VARSHA SINGANNAGARI

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SUMMARY

- Master's in Computer Science with expertise in Data Engineering, NLP, Machine Learning, Python, SQL, and Azure.
- Developed predictive models, data pipelines, and performed data analyses through academic projects.
- Known for problem-solving, attention to detail, and a passion for actionable data insights.

TECHNICAL SKILLS

Languages: Python, SQL, C
Frameworks: Pandas,Numpy,TensorFlow,Keras,Scikit-Learn,Matplotlib,Seaborn,Huggingface
Databases: MySQL,PostgreSQL,MongoDB
Data Analysis: Data cleaning, Data Modelling, Data Wrangling, Data warehousing, ETL, Clustering, Forecasting, Data Quality, Data Integration, Exploratory Data Analysis (EDA), Data Preprocessing, Anomaly Detection, Data Manipulation
Machine Learning: Regression, Decision Tree, KNN, SVM, Random Forest, K-Means, Statistics (Hypothesis testing, ANOVA), A/B Testing, NLP, Time Series Analysis
Cloud Computing: Azure (Databricks, Data Factory, Blob storage, Azure Data Lake Storage (ADLS) Gen2)
Data Visualization Tools: Tableau, MS Excel
Other Tools: Git/GitHub, Jupyter, Pyharm, MS Office, Anaconda, Spyder
Operating Systems: Windows, LINUX, MAC

EDUCATION

Master of Science in Computer Science, University of Wisconsin- Milwaukee   **May 2024**
Coursework: Machine Learning, Data Structures and Algorithms, Software Development Lifecycle, Discrete Mathematics, Natural Language Processing, Algorithm Design and Analysis, Image Processing, Operating Systems
GPA: 3.365/4.0

Bachelor of Electrical and Electronics Engineering, GNITS, JNTUH   **-2021**

INTERNSHIP

Summer Internship at Smart-Bridge Education Services Pvt.Ltd   **-2020**

- Acquired knowledge of machine learning and deep learning concepts using Python.
- Successfully completed a project titled "Analysis of Amazon Cell Phone Reviews," which involved leveraging machine learning and deep learning techniques to analyze sentiment in customer reviews of Amazon cell phones. Received a certificate of merit, reflecting a skill index of 9 out of 10.

PROJECTS

Credit Card Fraud Detection   **-2024**

- Developed a fraud detection model achieving a ROC-AUC score of 0.98, with 92 percent precision and 88 percent recall.
- Addressed class imbalance using SMOTE, enhancing the model's accuracy in identifying fraudulent activities.
- Conducted comprehensive EDA and used data visualization techniques to uncover patterns and improve fraud detection.
- Built and fine-tuned multiple machine learning models, including SGDClassifier, RandomForestClassifier, and Logistic Regression, using pipelines and GridSearchCV for hyperparameter optimization.
- Implemented robust data preprocessing and feature selection techniques, including mutual information scores, to enhance model performance. Evaluated model performance using a variety of metrics, including classification report, F1-score, AUC-ROC score, and accuracy.
- Utilized various Python libraries such as Pandas, Numpy, and Scikit-Learn for data manipulation and model building. Leveraged TensorFlow for deep learning model implementations and complex model training.
- Created interactive visualizations using libraries like Matplotlib and Seaborn to explore data patterns and support stakeholder understanding.
- Applied K-Nearest Neighbors Classifier with GridSearchCV, achieving a test accuracy of nearly 99.8
- Synthesized findings from data analysis to provide actionable insights on fraud patterns, aiding in strategic decision-making.
- Technologies: Python, Jupyter, Anaconda, Machine Learning, Data Visualization, Scikit-Learn, TensorFlow, Numpy, Pandas, ML Classifiers, Statistical Modelling

Customer Segmentation   **-2024**

- Collected and cleaned data using Excel, ensuring accurate analysis. Utilized pivot tables to extract key insights and created visualizations with charts.
- Analyzed total purchase amounts by product and purchase mode, revealing top-selling products and preferred purchase channels.
- Identified key customer preferences and product performance across various channels.

- Created a comprehensive dashboard to visualize customer segmentation data and support decision-making.
- Provided actionable insights for targeted marketing and sales strategies.
- Technologies: Excel, Pivot Tables, Charts

Analysis of Amazon Cell Phone Reviews   **-2020**

- Implemented a comprehensive sentiment analysis system for Amazon cell phone reviews, aimed at determining the sentiment (positive or negative) associated with each review.
- Created a web-based platform where users can input Amazon cell phone reviews, and the system automatically analyzes the sentiment of the text.
- Achieved high accuracy in sentiment classification through advanced model training.
- Developed and integrated machine learning models for text sentiment analysis, utilizing Python libraries and frameworks.
- Employed data preprocessing techniques to clean and prepare text data for analysis, ensuring high-quality input for the model.
- Designed and built the user interface using HTML and Flask, providing a seamless experience for users to interact with the sentiment analysis tool.
- Utilized deep learning techniques to enhance the model's performance in classifying sentiments.
- Conducted extensive testing and validation to ensure the reliability and accuracy of the sentiment analysis system.
- Technologies: Python, Numpy, Pandas, HTML, Anaconda, Jupyter, Machine Learning, Deep Learning, Spyder.

TEACHING ASSISTANT

Girls Who Code   **-2023 - 2024**

- Staunchly served as a Teaching Assistant for the Girls Who Code program, which aims to empower young women in technology. Mentored and guided students to improve their understanding of python programming language.

CERTIFICATIONS

- Azure Fundamentals (Microsoft)
- DevOps Foundations:Lean and Agile (Linkedin)

EXTRA CURRICULAR

Accenture Nordics Consultant Job Simulation on Forage   **-2024**

- Completed a job simulation involving a hypothetical Healthcare client on how to improve their mobile app.
- Reviewed a client brief and identified the most crucial priorities for the project.
- Analyzed varied data sources to make decisions about UX changes.
- Managed a project issue with the client and helped to prioritize long term initiatives.

Kalam Bharat   **-2019**

- Collaborated with the Department of School Education, Government of Telangana, on the "KALAM BHARAT 2019" program. Played an important role in a multidisciplinary team that carried out effective educational interventions in Telangana government schools.