

SUSMITHA ARIKATLA

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EDUCATION

MSc in Data Science | University of Houston | Houston, Texas | GPA: 3.6

May 2023

- Awards & Scholarships: Dean's Honors List, Engineering Dean's Master Scholarship, Masters Competitive Scholarship

Data Science Teaching Assistant

Aug 2022 – May 2023

- Showcased the utilization of various software tools including Excel, Power BI, R, Tableau to demonstrate the implementation of data science techniques and machine learning models.

WORK EXPERIENCE

Data Analyst | Freelance | Remote, India

June 2020 – Apr 2022

- Worked on SQL queries for efficient data retrieval and performed data analysis on equipment, reducing the time efficiency by 30%
- Developed several dashboards on Tableau to visualize the KPIs of the maintenance processes and presented to higher management.
- Responsible for creating training materials and process documents on Microsoft Office for implementing predictive analytics.

SKILLS

Programming languages : Python (NumPy, Scikit-learn, Pandas, TensorFlow, Keras, PyTorch), R, C++

Database Tools : MS Access, MySQL, Oracle DB, Hadoop, Azure ML Studio

Visualization Tools : Tableau, Power BI, TIBCO Spotfire, Python (Matplotlib, Seaborn, Plotly), Excel, Looker, Qlik Sense

Environments : GitHub, Google colab, PyCharm, VSCode, Jupyter, RStudio

Key Concepts : Machine Learning, Statistics, Predictive Analytics, Database Mgmt., Big Data Analytics

PROJECTS

Construction Safety Analysis using OSHA Dataset

Jun 2023

- Collected the data using web scrapping. Preprocessed the data using advanced NLP techniques, including stemming and lemmatization, to enhance data quality and trends. Applied Principal Component Analysis (PCA) to reduce dataset dimensionality and implemented TF-IDF vectorization. Employed the K-means Clustering Technique to identify the optimal K and Centroids

Optimization of SVM Classifier using Kernel and Ensemble Techniques

Dec 2022

- Designed custom kernel functions for SVM using Sine, Cosine, RBF, Gaussian, and Polynomial functions using kernel tricks to train unbalanced data. Used Boosting and Bagging methods on custom kernel SVM models to improve accuracy. Increased accuracy of the models by more than 15% when compared with inbuilt SVM functions.

Online class monitoring tool using facial recognition and emotion analysis

Aug 2022

- Used Pandas, SciPy, Scikit-learn, PyTorch, and other libraries to process images from video frames. Developed modules using state-of-the-art technologies such as FaceNet and DeepFace for facial recognition and emotion analysis. Documented the emotions of students throughout a video lecture and presented a detailed report.

Production prediction of oil wells using Time Series Analysis.

Jun 2022

- Gathered unstructured data from sources, processed it, and checked for the stationarity of data using ACF plot and ADF test. Built the models ARIMA & Seasonal Exponential Smoothing and validated them. Prioritized the models based on various metrics and predicted the production for the following weeks.

Comparative study of supervised learning algorithms for Intrusion Detection

Apr 2022

- Gathered Data from sources and processed it using techniques PCA, Label encoding, and Normalization. Trained the Decision Tree, Random Forest, SVM, XGBoost, Naive Bayes, and Advanced Neural Networks algorithms. Validated and presented the best algorithm based on Accuracy Score, Execution Time, and F1 score metrics.

CERTIFICATIONS

- Google Data Analytics Professional Certificate
- Machine Learning-HarvardX
- Data Visualization with Tableau
- Machine Learning Pipelines with Azure ML Studio

VOLUNTEERING & INTERESTS

- UHISSO organization | Student Mentor
- Advancing Community Engagement Services Institute, UH | Academic Impact Cougar Tutor
- Interests: Photography, Hiking, Volleyball