

# JIHENE GUESMI

## Data Science Engineering Student

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 [Linkedin Profile](#)

 [Github Profile](#)

## PROFILE

Data Science Engineering student (final year) with solid foundation in Machine Learning, Deep Learning, and Big Data tools. Passionate about building innovative solutions through data-driven approaches. Eager to contribute to real-world AI challenges and expand industry expertise.

## EDUCATION

- **Faculty of Sciences of Tunis**  
Engineering Degree Program - Data Science 2023 - Present
- **Faculty of Sciences of Tunis**  
Integrated Preparatory Cycle (Mathematics, Physics, Computer Science) 2021-2023
- **Kairouan Pilot High School**  
Baccalaureate in Mathematics - Honors: Very Good 2021

## ACADEMIC PROJECTS

### AI-Powered Personal Recommendation App | [Link](#)

- Built an AI-driven platform for personalized, eco-friendly tourism in Tunisia.
- Used KNN with Cosine Similarity for tailored destination matching (Top-3 accuracy: 87%).
- Leveraged Azure AI for sentiment analysis (F1-score: 91%) and integrated RAG & Gemini LLM for dynamic activity suggestions.
- Enabled real-time weather forecasts, increasing planning efficiency by 25%.

### Viral Trend Analysis & AI Content Generation | [Link](#)

- Developed a real-time AI system for trend detection on X & TikTok, improving trend identification speed by 60%.
- Used ARIMA, LSTMs, and Prophet for trend forecasting (MAPE < 10%), and RoBERTa with Azure AI for sentiment classification (accuracy: 93%).
- Automated content generation (text, image, video) using RAG & Stable Diffusion, reducing manual effort by 70%.
- Deployed via Flask dashboard with interactive visualizations and real-time analytics.

### Intelligent recruitment system | [Link](#)

- Built an ML-based CV screening engine that matches resumes with job offers, achieving 92% accuracy.
- Created a smart chatbot using Mistral-7B to generate adaptive quiz questions based on job roles and candidate profiles.
- Applied NLP techniques to rank and analyze candidate responses improving shortlisting precision by 40%.

### Traffic Anomaly Detection | [Link](#)

- Applied K-Means and DBSCAN on the CICIDS2017 dataset to detect network anomalies, achieving 82% accuracy with K-Means and 79% with DBSCAN.

### Image Reconstruction with Vision Transformers (ViT) | [Link](#)

- Implemented masked image reconstruction using ViTs fine-tuned from Hugging Face, achieving MSE of 0.013, compared against an autoencoder baseline (MSE: 0.008).
- Enhanced image quality on corrupted datasets by 35% compared to CNN-based baselines

## WORK EXPERIENCE

### Data Science Intern-BRI technology (July 2024 - Aug 2024)

- Integrated Neo4j with PostgreSQL using Spring Boot.
- Configured Google Analytics for real-time user tracking
- Streamlined ETL pipelines using Talend Open Studio

## CERTIFICATIONS

- Machine Learning Specialization – Coursera
- Natural Language Processing – LinkedIn
- Deep Learning & Neural Networks – LinkedIn
- Big Data & ML with Apache Spark – CDOSS
- AWS Academy Cloud Foundations – AWS

## SKILLS

- Programming Languages: Python, C, C++, JAVA, R
- Web Technologies: HTML, CSS, JS, PHP
- Databases: SQL, NOSQL, PLSQL
- Big Data: Hadoop, Apache Spark, Data Mining
- AI/ML: Scikit-learn, TensorFlow, NLTK, SpaCy, OpenCV, Transformers(Hugging Face)
- Data Visualization Tools: Tableau, Power BI, Talend Open Studio

## LANGUAGES

- Arabic: Native
- French: Fluent
- English: Fluent
- German: Basic

## VOLUNTEERING

- Marketing Consultant – Optima Junior Enterprise
- Business Development Team Member – Optima Junior Enterprise