

VISHAL CHANDRU

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EDUCATION

- **Master of Science in Data Science** Aug 2022 – May 2024
The University of Texas at Arlington GPA – 4.0/4.0

SKILLS

- Languages: C++, Java, Python, R
- Database: MySQL, PostgreSQL, VectorDB
- Analytics: Tableau, MS Excel, Power BI
- Libraries: TensorFlow, PyTorch, Scikit, MLflow, LangChain
- DevOps: Docker, GitHub, DVC, Kubernetes
- Cloud: AWS, Heroku

EXPERIENCE

- **Data Scientist (Capstone)** Jan 2024 – Present
Bank of America
 - **Optimizing LLM Detectors:** Collaborated with Bank of America to optimize the performance of LLM Detectors by integrating SVM to detectors like GPTZero, CopyLeaks, DetectGPT, ZeroGPT, DetectingAI.com with the University of Texas at Arlington.
- **Graduate Student Assistant** July 2023 – Dec 2023
University of Texas, Arlington - The Office of the Vice President
 - **Data Analysis:** Operated in the Vice President's Data Analyst Team to perform data analysis on enrollment data to provide insights for future Enrollment Opportunities at The University of Texas at Arlington.
 - **Data Visualization:** Developed 2021-2025 SEM (Strategic Enrollment Management) Planning, Vision, Goal and Initiatives of UTA by perform ETL task and building dashboards using Power BI.
 - **Portfolio Management:** Provide insights from Contract Management and offer recommendations on the renewal of the Contracts signed by UTA.
 - **Tools:** SAS, OAC, MS Excel, Tableau, Power BI, SQL.
- **Data Scientist** Oct 2021 – Nov 2022
Innomatics Research Labs
 - **Model Management & Experiment Tracking:** Deployed the machine learning models in cloud and kept a track of the model parameters and logging the experiments by MLOPs.
 - **Natural Language Processing:** Finetuned BART NLP Summarization models, and worked with LLMs.
 - **Computer Vision:** Worked with OpenCV, Yolo, Semantic Segmentation algorithms.
 - **Tools:** Python, R, GitHub Actions, Docker, MySQL, TensorFlow, PyTorch, GenAI
- **Software Engineer** Jan 2021 – Jun 2022
Larsen & Toubro Infotech
 - **Development:** Built and performed Data Analysis on the Mobility Data Analysis Platform for Mercer-Marsh McLennan using SQL and Python.
 - **Data Process Automation:** Automated the manual Data Analysis task by developing a python code that reduced the manual labor by 70%.
 - **Leadership:** Communicated with Client-Project Manager and Business Analyst and drive the team in agile methodology to accomplish sprints and milestones.
 - **Tools:** JAVA, Python, PostgreSQL, API

PROJECTS

- **Finetuning LLM Models (GenAI)** [Python, Hugging Face, Transformers, NLP, LLM, AWS]
 - Performed Prompt Engineering (Zero-shot, One-shot, Few-shot) and PEFT (LoRA method) on Flan-T5 model.
- **RLHF LLM Models (GenAI)** [Python, Hugging Face, Transformers, PyTorch, AWS]
 - Building a responsible AI with less toxicity using reinforcement learning by human feedback on finetuned Flan-T5 with reward model as facebook's roberta-hate-speech-dynabench-r4-target model.
- **RAG LLM Application using LangChain** [Python, OpenAI, Transformers, PyTorch, Pinecone, Weaviate, FAISS, AWS]
 - Created a Chat LLM model using Retrieval Augmented Generation LLM to retrieve response from external PDF using Semantic Search on the Embedded chunks of PDF in the Vector Store/DB.
- **Time Series Forecasting on Stock Prices** [Python, ARIMA, SARIMAX, LSTM]
 - Created a streamlit application which predicts the stock prices of a particular company using Tiingo API.
- **Experiment Tracking and Model Management** [Python, Streamlit, MLflow, DVC, DagsHub, Docker, AWS]
 - Built and containerized a Streamlit app, tracked with MLflow, DVC, automated CI/CD, and deployed on AWS ECR.
- **Recommendation Systems** [Python, TensorFlow, ScaNN, Ranking]
 - Music and Movie recommender systems using collaborative filtering on public datasets.