

# Tasnim Khalil

Pavillon Agathe-Lacerte (LCT), 1100 avenue de la Médecine – Quebec, QC G1V 0A9

Canada

✉ +1 418 931 4982 • ✉ tasnimkhelil24@gmail.com • in tasnim-khelil-789859255

## 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

Quebec, Canada

Sept. 2025 – Present

Academic Exchange Semester

Master's in Computer Science — Fall 2025

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

### ESPRIT

Tunis, Tunisia

Sept. 2021 – Present

Computer Engineering — Data Science Specialization

5th year of engineering degree

EUR-ACE accredited program by CTI (France)

### ElGuettar Secondary School

Tunisia

Sept. 2020 – June 2021

Tunisian Baccalaureate

Mathematics Section

## Professional Experience

### Arab International Bank of Tunisia (BIAT)

Tunis, Tunisia

June 2025 – Aug. 2025

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

### Gafsa Phosphate Company (CPG)

Gafsa, Tunisia

June 2024 – July 2024

Business Data Analyst

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

### Genius Soft

Tunisia

Aug. 2022 – Sept. 2022

IT Assistant

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

## 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