# 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.