

UDAYA TK

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EDUCATION

Bachelor of Technology in Computer Science Engineering (Big Data)

2025

Presidency University, Bengaluru — CGPA: 7.51

Pre-University Education (Science)

2021

Sri Chaitanya PU College — 81.5%

Secondary School Certificate (SSLC)

2019

Soundarya High School — 72%

TECHNICAL SKILLS

Programming Languages

Python, SQL

AI / Machine Learning

Large Language Models (LLMs), Retrieval-Augmented Generation (RAG), Fine-Tuning, Prompt Engineering, LoRA, QLoRA, Unsho, Embeddings, Vector Search

Frameworks & Tools

FastAPI, Streamlit, Pinecone, Elasticsearch, Google Gemini API, FFmpeg, Google Colab, Visual Studio Code

Databases

MySQL, Vector Databases

Cloud & Storage

Google Cloud Storage (GCS)

PROJECTS

Software for Dubbing English Videos to Indian Regional Languages

Independent Project

- Developed an end-to-end AI system to translate English videos into Indian regional languages with human-like voiceovers.
- Implemented speech-to-text, machine translation, and text-to-speech pipelines.
- Supported YouTube URLs and file uploads with downloadable translated videos and transcripts.
- **Tech Stack:** Python, Streamlit, FFmpeg, SpeechRecognition, gTTS, Google Translate API, yt-dlp, python-docx.

Retrieval-Augmented Generation (RAG) Chatbot

Independent Project

- Built a Streamlit-based chatbot using website content and semantic vector search.
- Scraped website data and stored embeddings in Pinecone.
- Retrieved relevant context using vector similarity search.
- **Tech Stack:** Python, Streamlit, Pinecone, BeautifulSoup, Gemini Embeddings.

Advanced Multi-PDF Chat AI Agent

Jun 2025 – Jul 2025

- Built an AI chat application to interact with multiple PDF documents.
- Implemented document parsing, chunking, and embedding-based retrieval.
- Integrated Google Gemini for accurate question answering.
- **Tech Stack:** Python, Streamlit, PyPDF2, NLP, Information Retrieval, Google Gemini API.

Fine-Tuned AI Model for Election Manifesto Summarization

Independent Project

- Fine-tuned Google Gemma-2B using LoRA and QLoRA for manifesto summarization.
- Optimized inference with 4-bit quantization for low-resource devices.
- Improved output quality using structured prompt engineering.
- **Tech Stack:** Gemma-2B-IT, LoRA, QLoRA, Unslot.

INTERNSHIP EXPERIENCE

Python Developer Intern (AI/ML)

Aug 2025 – Present

EpicMinds Information Technology Pvt. Ltd., Bengaluru

- Developed **NeuroVault**, an AI-powered file management and retrieval platform.
- Generated summaries, tags, and metadata using Google Gemini.
- Built an Elasticsearch-based semantic search engine.
- Integrated Google Cloud Storage with secure time-limited URLs.

SQL Developer Intern

Jul 2024 – Aug 2024

Bharat Electronics Limited (BEL), Bengaluru

- Implemented MySQL master-slave database replication on Windows.
- Configured master node and optimized read performance using slave nodes.
- Improved scalability, availability, and fault tolerance.

EXTRA-CURRICULAR ACTIVITIES

- Certifications: Python with Data Analytics, Agile Project Management, Introduction to Cybersecurity.
- Organizer, Zetta Byte Club — Presidency University.
- Techthon Finalist — Visionet (2024).
- National Cadet Corps (NCC).