

# SHIVIKA K BISEN

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## PROFESSIONAL EXPERIENCE

**Sr Data Scientist, Generative AI Prompt**, Viasat Aug 2023 – Present  
San Jose, California

- Architected **innovative prompting technique** for chat interface and natural language-to-code, achieving 91% accuracy while maintaining low latency from POC to production **deployment at scale**.
- Designed and implemented **chain-of-thought reasoning** enabling agentic AI workflow to navigate complex code logic.
- Built **chain-of-emotion** prompting technique for customer service Gen-AI product. Established robust **evaluation frameworks** measuring both technical performance and behavioral intelligence metrics (EQ).
- Led cross-functional collaboration with teams in US, Europe, and India, implementing **dynamic adversarial prompting** with **adv RAG** pipeline, **few-shot learning**, schema embedding and vector search.
- Designed and architected **conversational user-centric AI interfaces**. Implemented CI/CD and SDLC for scaled products.

**Lead Data Scientist – Gen AI**, PAXAFE Inc May 2021 – Aug 2023  
San Jose, California

- Led deployment of chatbot for **Johnson & Johnson** implementing **NLU** for reports understanding leveraging adv prompt engineering.
- Created comprehensive evaluation frameworks for measuring AI behavior against KPIs.
- Architected **evaluation tool** on large-scale data (10 TB+). Built data pipeline into AWS cloud and deployed real time dashboards using Superset, Tableau. Scaled to enterprise level for NA, Europe, SA and Asia with 95% accuracy in ML.

**Software Engineer- AI Prompt**, iCatalysts Inc Jul 2020 – Apr 2021  
San Francisco, California

- Designed intuitive prompting frameworks for **GPT-3 based classifier** for Salesforce email communications improving prioritization accuracy by 37%
- Performed code reviews, LLM finetuning, identified bugs and debugging using Python, ETL and conducted A/B test, unit tests.

**Data Scientist**, UMich– Ann Arbor (Microsoft funded) May 2020 – Apr 2021  
Ann Arbor, Michigan

- Led development of **Gen AI based search engine** for **United Nations** achieving a 0.87 MAP outperforming Google for UN queries.
- Designed **emotionally intelligent** prompting strategies that enabled AI product to understand the **social and ethical contexts**.
- Collaborated with UN stakeholders to translate technical capabilities into meaningful **human-centered solutions** using BERT summarization, BM-25 and vector search.

**NLP Engineer**, UMich – Ann Arbor (Google) Jan 2020 – Nov 2020  
Ann Arbor, Michigan

- Designed **psycho-linguistics** NLU feature based **Intent Classifier** to predict **emotions and behavior** on UpTogether platform. Achieved an 82 F1 score.
- Collaborated with LLM Researcher Prof. D Jurgen to build innovative algorithm for **detect behavioral, emotional and social cognition context** using GloVe embeddings, LIWC, Stanford CoreNLP sentiment. Solution resulted in adoption in 19 US states.

## EDUCATION

<b>University of Michigan – Ann Arbor</b>	<b>Ann Arbor, Michigan</b>
Master of Science in Data Science (Computer Science) – NLP track	Jan 2019 – Dec 2020
<b>VIT University</b>	<b>Vellore, India</b>
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:** Azure OpenAI, GCP, AWS (lambda, Bedrock, Sagemaker, API Gateway etc), Docker, Snowflake, redis, GCP, Github/Bitbucket, Alation, 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, Langchain, LamaIndex

## PUBLICATION & AWARDS

- **Blog writer:** Featured on **Medium** for [Large Language Models](#) | [Gen AI](#) | [GloVe embedding](#) .
- **Panel Speaker** at [Gen AI Conference DSS-ATX 2025](#) on deploying product grade Gen AI tool at scale.
- Secured **top rank** in a **Kaggle** competition for retrieval algorithm. Earned **UMich Scholarship** for STEM achievement.