LAKSHMI SUDINI

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As a Data Science master's student at the University of Delaware, I have honed my skills in data analysis, machine learning, and data visualization. With hands-on experience in software engineering and data analysis, I excel at developing data-driven solutions, identifying patterns, and optimizing data processes. I am passionate about using data to drive decision-making and improve operational efficiency.

EDUCATION

University Of Delaware, Newark, DE

Master's in data science February 2023 to December 2024

Relevant Coursework: Data Analysis, Data Visualization, Machine Learning, Data Modeling, Statistical Analysis

Anurag Group of Institutions, Hyderabad, India August 2017 – July 2021

Electrical and Electronics Engineering

SKILLS

- **Programming**: Python, R, MATLAB, Java, C++, C, HTML.
- **Machine Learning and ETL tools**: Linear Regression, Logistic Regression, Decision Trees, K-NN, Apache NiFi, Alteryx.
- **Libraries and Cloud Technologies**: scikit-learn, TensorFlow, Keras, PyTorch, Pandas, NumPy, AWS, Azure, GCP
- **Data Visualization and Data Pipelines**: PowerBI, Tableau, Excel, Matplotlib, SAS, DeepNote, Jupyter.
- **Big Data Tools and Databases**: Hadoop, Spark, Apache, SQL, NoSQL
- **General Skills:** Data Visualization, Machine Learning, Deep Learning, Pattern Recognition, Database structures and Algorithms, Statistical Analysis, Data Preparation, Quality Management, UI Design.

EXPERIENCE

University of Delaware, Newark, DE September 2024 – Present

Graduate Research Assistant

Integrated Modeling for Predictive Analysis of Coastal Terrains (IMPACTS)

Currently designing and implementing a secure, scalable Data Management System (DMS) in AWS to facilitate real-time environmental monitoring and coastal terrain management. Designing a robust and user-friendly UI for the DMS to improve accessibility and enhance the user experience. Processing high-volume, complex datasets to enable predictive modeling and insightful data visualizations, while collaborating with interdisciplinary teams to drive data-driven research and decision-making.

University of Delaware, Newark, DE September 2023 - December 2023

Graduate Research Assistant

Worked as a Research assistant under Bayles group on Characterizing multi-material 3D printing fidelity through image similarity metrics using MATLAB, Machine Learning, and Data-science techniques. The main objective of my project is to identify and implement a protocol to measure distortion in patterned cross-sections (i.e., 2D grayscale images)

Temenos Pvt. Ltd,(The BANKING Software), Chennai, India**.** September 2021- January 2023

Software Engineer,

-Successfully implemented a routine to move data from one server to another, reducing manual intervention and improving efficiency.
-Developed a job to load data from different servers, improving data consistency and accuracy.
-Educated clients on handling specific scenarios using depth knowledge in T24 transact and technical languages.
-Facilitated solution to tickets logged by analyzing data, updating clients, and stakeholders.
-Developed and ran routines and jobs to move and load data from different servers.
-Closed more than 20 tickets in a month, recognized by clients and superiors.
-Strong knowledge in T24 transact and technical languages like C, C++,Java, SQL.
-Proficient in data analysis, problem-solving, and communication.

Cognizant Technologies Solutions, Hyderabad, India March 2021- August 2021
Data Analyst Intern

- Utilized Pandas to clean and pre-process a 50,000-row data set, reducing missing values by 30%. Enforced ML models using scikit- learn showcasing a 25% increase in prediction accuracy compared to baseline models.
- Enhanced predictive model accuracy by 15% by employing advanced data transformation techniques, including Min-Max scaling and the utilization of machine learning algorithms such as Linear Regression, achieving an impressive 85% accuracy rate.

PROJECTS

Solar Radiation Prediction | Python, Machine Learning, Data Transformation, Data Analysis and Visualization, Power BI

• Developed Python code for data cleaning and utilized a variety of machine learning models, including Linear Regression, Decision Tree Classifier, K-Means, and Logistic Regression, to forecast hourly solar radiation
•Managed data pipeline es for effective data processing, incorporating PCA to reduce dimensionality to three columns, enhancing accuracy, and reducing prediction errors by 20%
Applied a combination of supervised and unsupervised learning methods to refine solar predictions, maximizing panel installation and solar application efficiency, resulting in a 30% increase in solar radiation estimate precision.

Tesla Stock Price Prediction | Python, Machine Learning, Regression analysis

- Developed a machine learning model to predict Tesla's stockprice using a Long Short-Term Memory (LSTM) model.
- Utilized Python to build and train the LSTM model, achieving higher accuracy than a linear regression model.
- Preprocessed the dataset by sorting it by date, filtering relevant columns, and normalizing the data.
- Evaluated the model using Root Mean Square Error (RMSE) and discovered that the LSTM model performs significantly better than the linear regression model.

Disease prediction | Python, Machine Learning, Data manipulation and analysis.
Developed machine learning model to predict disease likelihood using Python and Scikit-learn, implemented Decision Trees, SVM, and KNN algorithms, conducted exploratory data analysis, and evaluated model performance using accuracy, precision, recall, and F1 score.

Road Accident analysis | POWERBI
Utilized Power BI to analyze and visualize road accident data, applying advanced DAX functions for comprehensive insights. Developed interactive dashboards highlighting accident trends, severity, and high-risk areas. Provided actionable recommendations to improve road safety and resource allocation.

Smart Suitcase | C, IOT devices, Embedded systems
It is a smart carry-on suitcase which follows the traveler around automatically. The smart
Suitcase has the user interface through which user can choose either Manual mode or Automatic mode. In Manual mode, the user gets facilities of location tracking, smart lock and USB charging. While in Automatic Mode, the user gets an additional functionality of suitcase following the user.
Programming Language Used-C (Embedded C)

Controller for Charging Electrical Vehicles at Workspaces Using Solar Energy | Power Electronics, UI design

- Developed a sophisticated controller system for charging electric vehicles at workspaces, integrating solar energy as a sustainable power source.
- Implemented intelligent charging algorithms to optimize energy utilization, ensuring efficient and eco-friendly electric vehicle charging in workplace environments.
- Designed with user-friendly interfaces for workplaces, providing a convenient and intuitive experience for employees while promoting renewable energy practices.

ADDITIONAL

Participated in Robotic, IOT and AI workshops during under-graduation.
Organized many Technical events like Quiz during Under graduation.
Python, SQL certifications by Udemy