Parth Singh

Experienced Software Developer

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Profile

Experienced software developer skilled in **Python**, **Generative AI**, **Agentic AI**, **LangChain**, **LangGraph**, **Backend**, **RESTful API development**, **Django** and **Django REST Framework** with a strong understanding of software development principles and best practices.

Professional Experience

AI Software Engineer, *Simbo Inc.*   **Bengaluru, India (Remote)** *06/2021 - present*

- Developed an LLM-based **intent detection system** with integrated **sentiment analysis** and **response suggestion** for specific intents, serving as a fallback mechanism for the NLP variant.
- Built and deployed complex **LLM chains** using **GPT**-3, **GPT**-4, **LLaMA 2**, **Claude v2.1**, and **Command LLM** within Python pipelines to generate medical textual data for doctors; standardized outputs to achieve **80–90% accuracy** across applications; also crafted and managed advanced **Python** and **Bash** pipelines on **AWS EC2**, leading to the launch of a new pricing tier.
- Created **RESTful APIs** which heavily utilised the pipeline output and helped the frontend portal to become a feature-rich product in itself.
- Improved **NLU** performance by 20–30% through updates & critical bug fixes; developed ui-nlu as a cross-platform package (**JavaScript** for web, **Dart** for mobile) enabling low-latency voice, action, and text commands; independently built and led the most profitable **Android** / **iOS** app from scratch; **mentored** juniors and managed app maintenance before project handoff.

Computer Vision Intern, *MobbyPark*   **Bengaluru, India (Remote)** *11/2020 - 03/2021*

- Developed a real-time Automatic License Plate Recognition System for automated parking fee application, fine-tuned **YOLOv5** for vehicle and license plate detection, and trained a **CNN model** for character recognition.

Side Projects

Multi-User Corrective RAG Backend   **Python, Django, LangChain, LangGraph, ChromaDB**

Backend Project — Project Link

Developed a multi-user, authenticated backend for Document Ingestion and RAG-driven Q&A. Implemented Corrective RAG with query rephrasing and a **ReAct** agent, **JWT** authentication, custom document selection for context retrieval, and thread-based context for secure, **multi-turn** conversations.

Self-Retrieval RAG   **Python, LangChain, LangGraph, gpt**-4o-mini, **ChromaDB**

LLM Based Project — Project Link

Self-Retrieval RAG is an advanced RAG that enhances response accuracy by validating context, rephrasing queries, and refining responses as needed.

Tripai Backend   **Python, Django, Django REST Framework, LangChain, gpt**-4o-mini

Backend Project — Project Link

Robust and scalable backend system enabling users to plan trips based on budget, interests, duration, and travel type; implemented JWT-based authentication for secure and efficient trip data management.

Key Skills

- **Programming Languages:** Python, Java, JavaScript / TypeScript
- **Technical Skills:** Generative AI, Agentic AI, NLP, Full Stack Development, RESTful API Development
- **Tools & Frameworks:** LangChain, LangGraph, Django, Django Rest Framework, React.js, Next.js

Education

BTech in Computer and Communication Engineering *Manipal University Jaipur*   **Jaipur, India** *2017-2021*
CGPA: 7.23