

SHIVIKA K BISEN

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PROFESSIONAL EXPERIENCE

Data Scientist – Gen AI, Viasat

Aug 2023 – Present

San Jose, California

- Led **full stack LLM** based **chatbot** to production for text to SQL using RAG, enabling companywide Q/A for advertising performance.
- Deployed LLM agent in serverless architecture using AWS (Bedrock, Lambda, S3, API Gateway), LLM (Llama2 and Claude3), Langchain, vector DB, hugging face embedding and multi-database tech stack. Enhanced BI reporting by cutting down analysis time by 30%.
- Implemented **Yolo v5** based computer vision tool for safety monitoring through real-time video and image similarity using Redis.
- Coordinated with MLOps with effectively communication with business leadership on feedback. Implemented CI/CD pipeline with Github Action and agile methodologies.

Data Scientist – AI/ML, PAXAFE Inc

May 2021 – Aug 2023

San Jose, California

- Deployed **end-to-end ML prediction models** at **J&J** at global scale, using Python, MySQL, Docker, AWS, and Flask with 95% accuracy.
- Architected **product analytics tool** to evaluate metric on large-scale data (10 TB+). Productionalized data pipeline into AWS cloud and deployed real time dashboards using Superset, Tableau, data models in 4 regions- NA, Europe, SA and Asia.

Software Engineer – AI/ML, iCatalysts Inc

Jul 2020 – Apr 2021

San Francisco, California

- Created **GPT-3** based app for NLG in sales email for California Energy Commission using sentiment analysis, few shot prompt engineering and fine-tuning. Performed code reviews, identifying bugs, and debugging using Python, ETL, React and Git.

Data Scientist, LLM – Microsoft, University of Michigan – Ann Arbor

May 2020 – Apr 2021

Ann Arbor, Michigan

- Delivered **United Nation** Search Engine and recommendation on unstructured reports, achieving a 0.87 Mean Average Precision and raised **ranking** by outperforming Google for UN-related queries.
- Fine-tuned **BERT** model for summarizing text using, data scraping, PDF text extraction with Apache Tika and employed BM-25 ranking on Flask API.

NLP Engineer – Google.org, University of Michigan – Ann Arbor

Jan 2020 – Nov 2020

Ann Arbor, Michigan

- Designed a **classifier** by training **logistic regression** and, **RoBERTa** to predict user behavior on UpTogether **social networking** platform aimed at boosting **Ads targeting**. Achieved an 82 F-1 score (used TensorFlow, Scikit-learn framework).
- Collaborated with Prof. David Jurgen to develop **advanced NLP features** using GloVe embedding, LIWC, Stanford CoreNLP sentiment analysis. Solution resulted in adoption of platform in 19 US states.

EDUCATION

University of Michigan – Ann Arbor

Ann Arbor, Michigan

Master of Science in Data Science, Computer Science & Engineering

Jan 2019 – Dec 2020

VIT University

Vellore, India

Bachelor of Technology Biomedical Engineering, Minor in Computer Science

Jul 2009 – Aug 2013

TECHNICAL SKILLS

Technical Languages: Python, SQL, JavaScript, R, HTML5, CSS3

Tools and Frameworks: AWS (Bedrock, Sagemaker, Redshift etc), Docker, Snowflake, dbt, redis, GCP, Github/Bitbucket, Pandas, NumPy, SciPy, Scikit-learn, TensorFlow, Keras, Pytorch, Matplotlib, NetworkX, NLTK, genism, React, Flask, Django, Node.js, D3.js, Hadoop/Spark, Jira, Excel, Jupyter, MySQL, PostgreSQL, MLflow, Airflow

PUBLICATION & AWARDS

- Attended [Gen AI summit SF 2024](#) engaging with key industry, focused on AI, LLM and multimodal agents.
- Speaker at [ML-Ops Conference New York 2022](#) sharing insights on successfully deploying AI models to production.
- Secured **top rank** in a **Kaggle** competition at UMich, focusing on **chat-bot** retrieval.
- Featured on Medium for [GPT-3 vs BERT](#) | [Stanford coreNLP](#) | [GloVe embedding](#) .
- Published "An Improved Segmentation Technique for Breast Infiltration/Tumor Detection from Mammograms" in International Journal of Engineering and Technology, 2013, Vol. 5, Issue 3, pp. 2565-2574.
- Awarded UMich Scholarship for exceptional STEM achievement.