Abdelillah Serghine

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Education

Higher School of Computer Science (ESI-SBA) - Sidi Bel Abbès, Master and State Engineer in Ai and Data Science — Sept 2023 – Present

- **Coursework:** Machine Learning, Deep Learning, AR/VR, NLP, Big Data, Advanced Netwroks, Computer Vision and Image Processing, Computer Architecture, Project Management, Advanced Databases

University of Adrar - Adrar, Bachlor's Degree in Computer Science — Sept 2021 – June 2023

- **Coursework:** Data Structures and Algorithms, Networks, Operating systems, OOP (Java), web developement

Experience

Software Engineer Intern, Sonatrach, Adrar — Sept 2024 – Sept 2024

- Developed a mini python application for data visualization of oil production optimizing decision making
- Explored the IT Departement and its roles also the company architecture
- Discovered the the management systems used to reduce the company costs

Co-Founder, ADHAYA Technos, Sidi Bel Abbès — Sept 2023 – Present

- Building scalable software solutions that address real-world problems across multiple sectors.

Technical Team Member, Alphabit Club, Sidi Bel Abbès — Sept 2023 – Present

- Developed user friendly section of a web page using Nextjs and Tailwind-css for AlphaAi event

Research and Projects

Paperly : LLM-based Scientific Paper Summarizer — Github

Python, RAG, Agentic RAG, GraphRAG, ChromaDB, MLflow, Gradio

- Developing an LLM tool that helps academics extract and summarize informations from research papers,
- Using **MLOps** to manage experiments, track model performance, and facilitate dynamic updates to system components such as prompts and embedding models.

COVID-19 X-ray Segmentation (Transfer Learning) — Github

TensorFlow, NumPy, scikit-learn

- Applied transfer learning with TensorFlow and Keras for automated chest X-ray classification and lung segmentation using the COVID-19 Radiography Dataset.
- Combining **ShuffleNetV2** for **COVID-19 X-ray** classification and U-Net for lung segmentation.
- Achieved a notable improvement in classification accuracy **(98%)** and segmentation performance.

Healthcare Assistant : Recommendation-based system — Github

Python, Pandas, Scikit-learn, Streamlit, conda

- Applied association rule mining (ECLAT, Apriori, FP-Growth) to analyze 239k+ prescription records, uncovering patterns and building scalable models for pharmacy and healthcare integration.

Skills

Languages: Python, C, Java, SQL, JavaScript, HTML/CSS, R, LaTeX

AI: Jupyter Notebook, NumPy, Pandas, Matplotlib, PyTorch, TensorFlow, Scikit-learn, RAG, LangChain, Gradio, ChromaDB

Tools: Docker, Git, Linux, MLflow, Airflow, Kafka, Spark, Conda, NetworkX

Others: Streamlit, Folium, Rasterio, ipyleaflet, Github