

Gulshan Kumar

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🔗 <https://gulshan100.netlify.app/>

📁 PROJECTS

RAG based Chatbot - Medicare

Created an AI chatbot utilizing Retrieval Augmented Generation (RAG) and Gemini API to manage inquiries effectively. Improved user experience by delivering intuitive, automated responses and real time support.

AI Research Agent

A specialized AI research application with two specialized agents: IT Research Agent and Pharmaceutical Research Agent. Built with Django, LangChain, LangGraph, and LangSmith that use the RAG and web search to find the information for the report generation.

AI Powered Calorie Burn Prediction and Management Tool

Developed a Flask web application with XGBoost for predicting exercise calorie burn from a Kaggle dataset. Integrated a Bootstrap-based UI, containerized the application using Docker, and implemented CI/CD pipelines with CircleCI.

LLM Voicebot

Developed an LLM Voicebot using Gemini, AssemblyAI, and TTS to transcribe user voice, generate responses with LLMs, and deliver synthesized speech. Built the backend with Flask and the frontend with HTML, CSS, and JavaScript.

Synthetic Data Generation using NLP

- **Data Preprocessing:** Cleaned and enhanced a dataset of 16,669 product reviews using standard scaling, text lemmatization, and word count analysis.
- **Model Development:** Created a custom deep learning model with attention mechanisms and Bidirectional LSTM layers to generate coherent product reviews.
- **Review Generation:** Implemented the model to generate high-quality product reviews.

Fine tuned T5 Model for Text Summarization

Implemented and trained a T5 small model on the CNN/DailyMail dataset for text summarization tasks, utilizing the Hugging Face Transformers library and PyTorch, with custom data preprocessing.

Plant Disease Prediction using Convolution Neural Networks

Designed a CNN model to classify plant diseases from leaf images and built a web app for instant diagnosis via image uploads.

LLM powered Crypto Tweet Generator

Developed an AI LLM powered Tweet Generator using Flask, LangChain, and Google's Generative AI to create engaging, crypto themed tweets with hashtags and emojis.

📁 EXPERIENCE

Python AI Developer

Swordfield Technologies Private limited

04/2025 – present | WFH

- Developing a RAG based chatbot with Langchain and Open AI API with agentic capabilities for the platform.
- Integrated features such as database querying, app information search, keyword analysis, app tracking management, and automated task execution.
- Implemented API integrations and built modules for summary and performance report generation.

Freelancer

11/2024 – 02/2025

Worked on client's projects based on Machine Learning, Image classification, Image Annotations, LLM, etc.

🧠 SKILLS

Data science, Machine learning and Deep learning

Python, Supervised and unsupervised algorithms, Neural Networks, ANN, CNN, RNN, LSTM, Feature engineering, NLP, Transformers, Fine Tuning etc.

Python Packages and Frameworks

Scikit-learn, Tensorflow, Keras, Numpy, Pandas, NLTK, Langchain, Streamlit, Django, etc.

Languages, Databases and Frameworks

HTML, CSS, Javascript, PostgreSQL, MongoDB, Django

Generative AI

GPT, LLMs, RAG, Gemini, Vector DBs, Langchain, LangGraph, Hugging Face, AI Agents, Fine tuning LLM, etc.

MLOPS

Git, Github, Docker, CI CD Github Actions

📄 CERTIFICATIONS

- Machine learning, Deep learning & NLP specialization
- Langchain for LLM Application development

🏠 ORGANIZATIONS

GeeksforGeeks

Technical writer

01/2023 – 05/2023

- Authored 23+ technical articles on computer science.

Chegg India

Subject Matter Expert

05/2023 – 11/2024

- Solved 400+ questions in probability and statistics.