Ravi Kumar

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Education

Indian Institute of Technology Jodhpur Graduation date: May 2023
M.Sc. in Mathematics ***CGPA: 7.77/10***

University of Lucknow Graduation date: Sep 2020
B.Sc. in Physics, Chemistry, Mathematics ***CGPA: 8.0/10***

Skills

Languages: Python, C++, SQL, HTML, CSS, Latex

Libraries: Pandas, Numpy, Matplotlib, Scikit-Learn, PyTorch, TensorFlow etc.

Technologies & Tools: Google Colaboratory, MySQL, Excel, Power BI, VS Code, LaTex, Jupyter Notebook, Flask, Git, Docker.

Academic Courses: Programming Techniques, Machine Learning, Optimization, Financial Engineering, Computer Graphics, Deep Learning, Data Structures and Algorithms.

Projects

Movie Recommendation System Sep. 2023 - Oct. 2023

Recommended movies and insights web application *Python, JavaScript, HTML, CSS, Flask, Bootstrap, Git*

- Utilized Collaborative-Boosted Content-Based Filtering to enhance recommendation accuracy by integrating 90% of content-based filtering and 10% of the collaborative filtering.
- Data was collected from the IMDb API using IMDb ID over 10000 movies for comprehensive movie information.
- Preprocessed the dataset to ensure data quality and techniques for feature engineering were used to enhance the model's ability to capture relevant movie features.
- Created a web app allowing users to select a movie of interest, this recommends 10 movies with the same interest of movies. Further, this Movie Recommendation System was successfully deployed on Microsoft Azure.
  Live Demo Link

Sales Dashboard: Insights at a Glance Oct. 2023

Power BI project to visualize metrics and represent them on a map *Power BI, Data Modeling, DAX*

- Developed and implemented a comprehensive Power BI solution, encompassing an Executive Dashboard, Map Visualization, Product Level Insights, and Customer Analytics pages, resulting in enhanced business intelligence and data-driven decision-making capabilities across the organization.
- Integrated KPIs for orders (25.2K), revenue (₹24.9M), profit (₹10.5M), and returns (2.2%), utilizing visuals to identify trends, showing the top 10 products by total orders, Accessories has most orders (17.0K) and Clothing has least orders (7.0K), and highlighted most returned products.
- An interactive map visualization to showcase global sales data, the United States has the most orders(8,700 orders) and Germany has the least orders (2,294 orders) allowing an insightful view for making well-informed decisions.
- Designed a comprehensive product and customer level trending dashboard, enabling detailed analysis of orders, revenue, profit, returns, and return percentage, showing the top 100 customers by their number of orders, showing the number of unique customers (17.4K), and average revenue per customer (1,431).
- **Skills Demonstrated:** Data Visualization, KPI Implementation, Trend Analysis, Geospatial Mapping, Customer Analytics

Stock Price Prediction Oct. 2023

Analyze and forecast Apple stock price *Python, TensorFlow, Data Visualization Libraries*

- Gathered and processed historical 10 years of Apple stock price data for analysis.
- Implemented OHLC visualization and applied feature engineering on the training data (75% data) to enhance the stock price dataset for improved model performance.
- Created an LSTM model using TensorFlow to forecast stock prices with accuracy, configured with the Adam optimizer and Huber loss for effective training (RMSE of training and test set is 49.79 and 154.48).
- Implemented visualizations to illustrate the LSTM model's performance and generated comparisons between predicted and actual Apple stock prices for assessing model effectiveness and further forecasted stock price for 150 days.
- **Skills Demonstrated:** Time Series Analysis, Machine Learning (LSTM), Model Optimization, Data Visualization, Model Evaluation