

# SHIVIKA K BISEN

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## EDUCATION

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### University of Michigan

Ann Arbor, MI

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

January 2019 – December 2020

Coursework: Applied ML, Info Visualization, Statistical learning, Database Systems, Data Mining, Info Retrieval, Agile Software Tools

### VIT University

Vellore, India

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

July 2009 – August 2013

## WORK EXPERIENCE

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### PAXAFE

Indianapolis, IN

Data Scientist

May 2021 – Present

- **End-to-end ML:** Developed model for client application, predicted supply chain events for J&J, 100+GB data > data analysis > model development > MySQL database > AWS integration & testing > to **production** as an **API** using Flask & Docker
- **Automated** data pipelines for **ML model retraining** using from AWS S3 to **AWS RedShift** with 1TB+ of data
- **Insights/Dashboard:** Built cloud-based data visualizations tool from large dataset using Superset & SQL, Tableau

### iCatalysts

San Francisco, CA

Data Science Developer

July 2020 – April 2021

- Created prototype to demo value of deep learning algorithms like GPT3, transformers model in text classification
- Analytics: Contributed to development of D3.js code for California Energy Commission (CEC) insights/visualization web app
- Enhanced product's user experience by testing new features, reporting bugs, debugging & troubleshooting in Python and Git

### University of Michigan (Microsoft funded, data4good)

Ann Arbor, MI

Data Scientist, Researcher

May 2020 – April 2021

- **End-to-end NLP search engine:** Developed for United Nations reports with 0.87 MAP (better than Google for UN queries)
- Deployment: Data scraping > extracted text from PDF > summarized text with BERT > deployed BM-25 ranking on Flask

### University of Michigan (Google.org funded, FII project)

Ann Arbor, MI

Machine Learning Researcher

January 2020 – November 2020

- **ML/DL classifier:** Developed for user's posts/text in social network site UpTogether using logistic regression (F1 score 82)
- Mentored by Prof. David Jurgen. Performed feature engineering using GloVe, topic modeling, RoBERTa Transformers

## PROJECT EXPERIENCE

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- Sentiment analysis on autonomous cars, NLP (Python, sklearn, NLTK, Data Mining) UMich. [GitHub](#)
- Advanced data visualization on complex large dataset [Demo](#) | Database systems (MySQL) [GitHub](#)

## PUBLICATION AND CONFERENCES

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- **Deep learning**-CNN based image similarity & recommendation in visual search (Tensorflow, Python, CV) [Poster](#)
- Chetah search engine for United Nation reports [Poster](#), Data for Public Good Symposium, 2021 | WiDS Conference 2022
- 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
- Technical content creation (Medium author): [Topic Modeling](#) | [Stanford coreNLP](#) | [Interactive Insights](#)

## SKILLS

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

## ACHIEVEMENTS AND LEADERSHIP

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- **UMich LSAMP Scholarship** STEM Scholar 2020. Led as Data Science Coordinator for UMich, MIDAS
- Kaggle competition: **Top rank 2/70** in UMich 2020 (**ML Search** algorithm for COVID queries)