

Tasnim Khalil

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Professional Objective

Computer Engineering student specializing in Data Science, currently on academic exchange at Université Laval. Seeking a 6-month internship starting January 2026 in Data Science, Machine Learning, or Artificial Intelligence. Motivated, rigorous, and passionate about AI, I aim to contribute to the development of innovative technological solutions.

Education

Université Laval

Academic Exchange Semester

Master's in Computer Science — Fall 2025

Courses: Advanced AI, Combinatorial Optimization, NLP, Cloud/DevOps Development

Quebec, Canada

Sept. 2025 – Present

ESPRIT

Computer Engineering — Data Science Specialization

5th year of engineering degree

EUR-ACE accredited program by CTI (France)

Tunis, Tunisia

Sept. 2021 – Present

ElGuettar Secondary School

Tunisian Baccalaureate

Mathematics Section

Tunisia

Sept. 2020 – June 2021

Professional Experience

Arab International Bank of Tunisia (BIAT)

Data Analyst Intern, Data Science, BI & Automation

- Automated financial data extraction from PDFs (OCR + Python scripts)
- Data cleaning, consolidation, and automated Excel report preparation
- Created Power BI dashboards for decision-making
- Developed customer segmentation algorithms based on transactional behavior

Tunis, Tunisia

June 2025 – Aug. 2025

Gafsa Phosphate Company (CPG)

Business Data Analyst

- Analyzed and optimized internal processes
- Data valorization for strategic decision-making
- Predictive models for production optimization

Gafsa, Tunisia

June 2024 – July 2024

Genius Soft

IT Assistant

- Administration and optimization of IT systems
- Technical support and user assistance

Tunisia

Aug. 2022 – Sept. 2022

Academic and Personal Projects

IVF Patient Response Prediction: Python, FastAPI, SHAP, Random Forest

- Complete ML pipeline (89% accuracy) for patient stratification, medical PDF extraction
- Interpretable probabilistic model (SHAP/LIME), REST API and Streamlit deployment

Job-Shop Scheduling Optimization: Java, Python, Choco Solver, ONNX

- Domain-specific features improving makespan by 2-12%, hybrid Java/Python pipeline
- Covariate shift analysis for robustness, real-time inference via ONNX Runtime

Kubernetes Orchestration: Kubernetes, Docker, Ingress, SQLite

- Microservices architecture (gateway, logic-api, feedback-api), intelligent Ingress routing
- High availability (2 replicas), HTTP LivenessProbes, SQLite persistence

AI Pacman Agent: Python, scikit-learn, A*, MCTS

- Automatic heuristic learning for search algorithms, regression and decision trees
- MCTS integration, reduced node exploration with near-optimal solutions

MarketMind: Python, Hugging Face, NLP, LLMs

- Sentiment analysis and thematic classification pipeline, multimodal generation
- RAG-based recommendations with semantic embeddings, BERT/GPT integration

Customer Churn Prediction: MLOps, MLFlow, Docker, Jenkins, FastAPI

- Complete MLOps architecture with CI/CD, versioning and monitoring via MLFlow
- A/B testing and continuous production optimization, high-performance REST API

Voice Classification: PyTorch, Librosa, ResNet

- Audio to spectrogram conversion, advanced acoustic feature extraction
- Optimized ResNet model (+15% accuracy), temporal data augmentation

E-learning Platform: JavaFX, Symfony, JavaScript, MySQL

- Online course management, multi-role authentication, responsive interface
- MVC architecture, RESTful API, payment and real-time notification integration

Mental Health Website: PHP, JavaScript, CSS, Bootstrap

- Awareness website with interactive resources, self-assessment questionnaires
- Responsive design, SEO optimization, social media integration

Event Management App: Qt, C++, SQLite

- Cross-platform desktop application, participant and resource management
- Modern Qt GUI, local database, PDF/Excel exports

Technical Skills

Languages: Python, R, SQL, Java, C, C++, C#, TypeScript

Data Science: Pandas, NumPy, Scikit-learn, Advanced Statistics

Deep Learning: PyTorch, TensorFlow, CNN, ResNet, Transformers, LSTM

NLP: BERT, GPT, T5, RAG, NER, Embeddings

DevOps/MLOps: Docker, MLFlow, Jenkins, CI/CD, FastAPI, Kubernetes

Big Data: Hadoop, Spark, Cloudera

Tools: Git, VS Code, Tableau, Power BI, Google Colab

Soft Skills

Clear communication, analytical mindset, autonomy, rigor, technological curiosity, teamwork

Languages

Arabic: Native

French: Fluent

English: Professional

Certifications

2025: Fundamentals of Deep Learning — NVIDIA

2025: AI Application for Anomaly Detection — NVIDIA

2025: Python for Data Science and Machine Learning — Udemy

2025: Hashgraph Development Participation — Hashgraph Association