KAKANI VENKATA NAGA PAVAN TEJA

PROJECTS

Data Science Capstone Project: Falcon 9 First Stage Landing Prediction Aug 2023

Objective: Predicted the success of Falcon 9 first-stage landings to estimate launch costs and enable potential competitive bids against SpaceX

- Collected Falcon 9 landing data using RESTful API and web scraping techniques.
- Transformed JSON files into Python Pandas data frames for detailed analysis.
- Employed data wrangling techniques to prepare and cleanse data.
- Created scatter plots and bar charts to visualize and interpret landing data.
- Conducted SQL queries for specific data selection and sorting.
- Utilized Pandas for deeper exploratory data analysis.
- Developed an interactive dashboard featuring pie charts and scatter plots using Plotly Dash.
- Analyzed launch site proximities through interactive maps created with Folium library, featuring calculated distances, plotted coordinates, and marked clusters.
- Split data into training and testing sets for model validation.
- Trained and evaluated various classification models including SVM, Classification Trees, and Logistic Regression.
- Optimized model performances using hyperparameter grid search techniques.

Impact: Provided insights into potential cost savings for rocket launches based on Falcon 9 first-stage landing predictions, aiding in competitive bidding strategies.

Flight Price Prediction Project: Nov 2023

- Developed a predictive model to estimate flight prices using historical flight data, focusing on features like departure times, airlines, and flight duration.
- Applied machine learning techniques to analyze patterns and relationships within the data, improving accuracy in price forecasting.
- Utilized Python and libraries such as Pandas, NumPy, and Scikit-learn for data processing and model development.

- Employed Random Forest Regression to forecast prices based on departure times, airlines, and durations.
- Defined a custom evaluation metric to accurately assess the model's performance, ensuring relevancy to industry standards.
- Enhanced decision-making for budget-conscious travelers by providing real-time price predictions, demonstrating potential cost savings.

Human Resources Department Project: Jan 2024

- Developed a model to forecast which employees might leave, helping the company save money by planning ahead.
- Analyzed company data using Logistic Regression and other methods like Random Forest and Deep Learning to identify key factors behind employee turnover
- Leveraged Python and its powerful libraries including Pandas,NumPy and Scikit-learn for model training and evaluation.
- Employed advanced visualization techniques to interpret data trends and model outputs, facilitating a deeper understanding of key factors influencing employee decisions to leave.
- Implemented a comprehensive model assessment strategy, utilizing classification accuracy and other relevant metrics to fine-tune predictions.

Full-Stack Real time Chat application using MERN: May 2023

- Designed Front-end User-Interface for the application using HTML(Jsx), CSS(Scss), ReactJS
- Created Schemas and Models in MongoDB using Mongoose.
- Created a Back-end Using Express, Mongoose, API's.
- Created a Connection between Server and client using Socket.IO.

SKILLS

Specialization: DataScience in python ,Cyber security in python

Programming and skills: Python, Javascript, SQL ,Data Structures in Python ,Data Analysis and visualization in Python ,Machine learning ,Python libraries Like Numpy ,Pandas ,Seaborn ,Matplotlib, Scikit-Learn.

Web Technology: JavaScript, HTML, CSS, React, NodeJs ,Express ,Mongodb.

Operating Systems: Windows

***Other Skills and Software Tools**:* Git, GitHub ,Jupyter Notebook, PremierPro CC ,Photoshop CC with Generative Ai.

Management Skills
Problem Solving, Time Management, Communication Skills, Project Management

Languages

Fluent in English, Telugu

PERSONAL INFORMATION

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https://github.com/Pavanrebel171/Data-science-projects.git

EDUCATION

SRM University, AP *June 2019-May 2023*
Bachelor of Engineering, Computer Science Engineering: CGPA: 7.5/10.0

BHASHYAM IIT JR COLLEGE May 2017-April 2019
CGPA:8.7/10.0

BHASHYAM HIGH SCHOOL May 2016- March 2017
CGPA:9.2/10.0

CERTIFICATIONS & TRAININGS

Coursera – IBM Data Science Professional Certificate Aug 2023

Udemy – Data structures and Algorithms July 2023

Udemy - fullStack web development - Node Js, React, Mongodb, Javascript, HTML, CSS, Express, API May 2023