



# Oussama ZIADA

Fifth-year Computer Science engineering student at INSAT, specializing in Artificial Intelligence and Data Science. Proficient in data analysis, machine learning, and deep learning, with a passion for solving complex problems through innovative technologies :

- **Artificial Intelligence:** Predictive modeling, Time-series analysis, Deep learning, Computer-vision
- **Programming:** Python, TypeScript, Back-end development (NestJS).
- **Libraries and Tools:** TensorFlow, PyTorch, Keras, Scikit-learn, Pandas, NumPy, Matplotlib, Seaborn, OpenCV, Power BI.
- **Platforms:** Microsoft Azure, Git, PowerBI

## EXPERIENCE

### Karunya Institute Of Technology, India – Data Science Intern

July 2024 – September 2024

- Improved model accuracy for meteorological parameter estimation by **10%**, leveraging deep learning techniques and historical data.
  - Cleaned and prepared over **7.3K records**, ensuring a robust dataset for analysis.
  - Conducted trend analysis to identify critical patterns in climate data, directly contributing to agriculture and disaster prevention initiatives.
- Acquired Skills: deep learning, Time-series analysis, Python, Pandas, TensorFlow, Data visualization, Project management.

### KPI Associates, Tunis – Data Analysis Intern

June 2023 – August 2023

- Built an interactive Power BI dashboard summarizing academic performance trends across Tunisian universities.
  - Conducted data analysis on **100K+ records**, uncovering key insights for policy recommendations
- Acquired Skills: Data analysis, Python, matplotlib, Seaborn, pandas, Data storytelling, PowerBI.

## EDUCATION

### National Institute Of Applied Sciences And Technology(INSAT)– Computer Science Engineering Degree (2020–2025)

Fifth-year student at INSAT, specializing in artificial intelligence and data science.

## PROJECTS

### STATE OF THE ART AND IMPLEMENTATION OF A GRAPH TRANSFORMERS ARCHITECTURE FOR EMBRYO IMAGE

#### CLASSIFICATION:

- Designed a CNN-based feature extractor.
  - Enhanced Graph Transformers for image-specific tasks, adapting state-of-the-art architectures for innovative results, achieving 76% accuracy in embryo image classification.
- Acquired skills: Deep learning, Graph-ml, Graph theory, Image processing, Python, TensorFlow, PyTorch, Transformers, CNN.

#### CLUB-HUB(Student Engagement Platform):

- Led the back-end development using NestJS, engaging over 3,000 students and supporting coordination across 15+ student organizations.
  - Implemented database systems to handle 10K+ user profiles efficiently.
- Acquired skills: Back-end development, NestJS, API design, Database management, TypeScript

#### IMAGE ANOMALY DETECTION:

- Developed a deep learning algorithm using autoencoders to detect image anomalies, achieving 90% precision in classification.
  - Preprocessed datasets with 1600 images, streamlining pipeline workflows
- Acquired skills: Autoencoders, Deep learning, Computer vision, Image processing, Unsupervised learning, Data preprocessing, Python, PyTorch, OpenCV.

## CERTIFICATIONS

- **Coursera** Unsupervised Learning, Recommenders system, Reinforcement Learning - October 2023
- **Coursera** Advanced Learning Algorithms - January 2023
- **Coursera** Supervised Machine Learning: Regression and Classification - December 2022
- **IBM** Data science and analytics intro - April 2022

## LANGUAGES

- French/English/Arabic

## VOLUNTEER EXPERIENCE

- Vice-president of the 2023 National Cybersecurity Congress in Tunisia.
- Active member of Securinets Insat.
- Active member of IEEE Insat.