Soham Shimpi

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

EDUCATION

M.S. Computer Science *August 2023 – May 2025*
Arizona State University, Tempe, AZ GPA 3.94

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 Development(SDLC), 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, Fundamentals of Statistical Learning and Pattern Recognition, Artificial Intelligence, Data Science, Data Mining, Applied Cryptography, Data Intensive Systems for Machine Learning, Knowledge Representation and Reasoning, 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, Tableau, jQuery, jUnit, AWS, Azure, GCP, Jenkins, Docker, Agile, Microservices, DevOps, CI/CD, REST, Spark, Hadoop
Machine Learning and Data Science: TensorFlow, PyTorch, Scikit-Learn, Deep Learning, NLP, Statistical Learning, Data Analysis, Data Mining, Data Management, Data Collection, Computer Vision, Data Pipelines, Larger Language Models

EXPERIENCES

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

- Conducted literature reviews, data preparation, and analysis and managed diverse data sources, reducing **data retrieval time by 30%** and enhancing data analysis efficiency.
- Programmed in Mathematica and Matlab to develop and analyze economic models, enhancing the efficiency and accuracy of **statistical regressions**.
- Constructed and managed databases from provided data sources, optimizing data retrieval and preparation processes.

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

- Spearheaded development of 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**.
- Analyzed and visualized critical financial metrics, including the nearest strike price, annualized returns, and market insights, resulting in a **10% increase in data retrieval speed** and enabling quicker decision-making for investors

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 **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)

- Created a weather monitoring system with **Raspberry Pi 3B+**, utilizing **AWS DynamoDB** as the database, reducing **data access time by 25%.**

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

- Led a team to develop a comprehensive food ordering platform using ReactJS and NodeJS, streamlining the ordering process decreasing the ordering time by 30% and increasing efficiency by 40%. Implemented features including **real-time data storage** (Firebase Firestore), **secure payment gateway** (Razor Pay) and **secure user authentication** (Firebase Authentication).

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.