Aditya Kumar

+91 9119267828 | aditya.iiitsurat@gmail.com | linkedin.com/in/aditya-kumar-learner | github.com/addygeek

EDUCATION

Indian Institute of Information Technology, Surat

Surat, Gujarat

B. Tech in Computer Science and Engineering

Nov. 2022 - May 2026

Projects

Indian Image Generation Platform (GenAI, LORA, Fine-tuning, Flux, Stable Diffusion)

Created an Indian image generation platform allowing users to generate custom images based on textual prompts. Users can upload their own face data for custom image generation, enhancing the personalization of AI-generated content. Fine-tuned Stable Diffusion models using LoRA on cloud infrastructure for better customization and model adaptability. Leveraged Flux for stable model deployment and efficient training pipelines.

AI-powered CRM Automation using LangChain and Agent Frameworks (LangChain, AI Agents, Automation) Developed an AI-based CRM automation system that integrates with existing CRM workflows using LangChain. The system utilizes AI agents to automate customer interactions, lead generation, follow-up tasks, and sentiment analysis. The agents improve workflow efficiency and help personalize customer service interactions, providing real-time recommendations for sales teams.

Personalized Content Generation with Fine-tuned LLMs (GenAI, GPT, Fine-Tuning, RAG)

Built a custom fine-tuned LLM system that generates personalized content for users, leveraging RAG (Retrieval Augmented Generation) and fine-tuning techniques. The system dynamically fetches relevant data from a structured knowledge base to produce context-aware content. The project focused on applying GenAI for customer-facing solutions, aiming for highly tailored user interactions.

Multimodal AI Assistant for E-commerce (GenAI, LLMs, Multimodal AI)

Developed a multimodal AI assistant that integrates with e-commerce platforms. It uses LLMs to provide personalized shopping recommendations, answer customer queries, and generate content such as product descriptions, reviews, and social media posts. The project aims to optimize e-commerce experiences through deep personalization.

Text-to-Image Generation using Stable Diffusion API (GenAI, Stable Diffusion, Prompt Engineering) Created a custom API to generate images based on text prompts using Stable Diffusion. The system is designed to provide businesses with a fast and scalable solution for creating unique, AI-generated images for digital marketing, product presentations, and social media content. Focused on prompt engineering to ensure the generated content meets specific design criteria.

AI-driven News Aggregator with Sentiment Analysis (GenAI, NLP, Text Summarization, Sentiment Analysis) Developed an AI-driven news aggregator that fetches articles based on user-defined interests and summarizes the content with text summarization techniques. The system performs sentiment analysis on articles, delivering personalized newsfeeds with bias and sentiment insights. The project leverages NLP models to make content discovery more relevant.

SKILLS

Programming & Scripting: Python, TypeScript, JavaScript, SQL, Shell Scripting

GenAI & Foundation Models: Prompt Engineering, Instruction Tuning, Fine-tuning (LoRA, QLoRA, PEFT), DreamBooth, ControlNet, Stable Diffusion, Text-to-Image/Video Generation

LLMs & NLP: Transformers (BERT, GPT-3.5/4, LLaMA2/3, Mistral, Mixtral, Qwen, Phi-2), Hugging Face, Sentence Transformers, Text Summarization, RAG (Retrieval Augmented Generation), OpenAI APIs

AI Agents & Orchestration: LangChain, LangFlow, CrewAI, AutoGPT, BabyAGI, Flowise, n8n, LangGraph, Memory Architectures for Autonomous Agents

Vector Databases & Embeddings: FAISS, ChromaDB, Pinecone, Weaviate, Milvus, OpenSearch, Hugging Face Embeddings, OpenAI Embeddings

Model Deployment & Inference Optimization: vLLM (Very Fast LLM Inference), Hugging Face Inference Endpoints, Triton Inference Server, DeepSpeed, ONNX, TensorRT

Machine Learning & Deep Learning: Scikit-Learn, TensorFlow, PyTorch, Keras, XGBoost, LightGBM, CNNs, RNNs, Transformers, Attention Models

Computer Vision & Multimodal AI: OpenCV, YOLOv8, SAM (Segment Anything Model), Visual Question Answering (VQA), Image/Video Captioning Models

Data Science & Analytics: Pandas, NumPy, Matplotlib, Seaborn, Plotly, Streamlit, Power BI

Cloud Computing & MLOps: AWS (SageMaker, EC2, S3, Bedrock), Google Cloud (Vertex AI, TPU), Azure AI Studio, Replicate, Docker, Kubernetes, MLflow, Airflow

Automation & Workflow Tools: n8n, Flowise, LangFlow, Zapier, Serverless Functions, Data Pipelines Automation

Ozibook

Data Analyst Intern

 $\begin{array}{c} {\rm May}\ 2024-{\rm Present} \\ {\it Remote} \end{array}$

• Scraped and analyzed LinkedIn data using **Selenium** and **BeautifulSoup**.

- Built interactive dashboards in Tableau and Power BI for client insights.
- Conducted **predictive analytics** to forecast trends and improve decision-making.
- Automated **reporting systems**, enhancing data accessibility and efficiency.