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**
Lead Data Scientist *May 2021 – Present*

- Machine learning model development (end to end) for time series forecasting and applied regression in the supply chain prediction
- Delivered an API by **integration** of data pipeline, MySQL, Flask and Docker. **Deployed ML model** on **AWS** for Johnson & Johnson.
- Implemented online ML model (real time) with 92 % accuracy for streaming data. Conducted **unit tests** and pattern recognition
- Built **data visualizations**/dashboard (**Tableau, plotly, seaborn**) & performed EDA. Developed **statistical model** for **geospatial data**.

iCatalysts **San Francisco, CA**
Data Science Developer *July 2020 – April 2021*

- Implemented deep learning model GPT-3 & developed a network analyzer app for California Energy Commission (using D3.js)
- Managed **software engineering** processes in Git (**Software QA testing**). Developed Python scripts to deploy web app for mapping.
- Worked on NLP classification & sentiment analysis for Salesforce texts. 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 *January 2020 – November 2020*

- Developed AI/ML model with an 82 F1 score to predict user behaviors on social networking site *UpTogether (Google.org funded)*
- Mentored by NLP and info retrieval expert Prof. David Jurgen. Developed innovative algorithm for linguistic feature extraction.
- Developed novel algorithm using **supervised models** (logistic regression, SVM) & RoBERTa. Performed feature engineering using LIWC, CoreNLP, GloVe, word embedding, clustering, **unsupervised** & LIME. Implemented topic modeling on big data.

PROJECT EXPERIENCE

- Twitter sentiment analysis on autonomous cars (sklearn, NLTK, gensim, Python, NLP, Data Mining), UMich. *GitHub*
- **Advanced data visualization** and analytics on complex dataset CDC *Demo*

PUBLICATION AND CONFERENCES

- Data for Public Good Symposium 2021, UMich- Chetah: Fast and Intelligent search engine *Poster* | WiDS Conference 2021
- UMSI Exposition 2019, Deep learning-based recommendation using **AWS Sagemaker** (Tensorflow, Python, CV), UMich. *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, MATLAB, Pandas, NumPy, SciPy, 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

- **LSAMP STEM Scholarship** (Top 1% of Class).
- Led as NLP Project Manager for MIDAS for five Michigan Universities
- Kaggle competition: **Top rank 2/70** in UMich 2020 (NLP Search algorithm for COVID queries).