Shivam Vilas Gaikwad

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EDUCATION

University of Southern California, Los Angeles, CA   Aug 2023 – May 2025

Master of Science in Applied Data Science

Coursework – Analysis of Algorithms, Database System, Data Management, Machine Learning, Data Mining, Data Visualization

Roles – **IT Support Specialist at USC Dramatic School**: *Troubleshooting, Desktop Support, IT Security and Documentation*

Savitribai Phule Pune University, Pune, India   Aug 2019 – Jul 2023

Bachelor of Engineering in Computer Engineering (Honors Data Science) [**GPA: 9.43/10**]

Roles – **Teaching Assistant**, **Treasurer** *at Debugger's Club,* **Core-Committee member** *of ISTE,* **H.R Committee** *of Rotaract Club of Nashik*

TECHNICAL SKILLS

- **Languages**: Python, R, C++, Java, HTML, CSS, JavaScript
- **Databases**: MySQL, PostgreSQL, MongoDB, Snowflake, MS SQL Server
- **BI Tools**: Tableau, Power BI, MS Excel, Alteryx
- **Frameworks**: TensorFlow, NumPy, Pandas, Scikit-learn, Matplotlib, PyTorch, Seaborn

PROFESSIONAL EXPERIENCE

Machine Learning & Finite Element Analyst Intern – ASML San Diego, CA, U.S.A   May 2024 – August 2024

- Developed an artificial neural network model to implement the universal shard killing function, successfully morphing simulated data points into measured data points, which streamlined the data validation process and reduced analysis time by 40% for the engineering team.
- Implemented advanced ML algorithms for real-time parameter optimization, reducing resource use and costs based on dynamic data inputs.

A.I & M.L Intern - Cognifront Pvt. Ltd. Nashik, India   Jan 2022 – Feb 2022

- Mastered Python programming for data manipulation and analysis. Utilized Pandas, Jupyter, NumPy, Scikit and Matplotlib for data processing and visualization.
- Led and managed a team to complete a capstone project focused on utilizing Kernel SVM classification algorithm for predicting water portability and obtained an accuracy of 91%.

Data Science Intern – Smartknower Edutech Pvt. Ltd. Karnataka, India   Jun 2021 – Jul 2021

- Performed data cleaning, transformation, and preprocessing of basket dataset for comprehensive analysis.
- Applied advanced market basket analysis techniques using 'mlxtend' library's Apriori algorithm with a minimum support of 0.01 and minimum confidence of 0.5.
- Designed and developed a dynamic Tableau Dashboard for efficient visualizing and sharing project findings.

ACADEMIC PROJECTS

Sentiment Analysis of Text Reviews Using Deep Learning Techniques   2024

- Developed and compared multiple deep learning architectures, including MLP, CNN, and LSTM, to perform sentiment analysis on textual reviews. Utilized advanced NLP techniques to preprocess and analyze over 47,000 unique words, enhancing model training and testing processes.
- Engineered and fine-tuned data preprocessing pipelines involving tokenization, cleaning, and encoding to efficiently handle large datasets, leading to a 72.71% accuracy in sentiment classification using LSTM.
- Pioneered advanced data preprocessing strategies, enhancing model input quality and reducing training time by 30%, which significantly improved sentiment prediction accuracy.

Uber Data Analytics (Google Cloud Platform)   2023

- Used TLC taxi record data and performed ETL features on the dataset. Build the data model for analysis from scratch.
- Performed an end-to-end data pipeline, extracting raw data from Google Storage, transforming it using Mage Data Pipeline Tool, and loading it into BigQuery for in-depth analysis.

Real Time Sign Language Translation using Microsoft XBOX Sensor   2023

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- Deployed real-time system which captures and analyzes signs made by individuals, converting them into text and speech, and translating audio signals into corresponding sign language.
- It utilizes Kinect sensor for input processing and NN-DTW (K Nearest Neighbors & Dynamic Time Warping) classifier to find similarity between signs with estimated precision of 90%.

RESEARCH EXPERIENCE & PUBLICATIONS

- Gaikwad, S., Joshi, M. P., & Joshi, J. G. (2021, November), "Design of Circular Microstrip Antenna Using Python". In 2021 IEEE Bombay Section Signature Conference (IBSSC) (pp. 1-3). IEEE.
- Shivam V. Gaikwad, Mandar P. Joshi, Jayant G. Joshi, "Resonant Frequency Calculation of Hexagonal Microstrip Antenna using Python" published in 2022 National Conference in Recent Trends in Communication, Computing and IoT (RTCCI).

AWARDS & ACHIEVEMENT

- Best Outgoing Student Award of Computer Engineering Department.
- 2 - Merit Scholarships (Among Top 3 Students in First Year of Engineering, Top 3 in Bachelor of Engineering).
- State Level Cricket Player, District Level Lawn Tennis Player, and Certified YOGA Trainer.