Darshan Tank

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EDUCATION

Bachelor of Technology in Computer Engineering (2018-2022)

Dharmsinh Desai University, Gujarat (CGPA: *8.05/10*)

PROJECTS

Deep Learning - work and projects 🔗

- Classification, Neural Network, seq2seq modeling, Linear Algebra, Exploratory Data Analysis(EDA) on open dataset like zomato, Black Friday sale.

News Summarization (Flask, huggingface, T5, Adapter, datasets) 🔗

- Conducted extensive research on abstractive text summarization for large news datasets under the guidance of **Dr. Brijesh Bhatt** and Prof. Siddharth Shah.
- Experimented with fine-tuning **PEGASUS** for the Indian language. Fine-tuned **T5**-small and T5-base models on supercomputer param shavak. Additionally, developed adapters for both. Adapters **reduced the fine-tuning time by 75%** without losing performance.

MailSquad (crewAI, Langchain, RAG, LangGraph, Groq) 🔗

- Developed 'MailSquad' AI Crew, an email automation system using **Langchain**, **RAG**, and **LangGraph** to classify emails and generate automated, context-aware responses based on reference templates, improving efficiency and scalability.

LLM based Q&A (Openai, Llama-2, Langchain, VectorDB, RAG, Prompt Engineering) 🔗

- Explored LLM-based open Q&A, prompt-engineered contextual Q&A, and RAG-based Q&A with Cromadb. Found RAG pipeline with vectordb excelled in results and latency.

Online Q&A system (Django, MongoDB) 🔗

- Functionality: CRUD for questions and answers, User profile, Like-dislike, Comment, Advanced view counts based on IP, Search questions and answers, sorting - By views, likes, posting times, no.of responses, name(A-Z)

LANGUAGE AND TECHNOLOGIES

- Python, C/C++, Flask, FastAPI, Pytorch, Pandas, Numpy, nltk, Scikit-learn, Matplotlib, spacy, transformers, Huggingface, Openai, LLM, Langchain, RAG, RabbitMQ, Asyncio, Pinecone, Qdrant, Prompt Engineering, AutoGen, CrewAI, vectorDB, Redis, MongoDB, PostgreSQL, adapter-transformer, Docker, loguru, Git, aws s3, LaTeX.

PROFESSIONAL EXPERIENCE

Gnani.ai | Senior NLP Engineer 🔗

May 2024 – present | Bengaluru, India

- Conducted **soft-skill analysis** on conversations between call centre agents and users to assess agent performance. Analysed call centre data to derive insights such as **agent feedback, call summaries** using **COT+Feedback** prompting, **and agent notes**, guiding agents to improve their performance. Worked on **script adherence** projects.
- Designed, developed, and deployed a Gen-AI-enabled end-to-end **RAG pipeline** for **real-time**, large-scale, multi-class email classification across **150+ categories**, achieving a **66% reduction in manpower** and improving accuracy from **39% to 84%** (115% improvement) by combining **XGBoost** and **GPT-4o-mini** in a **robust ensemble model,** leveraging XGBoost for weak data where GPT responses were insufficient.

Gnani.ai | NLP Engineer 🔗

Sep 2022 – Apr 2024 | Bangalore, India

- Led development of multilingual conversational systems, implementing deep learning models for Indian and US clients. It helped them to achieve a **50% reduction in agent costs** with a **12% success rate.**
- Hands-on experience with NLP techniques like **paraphrasing** for data augmentation, **entity recognition** like ducking to capture the date-time, and **intent classification** for rule-based conversation. Did external API intergration to fetch and update data from CRM.
- Involved in the development and implementation of no-code/low-code software for conversational AI which **reduced bot building time by 60%**. Also, I was part of some of the cool POC projects, for instance, LLM-based voice bot.

OPEN-SOURCE & COMPETITIVE CODING

- **Adapter:** Trained Adapter for T5-small and T5-base models for News dataset (CNNDM)
- **Ivy:** Build Hyperbolic functions for the Numpy frontend
- Solved **350+** problems on leetcode and other coding platforms

RELEVANT COURSE WORKS

- Deep learning (NPTEL)(Dr. Mitesh Khapra), DGM(IISc)(Dr. Pratosh AP) Machine learning(Coursera), Probability and Statistics, Linear algebra