

DIPTYAJIT DAS

Education

B.Tech in CIVIL ENGINEERING – IIT Kharagpur 2022

Courses: Probability and Statistics, Programming and Data Structures, Risk and Reliability of Civil Infrastructures

M.S. in ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING – Woolf University 2025

Courses: Data Analysis and Visualization, Machine Learning, Deep Learning

Skills

[Python](#)

LeetCode Knight [Top 2%]

Libraries: pandas, seaborn, scipy, sklearn, tensorflow, keras, pytorch

[Databases](#)

SQL: MySQL, PostgreSQL

NoSQL: MongoDB

VectorDB: Qdrant, Faiss

[Visualization](#)

Excel: Pivot Chart, VLOOKUP, HLOOKUP, XLOOKUP

Tableau: LOD, QTC

Work Experience

IOPEX TECHNOLOGIES – Data Analyst Jun '24 – Jun '25

- Finetuned **EfficientNet-B3** CNN for multi-class image classification (adult, violent, neutral), achieving F1-scores of **0.95, 0.92, and 0.80**, respectively, on a 50,000-image dataset. Utilized TensorFlow with ImageNet-pretrained weights, data augmentation, and weighted categorical cross-entropy to address class imbalance. Deployed via **Fastapi** and **Docker** with REST APIs, reducing manual review workload by **20%**, enhancing content moderation.
- Built a face recognition system using **Qdrant** vector database and **Insightface**, enabling efficient multi-person tagging. Achieved Hamming Loss of **0.06** for known persons and **0.08** for unknown persons via optimized cosine similarity and face detection thresholds. **Facetag** increased gallery interactions by **15%**.
- Developed **SARIMA** and **Prophet** models for sales volume forecasting, achieving MAPE of **0.06** and **0.09**, respectively, on 1 years of time-series data (1L records). Preprocessed data with pandas and tuned hyperparameters via grid search. Forecasted next 3 months of Sales volume optimizing resource planning.
- Designed RAG application using **LangChain** and **Faiss** for document retrieval, indexing 25 policy documents with sliding window and 20% overlap with 512 token size using OpenAi embedding model. Achieved MRR of **0.73** for top-5 retrieved chunks. Integrated **GPT-4** for response generation, attaining a **BERTScore** of **0.81** across 100 queries.

EXCELERATE – FullStack Developer Aug '23 – Jan '24

- Enhanced an educational organization's website using Angular, Node, TypeScript and DynamoDB which resulted in a **10%** increase in effective email delivery rates leading to a **5%** increase in course enrollments.

Projects [[Portfolio](#)]

E-COMMERCE DATA ANALYSIS FOR DRIVING GROWTH [[Link](#)] May '24

- Achieved substantial insights by analyzing 2019 ecommerce data
- Performed **Cohort Analysis** and **CLTV** prediction achieving a **.85 R²** score.

RETAILER DATA ANALYSIS (SQL) [[Link](#)] Feb '24

- Analyzed an eminent Brazilian retailer's dataset identifying trends, peaks and buying habits.
- Discovered results like a **137%** sales spike and the most profitable states.