File Edit Selection View Go ··· BDA_Exp10

main.py historical_ride_data.csv

main.py > X

```python
import pandas as pd

ride_data = pd.read_csv('historical_ride_data.csv')

ride_data.dropna(inplace=True)

ride_data['hour_of_day'] = pd.to_datetime(ride_data['timestamp']).dt.hour

from sklearn.model_selection import train_test_split
from sklearn.ensemble import RandomForestRegressor
from sklearn.metrics import mean_squared_error

X = ride_data[['hour_of_day', 'day_of_week', 'weather']]
y = ride_data['demand']

X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.2, random_state=42)

rf_model = RandomForestRegressor(n_estimators=100, random_state=42)
rf_model.fit(X_train, y_train)

y_pred = rf_model.predict(X_test)

mse = mean_squared_error(y_test, y_pred)
print("Mean Squared Error:", mse)

new_data = pd.DataFrame({'hour_of_day': [10], 'day_of_week': [3], 'weather': [2]})
predicted_demand = rf_model.predict(new_data)
print("Predicted Demand:", predicted_demand)
```

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main.py historical_ride_data.csv

historical_ride_data.csv

```
timestamp,hour_of_day,day_of_week,weather,demand
2022-09-08 05:05:00,5,3,2,13
2022-10-22 21:38:00,21,5,2,12
2022-07-23 14:07:00,14,5,2,11
2022-08-02 23:42:00,23,1,1,12
2022-10-04 22:01:00,22,1,2,11
2022-06-19 15:09:00,15,6,1,11
2022-01-18 11:04:00,11,1,1,6
2022-08-15 14:33:00,14,0,2,5
2022-04-24 20:44:00,20,6,3,17
2022-03-10 19:20:00,19,3,1,6
2022-09-22 12:50:00,12,3,3,6
2022-09-09 08:53:00,8,4,2,13
```

main.py > X

```python
from sklearn.metrics import mean_squared_error
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
PS C:\Users\ADMIN\OneDrive\Desktop\BDA_Exp10> python main.py
Mean Squared Error: 19.06511299681103
Predicted Demand: [11.5070215]
PS C:\Users\ADMIN\OneDrive\Desktop\BDA_Exp10>
```