

# Rafael Torres Nóbrega Gomes

• **Tel:** +55 81 98251-2792 • **Email:** rafaeltorresng@gmail.com • **GitHub:** rafaeltorresng  
• **LinkedIn:** rafaeltnng • **Portfolio:** rafaeltorresng.github.io

## SUMMARY

Computer Science student at UFPB with experience in **Software Engineering**, **AI/ML Engineering**, and **Data Science**. Skilled in **scalable web applications**, **Machine Learning systems**, and **full-stack development**. Strong foundation in **system architecture** and **design patterns**, with a focus on building **reliable, AI-driven systems** that deliver **real-world value and scalability**.

## EXPERIENCE

- Software 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, enhancing client satisfaction.
  - Implemented **LLM-powered data analysis workflows**, generating numerical indicators and insights in an interactive dashboard, improving decision-making speed.
  - Contributed to **system architecture, data engineering, and ML deployment**, improving scalability and reliability.
- Data Scientist – Zoxx Smart Data (partnership with 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.
- LLM API Workshop – LAGID/UFPB** Apr 2025
- Conducted a workshop on **LLM API usage**: authentication, prompting, chatbot deployment, and extracting insights from data for > 70 students.

## PROJECTS

- Blonded AI – Music Recommendation System**
- Built a **Flask**-based recommendation engine using **embeddings**, **PCA**, and ChromaDB with **cosine similarity** for fast vector-based similarity matching, featuring real-time **Spotify API** integration and a modern **Vue.js** interface.
- GuardAzul PB – Mobile Environmental Protection App**
- Built a **React Native + FastAPI + PostgreSQL** app with **Computer Vision** validation for georeferenced environmental reports and automated pollution detection, featuring an **AI-powered chatbot** for coastal ecosystem education.
- 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**
- Built a football championship simulator leveraging **MVC**, **Strategy**, and **Factory patterns**, with automatic scheduling, realistic match simulation, and dynamic standings.

## EDUCATION

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

## CERTIFICATIONS

- Cambridge Certificate in Advanced English (CAE)** 12/2022  
CEFR B2 – Overall score: 175/220 (198 in Speaking)

## SKILLS

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