Aires Augusto Miguêns

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Objective

Master's student in Data Science seeking an internship opportunity. Experienced in machine learning, deep learning, and predictive analytics. Passionate about applying AI to real-world problems, particularly in healthcare. Currently researching AI-driven healthcare solutions with Prof. Emmanuel Agu at WPI.

Education

- Worcester Polytechnic Institute (WPI), Worcester, MA | Master of Science in Data Science | **Expected**: May 2026
- Institute of Technology of the University of Luanda, Angola | BS in Telecommunications Engineering | Graduated: 2022

Skills & Tools:

- Programming: Python, R, MATLAB, SQL
- Machine Learning & AI:TensorFlow, PyTorch, Scikit-Learn, OpenCV, FaceNet, Hugging Face Transformers
- Big Data & Analytics: Pandas, NumPy, Seaborn, Microsoft Excel
- APIs & Cloud Tools: OpenAI API, MIDI API
- Other Tools: Jupyter Notebook

Awards & Achievements: **Fulbright Award** (2024-2026)

Work experience:

• Project Analyst & Supervisor | **TECCPROENG | New International Airport of Luanda** | Oct 2022 – July 2024
- Managed and analyzed large-scale construction project data, improving operational decision-making.
- Designed scalable solutions for real-time project tracking and reporting.

• Service Desk Specialist | **SINFIC SA, Luanda, Angola** | July 2021 – Sept 2022
- Conducted computer hardware and software troubleshooting both remotely and in-person.
- Managed large GIS datasets, ensuring accurate mapping of polling stations for national elections.
- Applied data visualization and analytics using Excel to monitor electoral process efficiency.

Research & Projects:

- **RNN-Based Music Generation**

Technologies: Python, TensorFlow, Keras, MIDI API
- Developed an LSTM-based RNN model to generate music sequences based on classical compositions.
- Used MIDI API to preprocess music data for structured model training.
- Optimized model hyperparameters for improved music sequence coherence and originality.

- **Facial Recognition Using Deep Learning**

Technologies: Python, OpenCV, TensorFlow, Keras, FaceNet API.
- Built a CNN-based facial recognition model for real-time face classification.
- Integrated FaceNet API for feature extraction and recognition accuracy improvement.
- Applied OpenCV for image preprocessing to enhance model performance on noisy data.

- **Large Language Model (LLM) Chatbot**

Technologies: Python, PyTorch, Hugging Face Transformers, OpenAI API
- Fine-tuned transformer-based LLMs for domain-specific NLP tasks.
- Developed a chatbot using OpenAI API, improving response accuracy and coherence.
- Applied model quantization techniques to optimize inference speed and reduce computational costs.

Languages

Portuguese (Native) | English (Fluent) | Spanish (High Intermediate) | French (Intermediate)