

OUSSAMA ZIADA

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EDUCATION

National Institute of Applied Sciences and Technology

Sep 2020 - Sep 2025

Computer Sciences engineering degree

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

EXPERIENCE

Data Science Research Intern

Jul 2024 - Sep 2024

Karunya Institute Of Technology And Sciences - India

- 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.
- Improved model accuracy for meteorological parameter estimation by 10%, leveraging deep learning techniques and historical data.

Data Analysis Intern

Jul 2023 - Aug 2023

KPI Associates - Tunisia

- Conducted data analysis on 100K+ records, uncovering key insights for policy recommendations.
- Built an interactive Power BI dashboard summarizing academic performance trends across Tunisian universities.

PROJECTS

Graph Transformer for Human Embryo Classification | Transformers, Computer vision, GNN, CNN

Jan 2024 - Jun 2024

- Conducted a strong study of the graph principles, transformers, and the integration of Graph Transformer architectures by reviewing over 15 research papers in the field
- Segmented 1,000 embryo images into patches, passing each through a CNN to extract 512-dimensional node features and 256-dimensional edge features, creating a detailed graph representation
- Implemented the Graph Transformer to classify embryos, leveraging the graph structure built from image features and Achieved a 85% classification accuracy, outperforming traditional CNN-based models by 5%

CLUBHUB Project | Nest.js, Web Development, Git, SQL

Jan 2024 - Feb 2024

- Led the back-end development using NestJS, engaging over 3,000 students and supporting coordination across 15+ student organizations.
- Designed and implemented RESTful APIs with Nest.js, improving data management efficiency and optimizing client-server communication, reducing response time by 20%

Image Anomaly Detection | Auto-encoders, Computer Vision, PyTorch, Python

Jan 2023 - Feb 2023

- Preprocessed datasets with 1600 images, streamlining pipeline workflows
- Engineered a deep learning algorithm using auto-encoders for anomaly detection in satellite images
- Evaluated the model's performance using various metrics, achieving an accuracy of 90% and ensuring high reliability in anomaly detection

TECHNICAL SKILLS

Programming languages and tools: C, Python, SQL, TypeScript, Back-end development (NestJS).

Machine Learning & Deep Learning tools: Numpy, Pandas, Matplotlib, Seaborn, Scikit-learn, TensorFlow, PyTorch, Keras

Computer Vision: YOLO, Convolutional Neural Networks (CNN), OpenCV, Image processing, Video Analysis

Big Data & Business Intelligence Tools: Apache Hadoop, Apache Spark, HBase, Power BI

Platforms: Microsoft Azure, Git, docker

CERTIFICATIONS

Coursera, Deeplearning.AI certification - Machine Learning Specialization

October 2023

IBM, Data science and analytics intro

April 2022

EXTRA CURRICULAR ACTIVITIES

Vice-president of the 2023 National Cybersecurity Congress in Tunisia

Sep 2022 - Mar 2023

Active member of IEEE Insat

Sep 2021 - Sep 2024

LANGUAGES

French: Fluent ; **English:** Fluent ; **Arabic:** Native ;