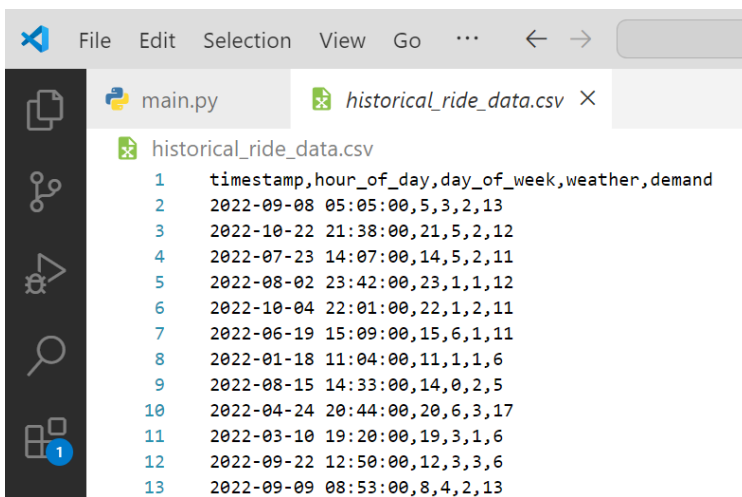


```
File Edit Selection View Go ... < > BDA_Exp10

main.py X historical_ride_data.csv

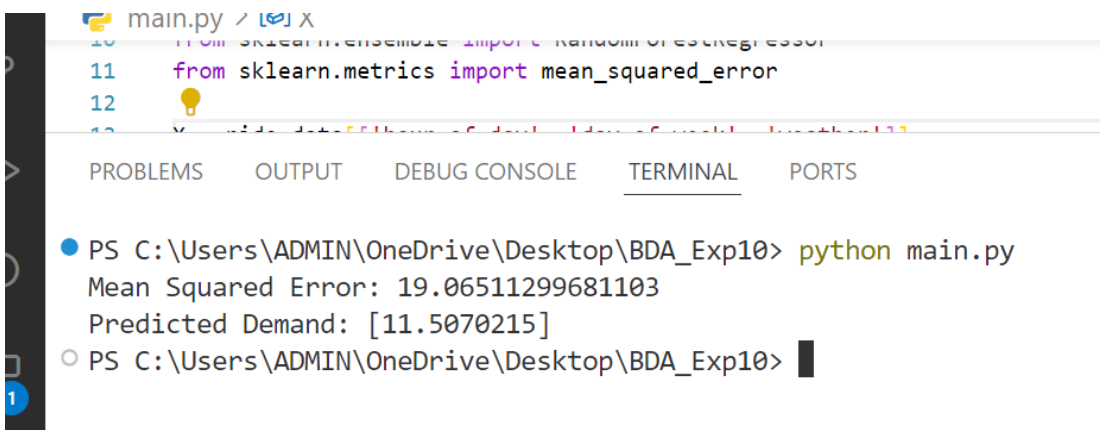
main.py > [X] X
1 import pandas as pd
2
3 ride_data = pd.read_csv('historical_ride_data.csv')
4
5 ride_data.dropna(inplace=True)
6
7 ride_data['hour_of_day'] = pd.to_datetime(ride_data['timestamp']).dt.hour
8
9 from sklearn.model_selection import train_test_split
10 from sklearn.ensemble import RandomForestRegressor
11 from sklearn.metrics import mean_squared_error
12
13 X = ride_data[['hour_of_day', 'day_of_week', 'weather']]
14 y = ride_data['demand']
15
16 X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.2, random_state=42)
17
18 rf_model = RandomForestRegressor(n_estimators=100, random_state=42)
19 rf_model.fit(X_train, y_train)
20
21 y_pred = rf_model.predict(X_test)
22
23 mse = mean_squared_error(y_test, y_pred)
24 print("Mean Squared Error:", mse)
25
26 new_data = pd.DataFrame({'hour_of_day': [10], 'day_of_week': [3], 'weather': [2]})
27 predicted_demand = rf_model.predict(new_data)
28 print("Predicted Demand:", predicted_demand)
29
```



```
File Edit Selection View Go ... < >

main.py X historical_ride_data.csv X

historical_ride_data.csv
1 timestamp, hour_of_day, day_of_week, weather, demand
2 2022-09-08 05:05:00, 5, 3, 2, 13
3 2022-10-22 21:38:00, 21, 5, 2, 12
4 2022-07-23 14:07:00, 14, 5, 2, 11
5 2022-08-02 23:42:00, 23, 1, 1, 12
6 2022-10-04 22:01:00, 22, 1, 2, 11
7 2022-06-19 15:09:00, 15, 6, 1, 11
8 2022-01-18 11:04:00, 11, 1, 1, 6
9 2022-08-15 14:33:00, 14, 0, 2, 5
10 2022-04-24 20:44:00, 20, 6, 3, 17
11 2022-03-10 19:20:00, 19, 3, 1, 6
12 2022-09-22 12:50:00, 12, 3, 3, 6
13 2022-09-09 08:53:00, 8, 4, 2, 13
```



```
main.py X
10 from sklearn.ensemble import RandomForestRegressor
11 from sklearn.metrics import mean_squared_error
12
13 X = ride_data[['hour_of_day', 'day_of_week', 'weather']]
14 y = ride_data['demand']
15
16 X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.2, random_state=42)
17
18 rf_model = RandomForestRegressor(n_estimators=100, random_state=42)
19 rf_model.fit(X_train, y_train)
20
21 y_pred = rf_model.predict(X_test)
22
23 mse = mean_squared_error(y_test, y_pred)
24 print("Mean Squared Error:", mse)
25
26 new_data = pd.DataFrame({'hour_of_day': [10], 'day_of_week': [3], 'weather': [2]})
27 predicted_demand = rf_model.predict(new_data)
28 print("Predicted Demand:", predicted_demand)
29
```

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>
```