

SHARVARI KALGUTKAR

☎ 323-470-3032 📍 San Jose, CA ✉ sharvari.kalgutkar82000@gmail.com 💻 [sharvarikalgutkar](#) 🌐 [GitHub](#) 🌐 [Portfolio](#)

Education

Masters in Data Science, University of Southern California Aug. 2022 – May 2024
Machine Learning, Deep Learning, Data Mining, Data Analytics, Database Systems (CGPA 3.87/4)

Bachelors in Electronics Engineering, Sardar Patel Institute of Technology Aug. 2018 – May 2022
Data Structure, Algorithms, Statistical Analysis, Object Oriented, Marketing, Management (CGPA 9.52/10)

Experience (1+ Year)

Data Scientist, University of Southern California Feb 2024 – May 2024

- Evaluated **10 Deep Learning** models using **TensorFlow** on **Image data** leading to **45%** cost improvement.
- Researched **Neural Network** performance on non-identical data using **distributed computing** like FedAvg.
- Awarded **Best Data Science Team** for outstanding **interdisciplinary** data science research by **USC CKIDS**.

AI Engineer, Scientist Technologies Nov 2021 – May 2022

- Devised **Computer Vision** Road quality tracking system using models like Faster R-CNN, yielding **84%** precision.
- Optimized **YOLOv5 Object Detection** model for diverse vehicle classification, resulting in **64%** mAP.
- Cross-collaborated on **5 Python algorithms** for road safety data analysis using **Agile**, achieving a **91%** **R2 score**.
- Orchestrated **ML workflow** with **AWS EC2** for model training, **CVAT** for data quality, and **AWS S3** data storage.
- Implemented **OpenCV video processing** for enhanced safety visualization, delivering **3x** quality assurance boost.
- Automated **ETL data pipeline** for **720+ hours** of video data from **Google Cloud** to **AWS S3** via **REST API**, significantly reducing operational time by **90%**.

Machine Learning Intern, Sardar Patel Institute of Technology Feb 2021 – April 2021

- Optimized **8 Machine Learning** models, namely Random Forest, Decision Trees, KNN, Logistic Regression, Support Vector Classifier, XGBoost, Lightgbm, & neural networks, resulting in **96%** accuracy.
- Trained **Stacked Ensemble ML model** for EEG emotion classification, achieving improved **97%** accuracy
- Conducted **Principal Component Analysis** to mitigate data's high dimensionality, reducing it by **94%**
- Published research paper** in IEEE International Conference. DOI: [10.1109/ICCNT51525.2021.9579818](https://doi.org/10.1109/ICCNT51525.2021.9579818).

Data Scientist Intern, Sardar Patel Institute of Technology Oct 2020 – Dec 2020

- Led a team of five to engineer **3 Deep Learning CNN** models, namely ResNet50, VGG-16, and Inception V3 to aid Chest X-ray pneumonia detection with a maximum recall of **98%** and accuracy of **94%**.
- Employed **Image Processing** techniques, including **Data Augmentation**, to increase the data size by **5x**.
- Authored a research paper** in IEEE International Conference. DOI: [10.1109/I2CT51068.2021.9417872](https://doi.org/10.1109/I2CT51068.2021.9417872).

Data Scientist/ Machine Learning Engineer, Skinzy Software Solutions Oct 2020 – Jan 2021

- Constructed a Mask-RCNN **Computer Vision** model in **TensorFlow** to detect skin diseases, achieving **0.6 IOU**.
- Deployed a ResNet-50 **Deep Learning** model for disease **classification**, yielding **85%** accuracy by optimization.

Technical Skills

ML Libraries: TensorFlow, PyTorch, Pandas, Numpy, Scikit-Learn, Decision Trees, OpenCV, Unsupervised/ Supervised
Programming: Python, R, HTML, CSS, JavaScript, Flask | **Big Data:** PySpark, Databricks, Hadoop, ETL
Visualizations: Tableau, Power BI, D3.js, Matplotlib, Seaborn, Plotly, ggplot | **Tools:** AWS, Alteryx, Docker, Git, Linux
Databases: MySQL, MS SQL Server, Firebase, MongoDB, AWS S3, AWS RDS, AWS DynamoDB, PostgreSQL

Projects

E-commerce Global Market Data Analysis 🌐 | *Data Analysis, Data Visualization, Python, Matplotlib, Seaborn, Plotly*

- National Finalist** with a rank of **7 out of 600+ teams** at the **Business Data Analytics** at IIT Delhi.
- Engineered **data visualizations** using Python, **Numpy, Pandas Matplotlib, Seaborn, and Plotly**, featuring Barplots, Line Charts, Box Plots, Squarify plots, and World maps to analyze sales trends of 6 e-commerce markets.
- Communicated to stakeholders'** seasonality trends, customer retention to identify top markets.

Layoffs Dashboard | *Tableau*

- Link: <https://public.tableau.com/app/profile/sharvari.kalgutkar/viz/NavigatingChangeTheLayoffsLandscape>

Happiness Quotient Data Analysis 🌐 | *Data Analysis, Management, Firebase, NoSQL, MySQL, Hadoop MapReduce*

- Managed **Firebase & SQL** distributed file storage for analyzing Happiness Index, GDP & unemployment.
- Engineered a web command-line interface in **Python and JavaScript** and **analyzed** user uploaded data for key trends like Top 10 GDP countries, Maximum Unemployment for Females in a given year.
- Deployed **Flask** website with **Hadoop-like MapReduce** for fast parallel data analysis & data search.

Big Data Yelp Business Recommendation System 🌐 | *Data Mining, Big Data, Spark, JSON, Collaborative filtering*

- Built an **PySpark** Recommendation System for predicting rating for **1.5M** users and **200k** businesses.
- Executed **Item-based and ML-based** Collaborative filtering using **XGBoost Regression**, yielding **RMSE of 1**.