Soham Shimpi

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EDUCATION

M.S. Computer Science *August 2023 – May 2025*
Arizona State University, Tempe, AZ CGPA 3.94
***Completed Coursework**: Data Visualization, Fundamentals of Statistical Learning and Pattern Recognition, Foundation of Algorithms, Data Mining, Data Intensive Systems for Machine Learning, Knowledge Representation and Reasoning*

B.E. Information Technology *August 2019 – May 2023*
Vivekanand Education Society's Institute of Technology, Mumbai, India CGPA 3.8
***Completed Coursework**: Data Mining, Artificial Intelligence, Data Science, Cloud Computing, Big Data Analytics, Blockchain, Database Management System, Data Structure and Analysis, Database Management*

TECHNICAL SKILLS

Programming Languages: Java, JavaScript, Python, C, C++, Matlab, Mathematica
Front-End: HTML, CSS, React.JS, Bootstrap, D3.js
Backend and Databases: Node.JS, Firebase Firestore, SQL, MongoDB, Postgresql
Tools and Frameworks: Git, Tableau, AWS, Azure, Jenkins, Docker, CI/CD
Machine Learning and Data Science: TensorFlow, PyTorch, Scikit-Learn, Deep Learning, NLP, Statistics, Data Analysis, Data Visualization, Data Mining

EXPERIENCES

Research and Teaching Aide *March 2024 – Present*
(Arizona State University)

- Utilized statistical packages for running regressions, conducting statistical tests, and analyzing data, contributing to research projects and academic activities.
- Applied database construction techniques, with access to diverse data sources, facilitating data management and analysis.

Software Developer Intern *April 2023 – July 2023*
(CBM - Finance)

- Engineered a Financial Dashboard leveraging Python and Streamlit, consolidating real-time data from the National Stock Exchange; which provided detailed financial analysis, driving a 15% reduction in investment risk
- Calculated and displayed critical financial metrics, such as nearest strike price, annualized returns, and market insights. Achieved a remarkable 10% increase in data retrieval speed, enabling quicker decision-making for investors.

PROJECTS

Research Paper Classification Using Graph Convolution Networks *January 2024 – April 2024*
(TensorFlow, Keras,, Sci-kit Learn, Pandas, Numpy, Sci-Py)

- Implemented **Graph Convolution Networks (GCNs)** on the **Cora dataset**, a graph dataset consisting of **interconnected scholarly articles via links**, to classify scientific papers, achieving a notable increase in classification accuracy from 73.16% to **83.52%** compared to traditional methods.

Visual Analytics Dashboard – IEEE VAST Challenge 2019 *August 2023 - November 2023*
(HTML, CSS, Javascript, D3.js, Numpy, Pandas)

- Developed an interactive visual analytics dashboard using HTML, CSS, and JavaScript, with a focus on D3.js to aid emergency responders after a seismic event, which incorporated **choropleth maps, violin plots** and **stream graphs** to analyze citizen-reported data, guiding resource distribution decisions with **spatial and temporal** insights using **80,000+ reports**.

Planetary Structure Detection from Satellite Images *August 2022 - April 2023*
(TensorFlow, Keras, OpenCV, Sci-kit Image, Sci-Py, Stream lit, Flask, MySQL)

- Developed and trained a deep learning model (**CNN**) using **11,000+ satellite images**; achieved **93% accuracy** in classifying planetary structures, enabling more accurate analysis for future space exploration missions.

Cloud-Integrated Weather Monitoring System *September 2022 - November 2022*
(HTML, CSS, Bootstrap, JavaScript, ReactJS, NodeJS, Firebase)

- Developed a weather monitoring system with **Raspberry Pi 3B+**, utilizing **AWS DynamoDB** as the database, reducing **data retrieval time by 25%.** The system collected real-time data from sensors, processed through Python scripting and Adafruit libraries, aiding informed decision-making. Various AWS technologies like **AWS IoT Core** facilitated device connectivity.

PUBLICATIONS

Krishna Kansara, Raghuttam Parvatikar, **Soham Shimpi**, Hanish Valecha and Kajal Jewani, "**Planetary Structures Detection** Planetary Structure Detection and Segmentation using Deep Learning

- Krishna Kansara, Raghuttam Parvatikar, **Soham Shimpi**, Hanish Valecha and Kajal Jewani, "Planetary Structures Detection and Segmentation Using Deep Learning," in Proceedings of the IEEE International Conference for Emerging Technology (INCET), May, 2023.