Parag Darade *Data Scientist*

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🪪 PROFILE

Generative AI and NLP specialist with 2.6+ years of experience in designing scalable LLM-powered solutions using RAG, agentic workflows, and prompt engineering. Proven ability to build production-ready AI systems leveraging LLM APIs, ensuring efficient retrieval, context-awareness, and ethical alignment. Adept at evaluating LLM behavior, curating high-quality datasets, and optimizing AI pipelines for real-world applications.

💼 PROFESSIONAL EXPERIENCE

Freelance AI Consultant   12/2024 – 02/2025
Client: Maargam AI Technologies Pvt Ltd

• Developed a **Retrieval-Augmented Generation (RAG) pipeline** using **LangChain**, **FAISS**, and **GPT-4o** to generate personalized meal instructions from WhatsApp chat history.
• Built a bilingual (Hinglish) transcription system for onboarding calls using **Whisper, Azure STT**, storing data in Supabase.
• Designed an **Agentic Workflow** for personalized, voice-based meal planning using **OpenAI Functions** and **Eleven Labs**.
• Deployed scalable **AI APIs on GCP** and **Azure AI Foundry** with Redis caching and vector stores.

Centific Global Solutions   04/2024 – 11/2024 | Hyderabad
LLM Expert
Amazon Project - Rufus (LLM Development for Product Information Chatbot)

• **Data Evaluation & Quality Assurance**: Led the monitoring and evaluation of datasets used to develop **Amazon's proprietary LLM**, "Rufus," ensuring high-quality, relevant data was incorporated into the model. This chatbot aimed to provide accurate, real-time product information to customers.
• **Cross-Functional Collaboration & Team Training**: Collaborated closely with product managers to understand project requirements, effectively training data curation and QA teams on best practices for dataset creation and evaluation. Fostered alignment with strict quality and relevance standards.
• **Data Curation & QA Management**: Led data curation and evaluation efforts to ensure datasets were well-suited for model alignment and downstream QA, contributing to model improvements without performing fine-tuning directly.

LLM Projects – Hermes, Helios, Poseidon (Model Training and Fine-Tuning)

• **Response Analysis & Issue Resolution**: Led post-training evaluation of model outputs for **Hermes**, **Helios**, and **Poseidon** LLMs, identifying and diagnosing issues in response quality, including violations of ethical guidelines and operational parameters.
• **Data Curation for Model Fine-Tuning**: Coordinated with cross-functional teams to curate datasets specifically targeted to address identified response issues. Led efforts to refine data inputs to ensure compliance with project-specific guidelines and improve overall model accuracy.
• **Leadership in Quality Control**: Oversaw and trained **QA teams** on **LLM behavior**, implementing quality control measures to maintain response consistency and adhere to ethical standards. Ensured high-quality training data was used for model fine-tuning, increasing model robustness and performance.

Key Responsibilities and Achievements:

• **Enhanced NLP Pipeline**: Contributed to a **significant improvement in the model's response accuracy**, directly increasing the chatbot's ability to provide relevant, context-aware answers. This improved user satisfaction and engagement by providing more accurate product information.
• **Cross-Functional Leadership**: Successfully led and collaborated with **product managers, engineers, and QA teams** across multiple teams and geographies to ensure seamless model integration and continuous improvement of the LLM's performance.
• **Ethical AI Standards**: Ensured model compliance with Amazon's **ethical AI standards**, actively reinforcing a responsible AI framework.
• **Ensuring Responsible AI Practices**: Played a key role in ensuring the **ethical alignment of responses** generated by the LLMs, working to ensure that model outputs adhered to Amazon's strict **responsible AI framework**. Contributed to creating **Responsible AIs** by advocating for fairness, transparency, and accountability in AI development processes.

iNeuron Intelligence Pvt. Ltd.   01/2023 – 03/2024 | Bangalore
Associate Data Scientist
Chatbot Development with GPT-3.5 and Langchain

• Developed a **ChatGPT-like chatbot** using the **GPT-3.5 Turbo** model via **OpenAI APIs**.
• Integrated **Langchain** for conversational context using **buffer memory**, enabling the chatbot the context of previous chats.
• Designed and implemented a **Retrieval Augmented Generation (RAG)** system for dynamic question-answering using company-specific data (course details, etc.), improving the chatbot's ability to provide accurate, personalized responses.
• Utilized **Langchain's Routing** to selectively call the RAG pipeline based on context, optimizing token usage in internal prompts and minimizing API costs.
• Stored conversation data in **MongoDB**, ensuring scalability and performance for real-time chat logging.

- Tools & Technologies: **Langchain**, **OpenAI APIs**, **MongoDB**, **RAG**, **FastAPI**, **Docker**, **AWS**.

Automated Assignment and Quiz Generation
- Developed an end-to-end system for **automated assignment and quiz generation**, improving operational efficiency.
- Implemented **auto-evaluation** mechanisms, reducing manual grading time by 90% while ensuring scalability for a growing dataset of student responses.
- Tools & Technologies: **AWS**, **MLOps**, **Langchain**, **OpenAI API**, **Docker**, **FastAPI**, **CI/CD**.

Video Data Extraction for Knowledge Base Creation
- Worked on extracting valuable **question-answer pairs** from **23,000+ course videos** hosted across three platforms.
- Utilized **Open Source LLMs** like **Llama2**, **Zephyr**, and other pre-2023 models to extract relevant data, avoiding the high costs of paid services like GPT APIs.
- Created a curated knowledge base of **10,000+ FAQs**, enabling enhanced student query resolution systems and improving the efficiency of course-related support.
- Tools & Technologies: **Llama2**, **Zephyr**, **Langchain**, **Open Source LLMs**, **FastAPI**, **Pinecone**, **FAISS**, **Docker**, **AWS**, **MongoDB**.

Video-specific Chatbot for Course Q&A
- Developed a specialized **chatbot** capable of answering questions on specific course videos using **GPT API** and **Whisper** models.
- Implemented a system for transcribing and analyzing video content, leveraging **Whisper** for speech-to-text processing.
- Tools & Technologies: **GPT API**, **Whisper**, **Langchain**, **FastAPI**, **Docker**, **AWS**.

iNeuron Intelligence Pvt. Ltd.   07/2022 – 01/2023 | Bangalore
Intern
- Worked on an insurance price prediction project using machine learning algorithms.
- Utilized end-to-end approach, from data preprocessing to model deployment on AWS.

🎓 EDUCATION

MBA (Business Analytics)   08/2019 – 08/2021 | Pune
Sinhgad Institute of Management (SPPU)

B.E. (Computer Engineering)   08/2014 – 07/2019 | Pune
Genba Sopanrao Moze College of Engineering (SPPU)

📁 PROJECTS

AI-Powered Mock Interview Platform
- **Personalized Interview Questions:** Leveraged **GPT-3.5 Turbo** and **Whisper** to **generate** relevant **interview question**s tailored to each user's resume for a relevant and **engaging experience**.
- **Engineered** an Immersive **Audio Format** leveraging Open Ai's **Whisper**, effectively **simulating real-world interviews** with natural-sounding audio, amplifying user experience.
- **Comprehensive Feedback:** Generated multi-modal feedback through:
- **Automatic Transcription:** Analyzed video responses using Open Ai's Whisper to provide text-based feedback and identify key strengths/areas for improvement.
- **Vision Model Analysis:** Assessed nonverbal cues (posture, facial expressions) to deliver holistic feedback and enhance self-awareness.

AI Automation for Meal Planning (Freelance Project)   12/2024 – 03/2025
• Developed a Retrieval-Augmented Generation (RAG) pipeline using LangChain, FAISS, and OpenAI GPT-4 to generate context-aware meal instructions from WhatsApp chat history.
• Built a bilingual (Hindi-English) transcription system for customer onboarding calls using Whisper, Azure STT, and Deepgram, with structured output stored in Supabase (PostgreSQL).
• Created an Agentic Workflow for personalized, voice-based meal instruction generation using LangChain Agents, OpenAI Functions, and Eleven Labs.
• Engineered AI APIs on GCP and Azure AI Foundry with optimizations such as Redis caching and efficient chunking.
• Automated grocery tracking and ingredient forecasting with Selenium, Playwright, and AI-based prediction models to improve inventory management.

🧠 SKILLS

Programming & Frameworks — Python, Langchain, FastAPI, TensorFlow, PyTorch, scikit-learn, FAISS, Langsmith •

Databases — MongoDB, MySQL, Pinecone • **AI/ML Expertise** — Generative AI, LLM Evaluation & Prompt Engineering (GPT, Transformers), NLP, Whisper, RAG • **MLOps & Tools** — CI/CD, Git Actions, Kubernetes, Docker •

Visualization & Reporting — Matplotlib, Seaborn, PowerBI • **Web Scraping & Automation** — BeautifulSoup, Selenium • **Cloud** — Eleven Labs, Google Cloud Platform (GCP), Vertex AI, Model Garden, Azure AI Model Foundry