

SHIVIKA K BISEN

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PROFESSIONAL EXPERIENCE

Data Scientist – Gen AI, Viasat

Aug 2023 – Present

San Jose, California

- **GenAI**: led from **inception to production at scale** using advanced RAG, LLM for text to SQL for Ad Campaign team with 91% execution accuracy. Enhanced business impact by increasing analytics use by 60% across teams.
- Analytics: Conducted A/B tests . Ran experiment with statistical analysis on new features and ML models.
- Coordinated with different business teams, MLOps with effectively communication with 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 predictive 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.
- Automated retraining of ML models for batch inference for forecasting, collaborating with cross functional teams.

Software Engineer – AI/ML, iCatalysts Inc

Jul 2020 – Apr 2021

San Francisco, California

- Created **LLM GPT-3** based app for post in **social network** for California Energy Commission using sentiment analysis, **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

- Developed **Gen AI recommendation system** to **production** for United Nations 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 and employed BM-25 and semantic retrieval.

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

Jan 2020 – Nov 2020

Ann Arbor, Michigan

- Designed a **Gen AI classifier** by training logistic regression and, RoBERTa to predict **user engagement** on UpTogether **social networking** platform aimed at boosting **Ads targeting**. Achieved an 82 F-1 score (used TensorFlow, Scikit-learn framework).
- Collaborated with NLP Researcher Prof. David Jurgen to develop advanced NLP features by data processing with 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 (lambda, Bedrock, ECR, Sagemaker, Redshift, API Gateway 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 **end to end** models to production.
- Secured **top rank** in a **Kaggle** competition at UMich, focusing on ranking and retrieval.
- Featured on Medium for [LLM Architecture](#) | [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.