



RAYANE FATIMA ZOHRA

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Research Focus: Spatiotemporal AI, Graph Neural Networks (GNN), and Agentic Explainability (XAI) **Live Research Demo:** <https://pwumtyv7uberzh8hjjpvfy.streamlit.app/>

1. PERSONAL PROFILE Ambitious Computer Science researcher and Full-Stack Lead Developer with a proven ability to lead technical projects from architecture to deployment. Currently focused on bridging high-accuracy predictive modeling (T-GCN) with human-interpretable AI agents for urban logistics.

2. EDUCATION Bachelor of Computer Science | Ammar Tledji University, Algeria
Expected Graduation: July 2026 Note: Current semester results are pending; high performance in specialized technical modules follows:

- **Advanced Web Systems Architecture:** 17/20 (Project Grade)
- **Desktop Application Development:** 16/20 (Project Grade)
- **Graph Theory & Discrete Mathematics:** 14/20
- **Object-Oriented Programming (C++/Java):** 12.65/20

3. FEATURED RESEARCH & TECHNICAL PROJECTS Independent Researcher | Urban Logistics & Spatiotemporal AI

- **Model Implementation:** Evaluated LSTM vs. **Temporal Graph Convolutional Networks (T-GCN)** in PyTorch.
- **UrbanGuard-XAI:** Developed an Agentic AI layer using LLMs to provide natural language diagnostics for GNN traffic forecasts.
- **Data Engineering:** Utilized **OSMnx** to model road network topologies for the SZ-taxi dataset at 15-minute intervals.

Technical Lead | Graduation Project: Khedmap (AI-Integrated Platform)

- **Leadership:** Managing the full technical lifecycle of a freelance ecosystem for the Algerian market.
- **AI Innovation:** Engineered a custom **Computer Vision and OCR** system for automated payment validation.
- **Security:** Implemented a Firebase-backed risk detection layer to identify fraudulent transactions.

4. TECHNICAL SKILLS

- **AI & Modeling:** PyTorch, GNNs (T-GCN), LLM Agents (LangChain), Computer Vision/OCR.
- **Full-Stack:** React Native (Mobile), Node.js, PostgreSQL, Firebase, MySQL.
- **Languages:** Python (Research), C++, JavaScript, Java, PHP.