafsa Phosphate Company</b> Software Development and IT Support Intern	<b>Jun 2024 – July 2024</b> Cité Bayech, 2100 Gafsa, Tunisia. On-site
<ul style="list-style-type: none"><li>Built a C# app to manage interns by tracking work days, tasks, and evaluations. Reduced manual work by 30% and improved evaluation speed by 20%.</li><li>Provided technical support by resolving 15+ hardware and software issues daily. Streamlined OS installations with bootable USB drives, cutting setup time by 25%.</li></ul>	

## PROJECTS

<b>Credit Risk Prediction App</b>   Python, Flask, React, scikit-learn, RandomForest, Pandas	<b>Jun 2025</b>
<ul style="list-style-type: none"><li>Developed a full-stack application for credit risk scoring using Random Forest, improving prediction accuracy by 15%.</li><li>Built a Flask REST API for real-time scoring and integrated it with a responsive React interface for user input and results.</li><li>Implemented automatic data preprocessing and validation, ensuring consistent accuracy across 13 input features.</li></ul>	
<b>Customer Churn Prediction</b>   Python, scikit-learn, XGBoost, Pandas, SHAP	<b>Mar 2025</b>
<ul style="list-style-type: none"><li>Built a machine learning model to predict customer churn, improving classification accuracy by 12% using XGBoost.</li><li>Engineered behavioral features and handled imbalanced data to enhance model performance and stability.</li><li>Applied SHAP for model explainability, identifying top churn drivers for business action.</li></ul>	
<b>Natural Language to SQL Converter</b>   OpenAI, Microsoft Azure, Streamlit, SQLite, Pandas	<b>Oct 2024</b>
<ul style="list-style-type: none"><li>Reduced deployment costs by 40% by hosting the application on Streamlit and Azure, improving operational efficiency.</li><li>Achieved SQL factuality of 89.39%, semantic similarity of 99.98%, and criteria match of 95.66%, enhancing query accuracy and user experience.</li><li>Implemented adaptive database handling and visualization, boosting user engagement by 30%.</li></ul>	
<b>COVID-19 Chest X-Ray Classification</b>   TensorFlow, Keras, CNN, OpenCV, Python	<b>Aug 2024</b>
Built a CNN model using TensorFlow to detect COVID-19 from chest X-rays, achieving 87% accuracy and aiding faster diagnosis.	

## TECHNICAL SKILLS

- 🔗 **Languages:** Python, C/C++, Java, R, MATLAB, Microsoft Excel, Power BI.
- 🌐 **Web Technologies:** React.js, Tailwind CSS, Node.js.
- ☁️ **Cloud & DevOps:** Azure, Docker, GitHub Actions.
- 📦 **Backend Frameworks:** Flask, FastAPI.
- 🗄️ **Databases:** SQLite, MySQL, PostgreSQL
- 🧠 **AI/ML:** TensorFlow, PyTorch, scikit-learn, OpenAI GPT, Keras, CNN, Streamlit.

## CERTIFICATIONS

<b>Microsoft Azure AI Fundamentals AI-900</b>	Credential ID: wbruu-H9uQ
<b>GOMYCODE: The Data Science Bootcamp</b>	Credential ID: 00011770
<b>Microsoft Certified: Power Platform Fundamentals PL-900</b>	Credential ID: UYnh-sFVH
<b>Learning Data Analytics : 1 Foundations</b>	Credential ID 9ef62a119
<b>Eskills Academy: programming using Python</b>	Credential ID: cert_slxbrkg5

## LANGUAGES

- Arabic : Native
- French : Professional
- English : Professional