Rafael Torres Nóbrega Gomes

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SUMMARY

Computer Science student at UFPB with hands-on experience in **Software Engineering and Data Science**. Skilled in developing and deploying **LLM and Machine Learning systems** into production. Strong foundation in software engineering and applied research, with projects spanning RAG, time-series forecasting, and AI-based recommendation systems.

EXPERIENCE

AI Engineering Intern – MGI Tech (partnership with LAGID/UFPB)   Apr 2025 – Present
- Developed a **Retrieval-Augmented Generation (RAG)** system enabling LLMs to answer client queries using product manuals as context.
- Implemented **LLM-powered data analysis workflows**, generating numerical indicators and insights in an interactive dashboard.
- Contributed to **system architecture, data engineering, and ML deployment**, improving scalability and reliability.

Data Scientist – TRIL Lab   Dec 2024 – Apr 2025
- Performed **data preparation, exploratory analysis, and prototyping** for AI research initiatives.
- Contributed to development of **multi-agent systems** for sales automation (CrewAI).

EXTRACURRICULAR EXPERIENCE

Student Member – TAIL (Technology and Artificial Intelligence League)   Jun 2025 – Present
- Advanced skills in **Machine Learning, Deep Learning, and Data Science** by building collaborative AI projects.
- Engaged in research and development activities within the first AI student league in Northeast Brazil.

Trainee – Trilha   Aug 2024 – Dec 2024
- Acquired foundational knowledge in **AI, programming logic, and ML pipelines**.
- Applied **software engineering best practices** in hands-on projects.

PROJECTS

Blonded AI – Music Recommendation System
Built a recommendation engine using Spotify **embeddings and PCA**, improving personalization and similarity matching.

TARG – Time-series Analysis & Report Generator (Hackathon)
Designed a web platform to predict BBAS3 stock prices (5-day horizon) using **LSTMs, web scraping, and sentiment analysis**.

Brazilian Championship Simulator – Java + Spring Boot
Developed a football championship simulator with a realistic match engine, live stats, and MVC design patterns.

LLM API Workshop – LAGID/UFPB
Conducted a workshop on **LLM API usage**: authentication, prompting, chatbot deployment, and extracting insights from data.

EDUCATION

Bachelor of Computer Science – Federal University of Paraíba (UFPB)   01/2024 – 12/2027 (expected)

CERTIFICATIONS

Cambridge Certificate in Advanced English (CAE)   12/2022
Grade B, CEFR B2 (Upper-intermediate proficiency) – Overall score: 175 (198 in Speaking)

SKILLS

Programming Languages: Python, C, Java, R, JavaScript
Machine Learning: Neural Networks, NLP, RAG, Embeddings, Time Series Forecasting, Model Deployment
Frameworks & Tools: Pandas, Scikit-learn, PostgreSQL, MongoDB, PyTorch, TensorFlow, Git
Languages: Portuguese (Native), English (Advanced, CAE Certified), Spanish (Intermediate)