Soham Shimpi

480-290-6911 | sohamshimpi@gmail.com | linkedin.com/in/soham-shimpi1712/ | https://soham1712.github.io/

EDUCATION

M.S. Computer Science *August 2023 – May 2025*
Arizona State University, Tempe, AZ GPA 4.0

B.E. Information Technology *August 2019 – May 2023*
Vivekanand Education Society's Institute of Technology, Mumbai, India GPA 3.8

***Relevant Coursework**: Data Visualization, Software Security , Software Design, Object Oriented Programming, Foundation of Algorithms, Database Management System, Data Structure and Analysis, Software Verification, Validation and Testing, Data Processing at Scale, Cloud Computing, DevOps, Artificial Intelligence, Data Mining, Applied Cryptography, Data Intensive Systems for Machine Learning, Big Data Analytics.*

TECHNICAL SKILLS

Programming Languages: Java, JavaScript, Typescript, Python, Shell Scripting, C, C++, C#, Matlab, Angular
Front-End: HTML, CSS, React.JS, Bootstrap, D3.js
Backend and Databases: Node.JS, Firebase Firestore, SQL, MongoDB, Postgresql, DynamoDB
Tools: .NET Framework, Git, Tableau, jQuery, jUnit, AWS, Azure, GCP, Jenkins, Docker, Agile, JIRA, DevOps, CI/CD, REST, Terraform.

EXPERIENCES

Research and Teaching Aide *March 2024 - Present*
(Arizona State University) Tempe, Arizona

- Designed and implemented data models using Python and Mathematica, automating quantitative computations and processing over 100,000 data points for economic research applications.
- Developed interactive visualizations and dashboards to summarize 70 years of financial time series data, uncovering trends and insights, and enabling seamless academic reporting.
- Streamlined database workflows for efficient handling and querying of research datasets, integrating statistical analysis techniques such as regression modeling, hypothesis testing, and time-series decomposition.

Software Developer Intern *April 2023 - July 2023*
(CBM - Finance) Mumbai, India

- Designed and developed a financial dashboard using Python and Streamlit, integrating real-time data from the National Stock Exchange (NSE) via Financial Data APIs to provide investors with actionable insights.
- Optimized backend data processing pipelines, improving data retrieval speed by 10% and enabling near-instantaneous updates for financial decision-making.
- Implemented features for analyzing financial metrics, including nearest strike price and annualized returns, reducing investment risk by 15%. Wrote modular and reusable Python code, enhancing system scalability and maintainability.

PROJECTS

Data Processing Pipeline for Graph-Based Analytics *August 2024 – November 2024*
(Neo4j, Neo4j GDS Plugin, Docker, Kubernetes, Minikube, Kafka, Zookeeper, Python, YAML, Pandas, pyarrow, Helm, Bash Scripting

- Designed and deployed a scalable distributed **data pipeline** using **Kubernetes**, **Kafka**, and **Neo4j**, processing over **1 million NYC Yellow Cab Trip records** in real time, enabling advanced graph analytics (PageRank, BFS) and reducing data processing latency by **40%** through **Docker** automation and **Helm-based** deployments.

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

- Engineered and trained a deep learning model (**CNN**) using **Python** and **TensorFlow**, processing **11,000+** satellite images to achieve **93%** accuracy in classifying planetary structures; integrated **Flask** and **MySQL** for data management and utilized **Git** and **Agile** methodologies to support collaborative development for space exploration analysis.

Food Ordering System *August 2021 - December 2021*
(HTML, CSS, Bootstrap, JavaScript, ReactJS, NodeJS, Firebase)

- Led the development of a comprehensive food ordering platform using **ReactJS** and **NodeJS**, streamlining the ordering process by **30%** and improving efficiency by **40%**, with features including **real-time data** storage (Firebase Firestore), secure **payment gateway integration** (Razor Pay), and robust user **authentication** (Firebase Authentication), leveraging **Git** and **Agile** methodologies for effective team collaboration.

PUBLICATIONS

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.