Kartik Garg

8882477516 | kartikgnitt@gmail.com | linkedin.com/in/Kg0505 | GitHub

Technical Skills

Programming & Scripting: Python (Pandas, NumPy, Scikit-learn), SQL, C++ (Basic)
Machine Learning & AI: Supervised & Unsupervised Learning, Regression, **LLMs, RAG, ARIMA forecasting**
Data Analysis & Visualization: Excel, Power BI, Tableau, Matplotlib, Seaborn, Plotly
Database Management: MySQL, **ChromaDB (Vector Database)**
Cloud Platforms & APIs: Google Cloud (STT, Translation), Sarvam AI (TTS), OpenWeather API
Tools & Frameworks: LangChain, Jupyter Notebook, VS Code, MS Word
Soft Skills: Problem-Solving, Critical Thinking, Communication, Attention to Detail

Experience

Structural Deterioration Prediction (ML) **May 2025-July 2025**
NIT Tiruchirappalli *Tiruchirappalli, India*

- Built a supervised ML pipeline to classify structural deterioration in **4,000+** buildings using inspection data.
- Preprocessed **11+** structural features with encoding and imputation for **5%** missing values.
- Finalized an SVC model with **89.8%** test accuracy and a Cohen's Kappa score of **0.8458**, outperforming baseline classifiers.
- Delivered high precision across all classes to support proactive infrastructure maintenance and reduce manual inspections.

Projects

KrishiMitra – AI-Powered Multilingual Advisor for Farmers | *Python, LLM, RAG* **Aug 2025**

- Selected as a **Top 14 Finalist out of 5000+ teams** at the Capital One Launchpad Hackathon 2025 (Fully Sponsored Finale).
- Developed an AI-powered multilingual advisor for farmers using **LangChain, ChromaDB, and Google Cloud** for data-grounded insights.
- Enabled **multilingual voice/text queries and responses** (Hindi, Kannada, 12+ languages) via Google STT + Sarvam AI TTS, and added **memory-enabled conversations** for contextual follow-ups.
- Implemented **ARIMA forecasting** for 40,000+ crop–market combinations and integrated 2,000+ seed varieties from public datasets (data.gov.in, PIB, ApniKheti).

Optimized Big Data Analysis Using Pandas and SQLite | *Big Data, Python, Pandas, Plotly* **Mar 2025**

- Implemented out-of-memory data analysis to handle a **3.9GB NYC 311 complaints CSV dataset** using Pandas and SQLite.
- Designed a chunk-based data import and processing pipeline, leveraging SQL-based aggregations to efficiently manage and analyze large-scale data.
- Utilized **Plotly** for dynamic graphical representations and **interactive data visualizations** to enhance data interpretability.

Sales Insights - Coffee Shop Business | *Power BI, SQL* **Dec 2024**

- Analyzed **150,000 rows** of coffee shop sales data using **SQL** and **Power BI**
- Executed **SQL queries** for sales analysis, customer segmentation, and trend identification.
- Designed a **Power BI dashboard** to present insights on **KPIs**, effectively displaying sales trends.
- **Sales Trends and Insights:** Analyzed sales patterns on weekdays vs. weekends to optimize staffing and inventory. Identified peak sales hours by grouping data by hours, enabling better resource allocation. Conducted monthly breakdowns to detect trends and adjust marketing strategies for slower periods.

Education

National Institute of Technology Tiruchirappalli **Tiruchirappalli, Tamil Nadu**
Bachelor of Technology in Civil Engineering (8.51/10) ***Nov 2022-May 2026***