```
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
```

```
data = pd.read_csv("uber_trips.csv")
print(data.head())
```

```
  dispatching_base_number      date  active_vehicles  trips
0                  B02512  1/1/2015              190   1132
1                  B02765  1/1/2015              225   1765
2                  B02764  1/1/2015             3427  29421
3                  B02682  1/1/2015              945   7679
4                  B02617  1/1/2015             1228   9537
```

```
print(data.shape)
print(data.info())
print(data.isnull().sum())
```

```
(354, 4)
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 354 entries, 0 to 353
Data columns (total 4 columns):
 #   Column                  Non-Null Count  Dtype 
---  ------                  --------------  ----- 
 0   dispatching_base_number  354 non-null    object
 1   date                    354 non-null    object
 2   active_vehicles         354 non-null    int64 
 3   trips                   354 non-null    int64 
dtypes: int64(2), object(2)
memory usage: 11.2+ KB
None
dispatching_base_number    0
date                       0
active_vehicles            0
trips                      0
dtype: int64
```

```
data["date"] = pd.to_datetime(
    data["date"],
    format="%m/%d/%Y",
    errors="coerce"
)
```

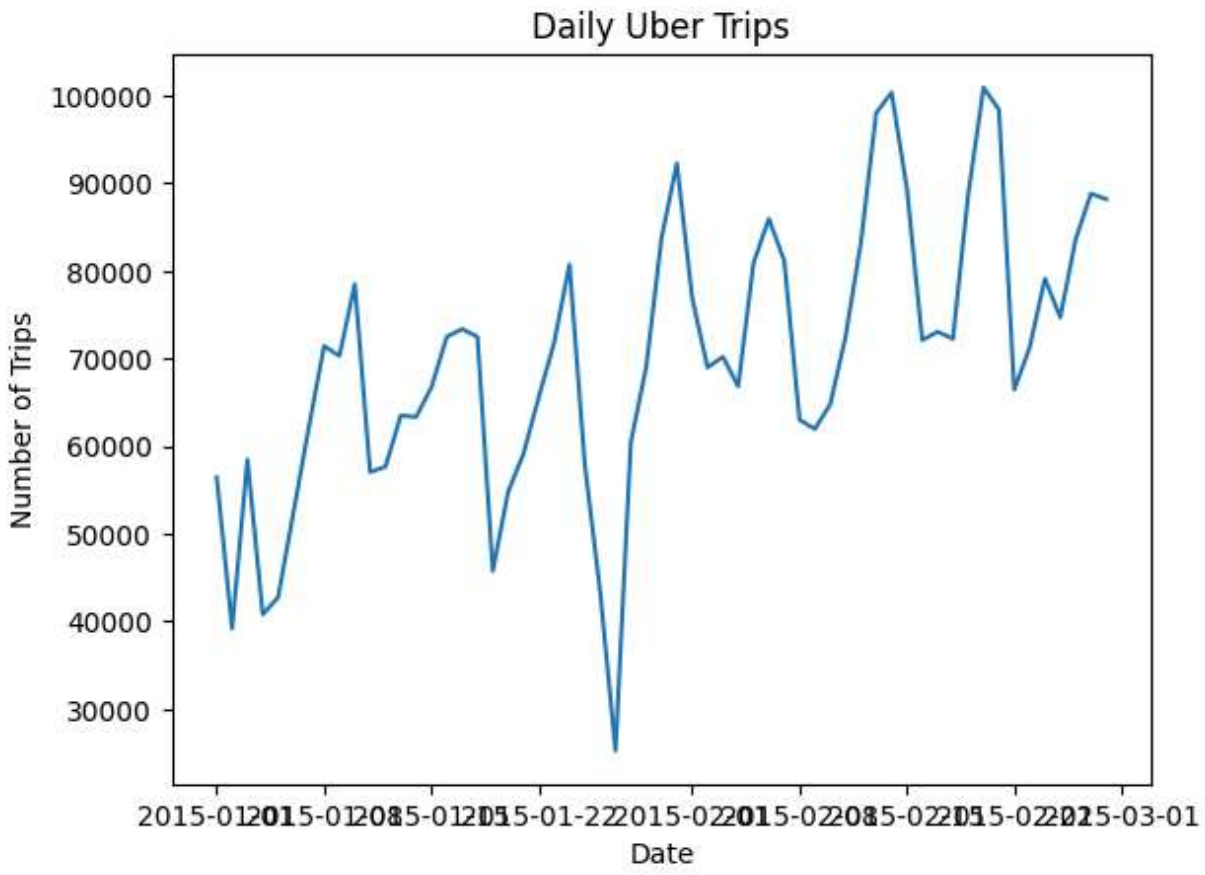
```
data["day"] = data["date"].dt.day
data["month"] = data["date"].dt.month
```

```
data["weekday"] = data["date"].dt.day_name()
```

Double-click (or enter) to edit

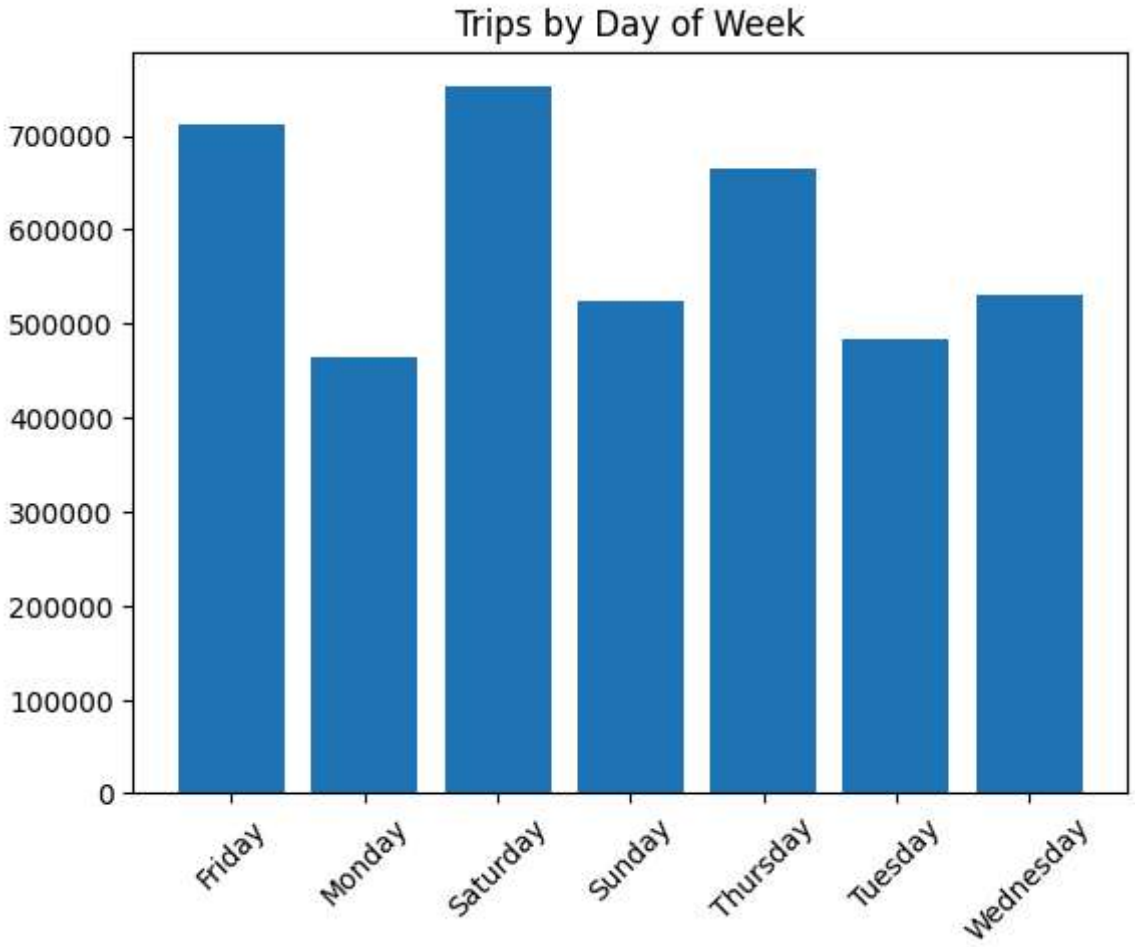
```
daily_trips = data.groupby("date")["trips"].sum()

plt.figure()
plt.plot(daily_trips.index, daily_trips.values)
plt.xlabel("Date")
plt.ylabel("Number of Trips")
plt.title("Daily Uber Trips")
plt.show()
```

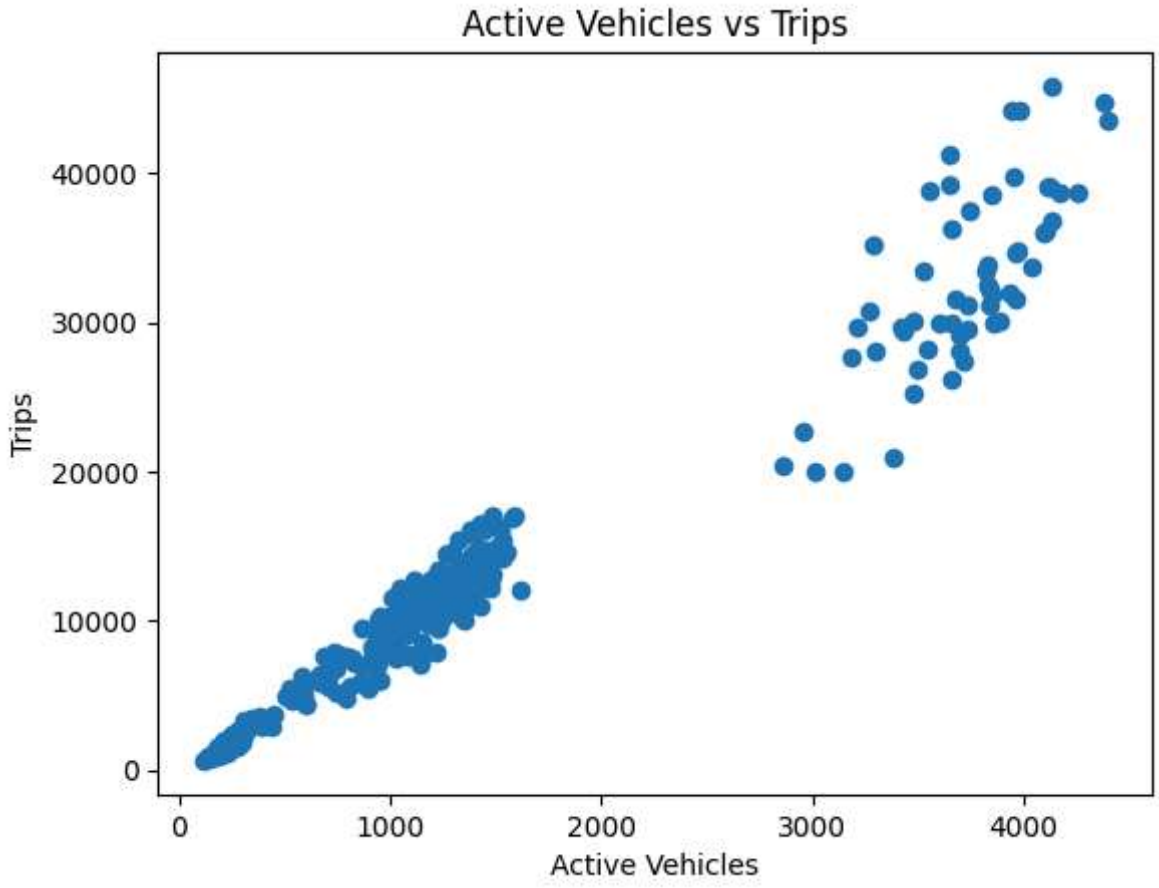



```
weekday_trips = data.groupby("weekday")["trips"].sum()

plt.figure()
plt.bar(weekday_trips.index, weekday_trips.values)
plt.xticks(rotation=45)
plt.title("Trips by Day of Week")
plt.show()
```

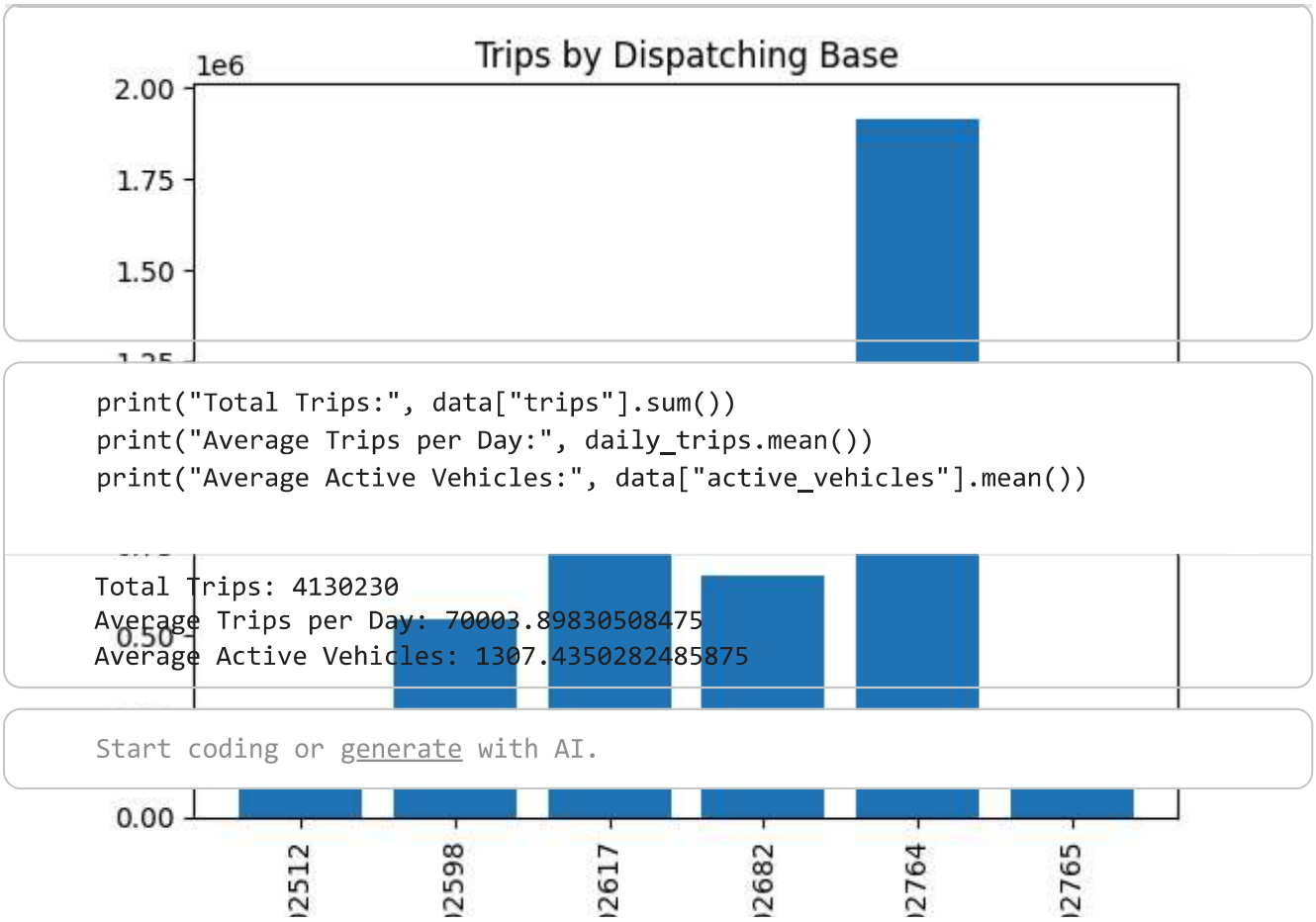



```
plt.figure()
plt.scatter(data["active_vehicles"], data["trips"])
plt.xlabel("Active Vehicles")
plt.ylabel("Trips")
plt.title("Active Vehicles vs Trips")
plt.show()
```




```
base_trips = data.groupby("dispatching_base_number")["trips"].sum()

plt.figure()
plt.bar(base_trips.index, base_trips.values)
plt.xticks(rotation=90)
plt.title("Trips by Dispatching Base")
plt.show()
```




```
print("Total Trips:", data["trips"].sum())
print("Average Trips per Day:", daily_trips.mean())
print("Average Active Vehicles:", data["active_vehicles"].mean())
```

```
Total Trips: 4130230
Average Trips per Day: 70003.89830508475
Average Active Vehicles: 1307.4350282485875
```

Start coding or generate with AI.