



Data science master's student with over 3.5 years of industry experience analyzing data and providing recommendations in Analytics and ML/AI space. Skilled in ML/DL, statistics, data visualization, and generative AI. Highly dedicated problem solver, goal-oriented, and an efficient team player. Looking for full-time opportunities as Data Scientist, ML Engineer, or AI Engineer.

EDUCATION:

Master of Science in Engineering Data Science | GPA: 3.95

Jan 2023 – Anticipated, May 2024

University of Houston, Cullen School of Engineering – Houston, TX

Bachelor of Technology in Civil Engineering

Aug 2015 – May 2019

Manipal Institute of Technology – Manipal, India

TECHNICAL SKILLS:

- **Programming:** PyTorch | Python (advanced) | HTML, CSS (basics)
- **Database:** MySQL Redshift, Snowflake | Vector Database (FAISS, Chroma) | Graph Database (Neo4j, NebulaGraph)
- **Analytical Tools:** Tableau (Certified), Power BI, Microsoft Excel (advanced), Microsoft PowerPoint
- **AI/ML:** ML Algorithms, Dimensionality Reduction (PCA, SOM, t-SNE), NLP, RNN, LSTM, Transformers, Explainable AI (XAI), Large Language Models, CNN, Object detection, image segmentation, pose detection, Prompt Engineering, Retrieval Augmented Generation, Knowledge Graph
- **Dev-ops Tools:** Git (GitHub, Bitbucket), Docker, Kubernetes

WORK EXPERIENCE:

Generative AI - Research Assistant - AIceberg | Houston, TX

June 2023 – Present

- **Fine-tuned large language models** on a custom dataset using **LoRA** and **QLoRA** fine-tuning methods and quantization of the models.
- **Grounded** the finetuned LLM with external non-parametric knowledge through **RAG** and **Knowledge Graphs** and generate quality response through prompt engineering to tackle **hallucination** in LLM.
- Developing and experimenting with novel techniques in **feature extraction** using vector embeddings and **prompt engineering**.
- Enhanced research and conducted experiments across multiple **frameworks** (LangChain, LLaMaindex), **embedder models** (SOTA embedders), and **vector storage databases** (simple methods to FAISS) to optimize both the speed and quality of processes.

Business Analyst - Meesho | Bangalore, India

Oct 2022 – Jan 2023

- Produced leads through data mining and measured impact/performance of webinars and 1:1 training through **A/B testing**.
- Provided **business recommendations** to improve supplier engagement.
- Developed and maintained **analytical dashboards** utilized by stakeholders to track the L0 metrics of the Supplier Activation charter.

Business Analyst - Swiggy | Bangalore, India

Apr 2021 - Aug 2022

- Implemented **A/B testing** and normalizations to measure the impact/performance of in-house products or features on **Chatbot (CRM)** and formulate necessary business recommendations.
- Improved the **CPO by 15%** by changing nomenclature of a bot disposition. Reduced 95th percentile customer wait times during peak hours by **60%** by balancing the load.
- Utilized Power BI to develop and maintain smart, compelling **analytical dashboards** to monitor KPIs, identify trends, and monitor company initiatives and agents' performance.
- Conceptualized the formulation of various metrics (active agents) and enhancement of a bot efficacy metric.
- Conducted **driver analysis** on key metrics to identify potential improvement areas in the Swiggy Chatbot flow.
- Collaborated with enterprise **data warehouse**, data governance, and business teams on **data quality issues**, as well as architecture of **data repositories** or fact tables under my purview.

TECHNICAL PROJECTS:

Transformers vs CNNs for Semantic Segmentation of Bridge Damages

Implemented Segformer-b5 and YOLOv8-m models for segmenting damage and object classes on dacl10k dataset. Achieved performance with YOLOv8-m (0.312 mIOU) trained for 70 epochs compared to Segformer-b5 (0.268 mIOU) trained for 5 epochs.

Pedestrian Crossing Detection using YOLOv8

Developed an advanced pedestrian detection system by fine-tuning YOLOv8s on a Pedestrian Intention Estimation (PIE) Dataset, achieving a mAP50 of 0.590 and mAP50-95 of 0.412.

Illuminating LLM Responses (XAI) with GPT 3.5 and T5

Leveraged **LangChain** framework on **GPT 3.5** to create high-quality **QA downstream task** response on **custom documents**. Fine-tuned the **T5** LLM to generate headlines from responses and employed **contextual similarity** (cosine) on the **embeddings** of T5-generated headline and the document's title to **retrieve** the specific document that was used to generate a response.

Resume Parser

Built a **Custom Name Entity Recognition model** using spaCy. Model was trained on a training dataset containing samples of hard skills and soft skills, to extract skills from PDF files.

HackerEarth: Adopt a buddy Challenge

Built a **multi-label machine learning model** stacked with **XGBoost** and **Light GBM** algorithms, to determine type and breed of the animal. The model got me a place in top 8% on the leaderboard.

Content-Based Movie Recommender System

Built a web app on an end-to-end movie recommendation system using Cosine Similarity, from the data scraped from the TMDB website by calling the API. Wrapped it in a Flask API and deployed it onto Heroku.