Dhrati Bajpai

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Summary — Data Scientist with 2 years of experience delivering end-to-end AI solutions in diverse industries. Specializing in Generative AI, leveraging cloud-agnostic solutions to automate workflows, optimize operational transformation, and drive decision making across sectors. Creating high-impact AI solutions by bridging business and technology.

Skills

Language Python, SQL, C/C++

Platforms Google Cloud Platform (GCP) (Vertex AI, Big Query, Artifact Registry, Cloud Run, Dialogflow CX), Azure (Document AI, Azure AI Studio, Cognitive Search), Databricks, Git, PowerBI

Technical Python, Machine Learning, Deep Learning, Natural Language Processing (NLP), Generative AI (Gen AI), Agentic AI, Prompt Engineering, Fine Tuning, Retrieval Augmented Generation (RAG), LangChain, Docker, LLMOps, AIOps

Experience

Genpact **Aug 2023 – Present**

Data Scientist

- Identified inefficiencies in human-led price claim validation impacting over 236 customers in an FMCG firm, and developed an AI-driven solution leveraging Azure Document AI, GPT-4o, and TF-IDF to automate claim closure. The system, deployed via an Azure-based pipeline (Blob Storage, Databricks, DevOps), improved document processing speed by 16% and achieved 81% accuracy in the MVP. It processed over 16,000 claims, uncovering 28% reconciliation errors, thereby enhancing financial accuracy and compliance and reducing effort equal to 7 FTEs
- Tackled inefficiencies in SOP retrieval across an FMCG knowledge base by reducing SME dependency for over 2,300 documents through a RAG-based chatbot with Semantic Conversational Flow, achieving 90% retrieval accuracy. The solution integrated GCP services (Vertex AI, Cloud Run, BigQuery, Vector Database) alongside Docker and FastAPI, efficiently handling over 6,000 queries. This led to a 60% reduction in manual effort, 80% decrease in new hire training time, and enhance information retrieval by 63%
- Analyzed over 2 million rows of switchgear data in the Electrification & Industrial Automation domain to optimize component selection, designing a predictive recommendation system as an individual contributor using K-Means, Hierarchical Clustering, DBSCAN, PCA, and TF-IDF, resulting in a 60% increase in selection efficiency. Leveraged Python, Spark, and Databricks to ensure scalable and performant processing, ultimately reducing design and approval time from 8 months to just 30–50 days, significantly enhancing operational efficiency

Mentorship Role

- Mentored, trained, and guided a team of 5 IITians, strengthening their technical expertise and preparing them for corporate-grade delivery. Led them to build and deploy a multi-agent GenAI solution under a tight deadline.

Proof of Concept Projects

- **Azure AI Ticket Resolution** on 50+ Knowledge Base
  - Develop an AI-powered system, processing 1000+ synthetic tickets, using **Azure Cognitive Search & NLP**
  - Enhance retrieval from PDFs accuracy by 86% and reduce latency by 40% through an optimized search pipeline
- **Chatbot using GCP conversational service** on 100+ Knowledge Base
  - Built a customer support chatbot on **GCP Dialogflow CX**, handling 1000+ queries with a seamless Streamlit UI
  - Deployed with Docker for 2x faster scalability, achieving 89% accuracy in document retrieval
- **Property Insurance Premium Prediction** with 1000+ rows
  - Created a premium prediction model trained on 6 months data, addressing imbalanced and insufficient datasets
  - Improved premium estimation by **67%** using **Linear Regression & Random Forest**, evaluated via MSE and R^2

Education

Dr. A.P.J. Abdul Kalam Technical University **Uttar Pradesh, India**

Bachelor of Technology(Hons.) *in Computer Science and Engineering* *Aug 2019 - Jul 2023*

GPA: 8.23