

SHIVIKA K BISEN

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EDUCATION

University of Michigan

Ann Arbor, MI

Master of Science in Data Science (GPA: 3.69/4.00)

December 2020

Coursework: Applied ML, Regression Analysis, Database Systems, Data Mining, Info Viz, Info Retrieval, Model of Operation Research

VIT University

Vellore, India

Bachelor of Technology Biomedical Engineering (GPA: 3.98/4.00)

July 2009 – August 2013

WORK EXPERIENCE

PAXAFE

Indianapolis, IN

Data Scientist

May 2021 – Present

- Machine learning model development (e2e) for time series modeling/forecasting and regression in the **supply chain** prediction
- Delivered an **API** by setting up data pipeline via MySQL, Flask and Docker. **Deployed ML** model on **AWS** for Johnson & Johnson
- Implemented online ML model (real time learning) with 92 % accuracy for streaming data. Conducted unit tests
- Built data visualization/dashboard and performed EDA, quantitative analysis and developed statistical models, predictive models.

iCatalysts

San Francisco, CA

Data Science Developer

July 2020 – April 2021

- Implemented deep learning model **GPT-3** & developed a network analyzer app using D3.js, for California Energy Commission (CEC)
- Worked on algorithm development and deployed analytics solution for mapping. Managed software engineering processes in **Git**
- Implemented NLP classification & sentiment analysis. Worked on prototyping, debugging and testing ETL process

University of Michigan (Microsoft funded project)

Ann Arbor, MI

Data Scientist (Researcher)

May 2020 – April 2021

- Deployed **NLP Search Engine for United Nations** using BM-25 ranking with MAP- 0.78 [funded by Microsoft](#)
- Web crawled, worked on SQLite, extracted text from PDF & summarized text using **BERT**, evaluated the results with retrieval metrics

University of Michigan (Google/FII partnership project)

Ann Arbor, MI

Machine Learning Researcher (NLP)

January 2020 – November 2020

- Developed **NLP model** with an 82 F1 score to predict user behaviors on social networking site [UpTogether \(partner- Google.org\)](#)
- Mentored by NLU and info retrieval expert Prof. David Jurgen. Work related to Prof Cliff Lampe's research on Facebook
- Developed novel algorithm using **supervised models** (logistic regression, SVM) & **RoBERTa**. Performed feature engineering using LIWC, **CoreNLP**, GloVe, word embedding, clustering & LIME. Implemented topic modeling on big data

PROJECT EXPERIENCE

- Twitter sentiment analysis on autonomous cars (sklearn, NLTK, gensim, Python, NLP, Data Mining), UMich. [GitHub](#)
- Information retrieval based chatbot (Python, Flask, NLP). [GitHub](#)

PUBLICATION AND CONFERENCES

- Data for Public Good Symposium 2021, UMich- Chetah: Fast and Intelligent **search engine** [Poster](#) | WiDS Conference 2021
- UMSI Exposition, Deep learning-based **recommendation** using **AWS Sagemaker** (Tensorflow, Python, CV) [Poster](#)
- Bisen, S. (2013). An improved segmentation technique based on Delaunay triangulations for breast infiltration/tumor detection from mammograms. International Journal of Engineering and Technology, 5(3), 2565-2574
- Medium: Topic Modeling | Stanford coreNLP

SKILLS

Python, Javascript, R, HTML, SQL, Pandas, NumPy, SciPy, Statsmodels, Scikit-learn, TensorFlow, Keras, Pytorch, NLTK, CoreNLP, Matplotlib, NetworkX, gensim, D3.js, Django, Flask, SQLite, AWS, Hadoop, Spark, Jupyter, Tableau, Jira, MS Excel, Docker, Git

ACHIEVEMENTS AND LEADERSHIP

- **UMich LSAMP Scholarship** STEM Scholar 2020. Led as NLP Project Manager for MIDAS in five Michigan Universities
- Kaggle competition: **Top rank 2/70** in UMich 2020 (NLP Search algorithm for COVID queries)