Roger Richard Demello

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SUMMARY

Aspiring software developer with expertise in **C++ and Python**, specializing in **Machine Learning, Agentic AI, and intelligent automation**. Experienced in building **end-to-end AI solutions**, including **agent-based orchestration and deployment-ready applications**, across **healthcare, sales, and workflow automation** domains.

WORK EXPERIENCE

AI LifeBOT

AI Engineer Intern *Jan 2026 - Present*

- Developed and integrated LLM-powered Agentic AI systems using Python, Ollama, and OpenAI APIs, enabling goal-oriented workflows with memory and reasoning capabilities.
- Contributed to research, prototyping, and deployment of scalable AI solutions, delivering documented progress through weekly reviews and final technical reports.

CFM, RCOEM

Machine Learning Intern *May 2025 - Jul 2025*

- Enhanced a **machine learning-based sleep disorder prediction system** using lifestyle and health data to improve model performance.
- Achieved **87% prediction accuracy** through feature analysis of **stress levels, sleep duration, and blood pressure**.
- Built and evaluated models using **Python, Scikit-learn, and Pandas** for data preprocessing, training, and analysis.

SKILLS

Programming Languages: C, C++, Python, Java
Machine Learning & AI: TensorFlow, Scikit-learn, NumPy, Pandas, PyTorch, Gen AI
Agentic AI & Automation: RAG, Vector Databases, Multi-Agent Systems, Ollama, LLaMA
DevOps & Tools: Amazon Web Services, Git, GitHub, CI/CD, FastAPI, Flask

PROJECTS

LifePulse - AI-Powered Health Analytics

Demo Link | ***GitHub***

Technologies: Flask, Python, TensorFlow, Scikit-Learn, XGBoost, Google Gemini AI, Rule-Based Engine

- Built ML-driven health modules and a nutrition tracker with actionable recommendations.
- Engineered ensemble models with a focus on accuracy and managed model artifacts and deployment using Render.
- Integrated rule-based logic and external LLM assistance for personalized recommendations and explanations.

Agentic AI Content Generation System

Demo Link | ***GitHub***

- Developed a **multi-agent AI content generation system** that converts structured product JSON into **FAQs, product pages, and comparison tables** using an **orchestrated agent workflow**.
- Implemented **agent orchestration and RESTful APIs** to enable **automated content generation and real-time processing** without external dependencies.
- Deployed a **serverless, production-ready AI solution** with **modular agents, reusable templates, and end-to-end automation**, improving content generation speed and consistency.

LabLingo - AI-Powered Scientific Dictionary

GitHub

- Built **LabLingo**, an AI-powered scientific dictionary leveraging **local LLM inference (Ollama with LLaMA 3.2)** to generate accurate, real-time definitions without external APIs or preloaded datasets.
- Implemented an **AI inference** and **caching pipeline** to support fast repeat queries, consistent outputs, and secure **session-based** access.
- Designed an **offline-first, privacy-focused AI system** demonstrating practical deployment of **local LLMs for educational and knowledge-access applications.**

EDUCATION

Shri Ramdeobaba College of Engineering and Management

Bachelor of Technology in Electronics and Communication (CGPA 8.73)

Minor in Artificial Intelligence and Machine Learning (CGPA 9.6)

CERTIFICATIONS

- AWS Certified Cloud Practitioner - Amazon Web Services (Issued October 2025)