



Data science master's student with over 2.5 years of industry experience analyzing data and providing recommendations. Skilled in machine learning, statistics, data visualization, and generative AI. Highly dedicated problem solver, goal-oriented, and an efficient team player. Self-driven and fast learner, looking for full-time opportunities.

EDUCATION:

Master of Science in Engineering Data Science - GPA: 3.89

Jan 2023 – 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:** Python (advanced) | HTML, CSS (basics)
- **Database:** MySQL Redshift, Snowflake (advanced) | Vector Database (FAISS, Chrome)
- **Analytical Tools:** Tableau, Power BI, Microsoft Excel (advanced), Microsoft PowerPoint
- **AI/ML:** Regression, KNN, ANN, Decision Trees, Random Forrest, SVM, Apriori, 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
- **Dev-ops Tools:** Git (GitHub, Bitbucket), Docker, Kubernetes

WORK EXPERIENCE:

Generative AI - Research Assistant - Applied Data Science Lab | University of Houston, TX

June 2023 – Present

- Researched techniques to enhance **text-generative AI interpretability and explainability**. Developed an end-to-end commercial integration from a cybersecurity perspective.
- Fine-tuned large language models on a custom dataset using LoRA and QLoRA fine-tuning and quantization of the models.
- Developing and experimenting with novel techniques in **feature extraction** using vector embeddings and **prompt engineering**.
- Researching ways to tackle **hallucination** in LLM.

Business Analyst - Meesho | Bangalore, India

Oct 2022 – Jan 2023

- Generated leads through data mining and measured the 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

April 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 the 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.
- Contributed to the formulation of various metrics (active agents) and the 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 the architecture of **data repositories** or fact tables under my purview.

TECHNICAL PROJECTS:

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 title of the document to **retrieve** the document that was used to generate the response.

Keyword extraction using Attention mechanism in BERT

Used the **contextual embedding** from the **last hidden layer** of the output of BERT to extract the top 5 keywords from any a text body.

Hotdog or Not Hotdog

Developed a 93.67% accurate custom image classification model that leverages **Inception V3**.

Resume Parser

Created a **Custom Name Entity Recognition model** using spaCy. This 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** which was stacked with **XGBoost** and **Light GBM** algorithms, to determine the type and breed of the animal. The model got me a place in the top 8% on the leaderboard.

Content-Based Movie Recommender System

Created 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.