Pranay Shaurya

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EDUCATION

Vellore Institute of Technology – Bachelor of Technology, CSE (Health Informatics) *Sep 2022 – 2026*
CGPA: 8.12/10.0 Bhopal, Madhya Pradesh

TECHNICAL SKILLS

Data Analysis, Programming: Python (Pandas, NumPy, Matplotlib, Scikit-learn), SQL (PostgreSQL, MySQL), C++.
Database Management: Relational Databases (MySQL, PostgreSQL), Vector Databases (ChromaDB), Data Modeling.
Business Intelligence and AI: Generative AI (GCP Vertex AI, Gemini), LLM Frameworks (Hugging Face), Predictive Modeling.
Tools and Platforms: Google Cloud Platform (GCP), Git, VS Code, Docker, MS Excel (Advanced).

EXPERIENCE

Generative AI Programs on Google Cloud (Virtual Internship) *2024*

- Completed Google Cloud's GenAI Exchange Program and Virtual Internship focused on Gemini and Vertex AI.
- Built and deployed scalable applications using Generative AI tools on Google Cloud.
- Earned Skill Badges: "Build Real World AI Applications with Gemini and Imagen" & "Prompt Design in Vertex AI".
- Pursued advanced learning paths in Gemini and Generative AI for Developers.

Research – Alzheimer's Disease Detection using Deep Learning *2024*

- Conducted research on Alzheimer's disease detection using CNN and ML, achieving 92% accuracy on 60K+ MRI scans.
- Optimized preprocessing and hyperparameters to reduce overfitting by 25%.
- Improved model precision by 15% through fine-tuned CNN architecture.
- Co-authored a research paper accepted for publication in Springer.

PROJECTS

Alzheimer Disease Detection — Tools: CNN, ML, Python, TensorFlow *Feb 2024 – Apr 2024*

- Developed a CNN-based deep learning model achieving **92% accuracy** on over **60,000 MRI scans**.
- Implemented 5-fold cross-validation ensuring robustness and generalization.
- Optimized preprocessing pipeline using NumPy and OpenCV for MRI normalization.
- Fine-tuned hyperparameters (batch size, learning rate, kernel size) reducing overfitting by **25%**.

Retail Sales Analysis — Tools: SQL

- **Architected a retail sales SQL database** , performing rigorous data cleaning and ETL to ensure data accuracy for analysis.
- **Executed advanced EDA using Window Functions and CTEs** , uncovering critical trends in customer demographics and purchasing behavior.
- **Quantified key metrics** like monthly revenue growth and shift-wise performance to identify high-value market segments.
- **Derived actionable insights**on top-spending customers and peak sales periods to support data-driven inventory strategies.

Gen AI QA System for Documentation (RAG Pipeline) — Tools: LangChain, OpenAI API, ChromaDB

- Developed a **Retrieval-Augmented Generation (RAG)** system for intelligent document question answering.
- Designed a data pipeline to **load, chunk (1000 chars)**, and embed text into **ChromaDB vector store**.
- Retrieved top **K=3** most relevant chunks using cosine similarity for precise context generation.
- Deployed a ChatOpenAI model with LangChain's prompt templates for grounded response synthesis.

CERTIFICATIONS

- Google Cloud – Virtual Internship on Generative AI (Certificate Link)
- AWS Academy Graduate – Cloud Foundations (Badge)
- Languages: English (Fluent), Hindi (Fluent), Japanese (Learning)