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UBER DATA ANALYSIS PROJECT

INSIGHTS FROM DATA EXORATION

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INTRODUCTION

- Uber is a leading ride-sharing platform revolutionizing transportation.
- **Objective:** Analyze user booking behavior using Uber data.
- **Tools used:** Jupyter Notebook and Python libraries:
  Pandas: For data cleaning and manipulation.
  Numpy: For mathematical operations.
  Matplotlib & Seaborn: For data visualization.

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RESEARCH QUESTIONS

- In which category do people book the most Uber rides?
- At what time do people book cabs the most?
- On which days of the week do people book Uber rides the most?
- For which purpose do people book Uber rides the most?
- In which months do people book Uber rides less frequently?
- How many miles do people usually book a cab for?

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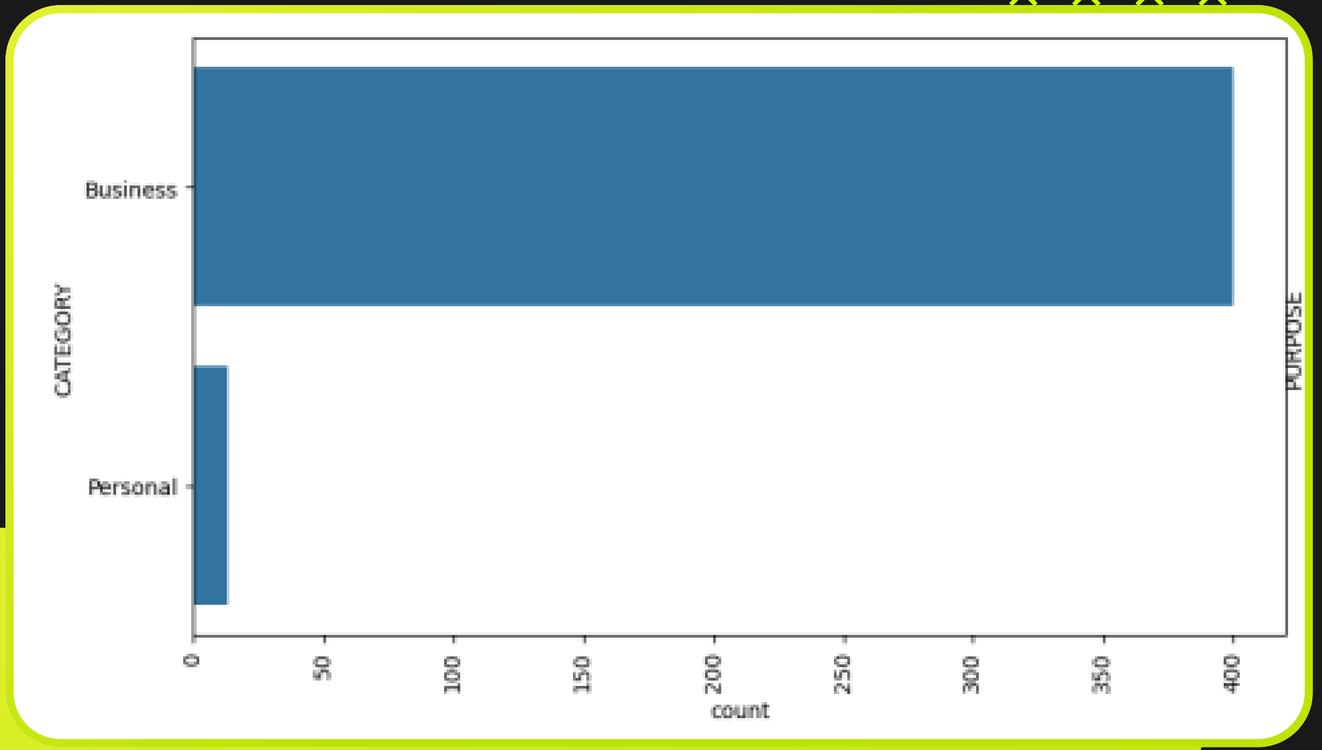

RIDE CATEGORY ANALYSIS

- Most Uber rides are booked under the Business category.
- Visualization: Graph showing ride distribution across categories.

```
plt.figure(figsize=(20,5))

plt.subplot(1,2,1)

sns.countplot(dataset['CATEGORY'])
plt.xticks(rotation =90)
```

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PURPOSE OF BOOKING

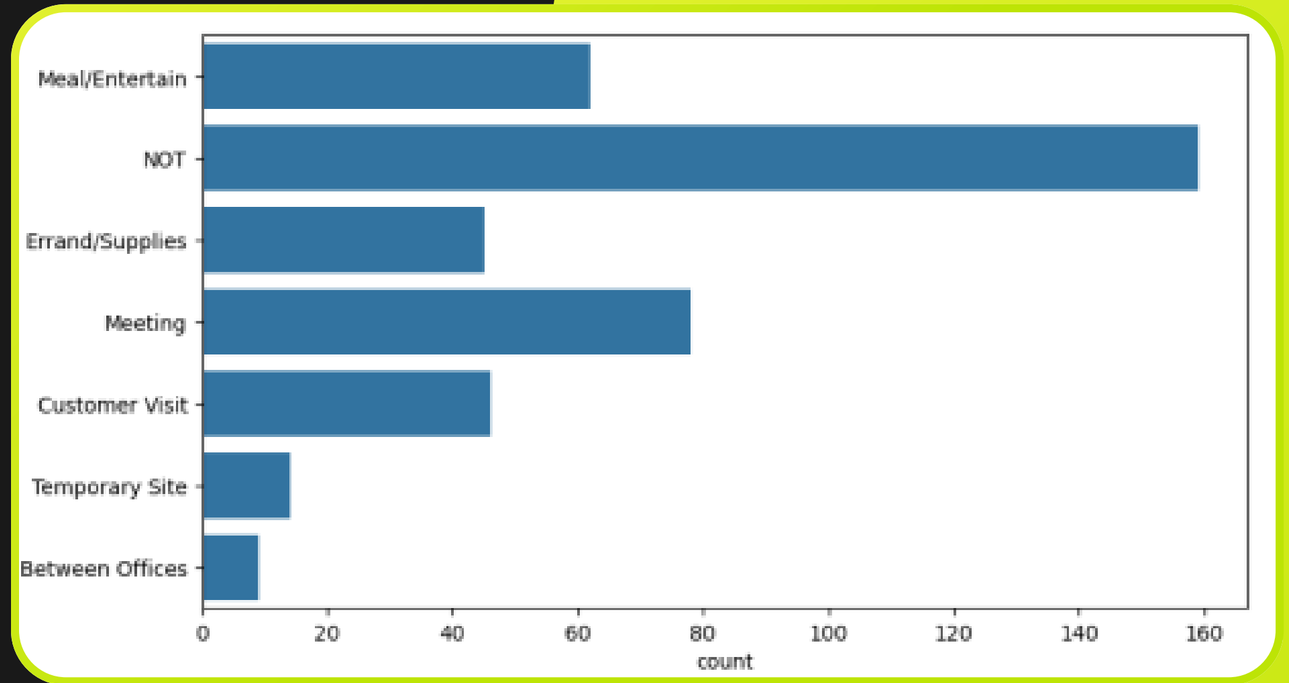
- The most common reason for booking an Uber ride is Meeting.
- Visualization: Bar graph representation.

```
plt.figure(figsize=(20,5))

plt.subplot(1,2,1)

sns.countplot(dataset['CATEGORY'])
plt.xticks(rotation =90)

plt.subplot(1,2,2)
sns.countplot(dataset['PURPOSE'])
```



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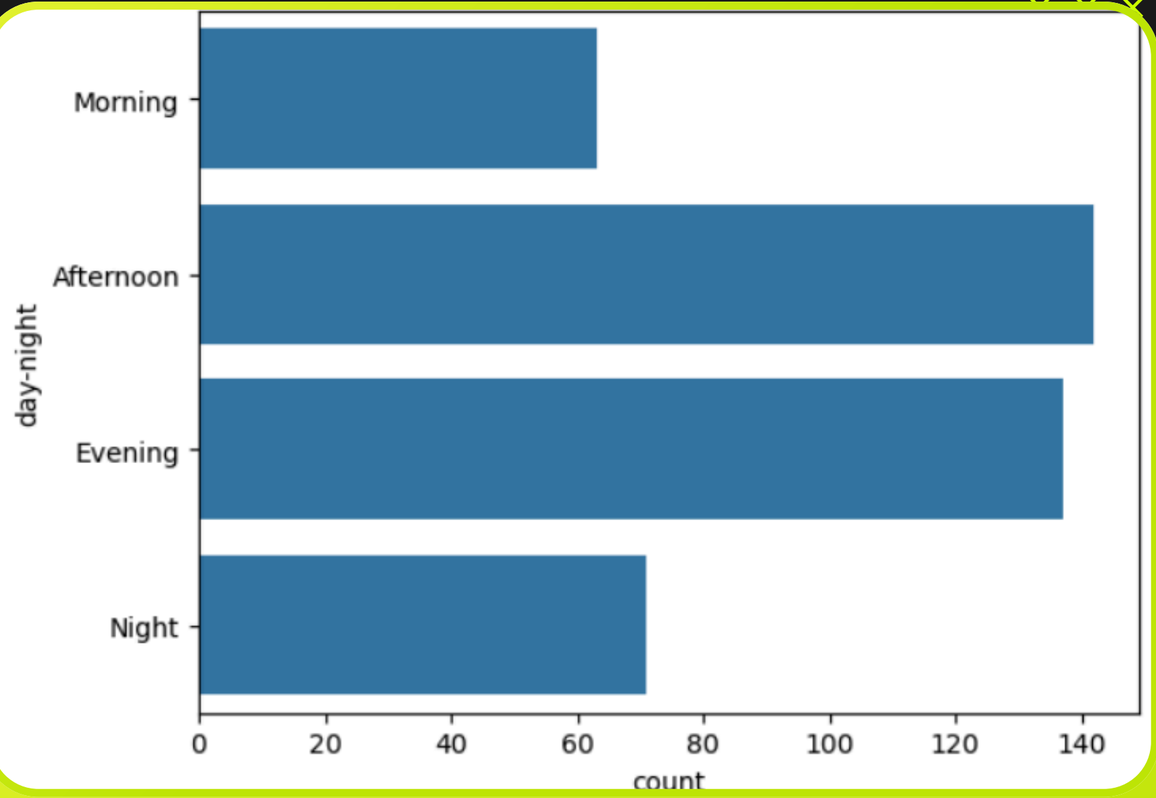
TIME & FREQUENCY ANALYSIS

- Afternoon, followed by evening, night, and morning.

```
dataset['day-night'] = pd.cut(x=dataset['time'],
bins =[0,10,15,19,24],labels = ['Morning', 'Afternoon', 'Evening', 'Night'])
sns.countplot(dataset['day-night'])
```



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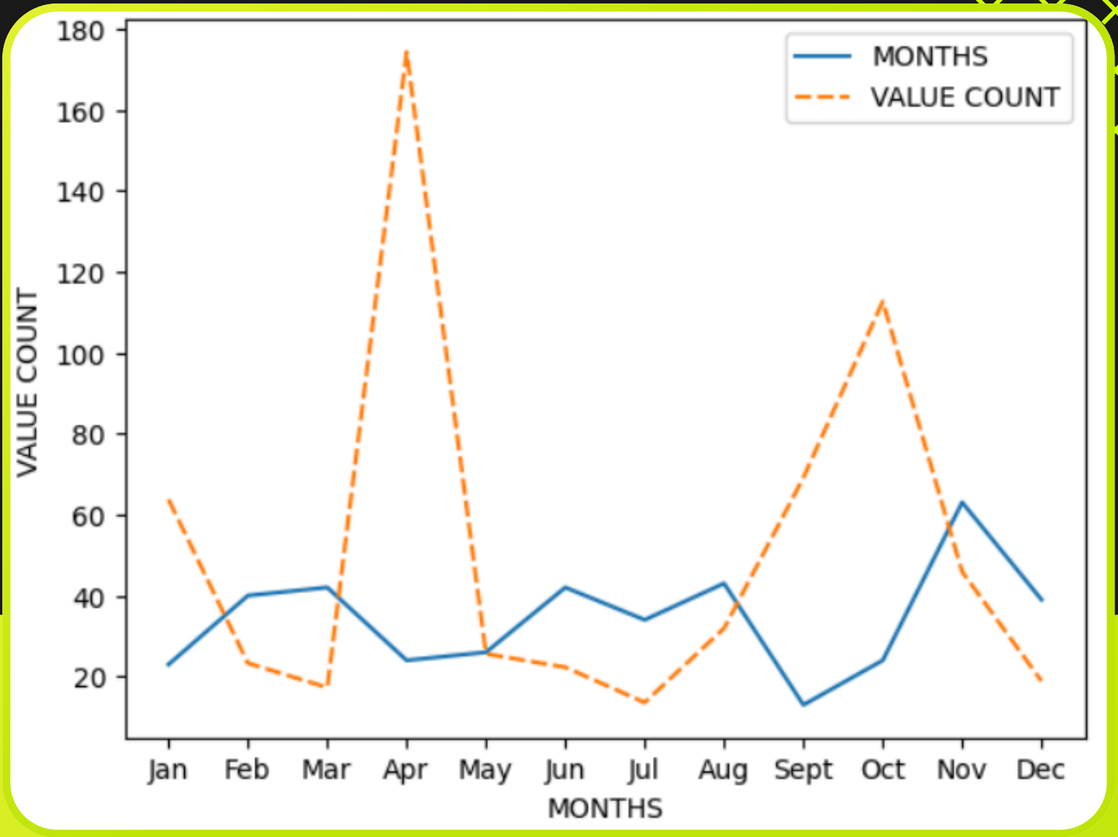
TIME & FREQUENCY ANALYSIS



- January, November, and December.
- Visualization: Line graph showing trends.

```
df = pd.DataFrame({
    "MONTHS": mon.values, # Total count of each month
    "VALUE COUNT": dataset.groupby('MONTH', sort=False)['MILES'].max()
})

p = sns.lineplot(data=df) #making lineplot
p.set(xlabel="MONTHS", ylabel="VALUE COUNT") #For set Axis labels
```

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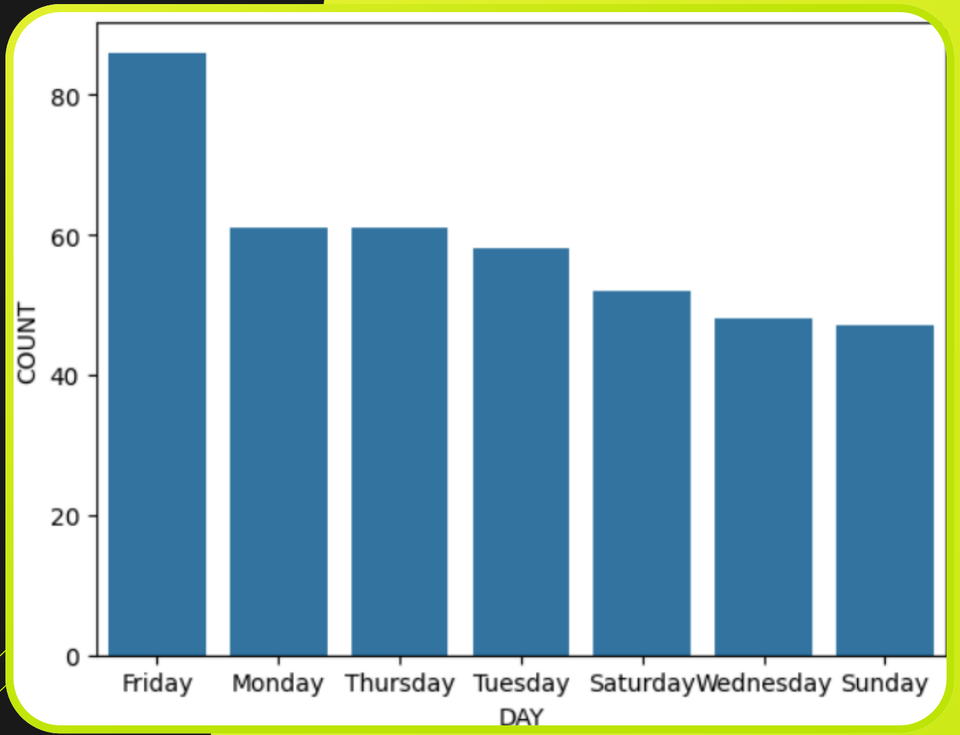
TIME & FREQUENCY ANALYSIS

- Friday people book Uber rides the most
- Visualization: Bar graph showing trends.

```
sns.barplot(x=day_label.index, y= day_label)
plt.xlabel('DAY')
plt.ylabel('COUNT')
```



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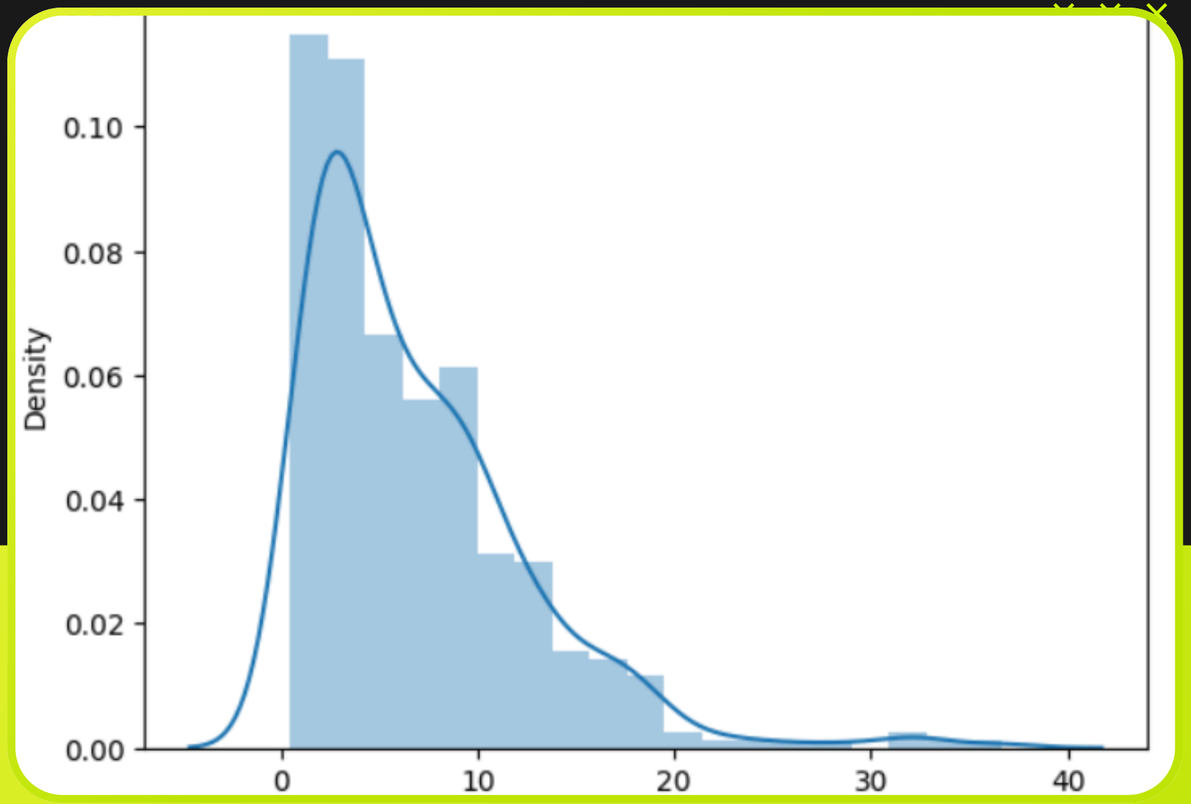
DISTANCE ANALYSIS

- Most Uber rides are booked for 0 to 20 miles.
- Visualization: Distplot representation.

```
sns.distplot(dataset[dataset['MILES']<40]['MILES'])
```



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CONCLUSION & INSIGHTS

- **Key Findings:**
  - Business rides are the most common.
  - Meetings are the main purpose.
  - Afternoon is the peak booking time.
  - January, November, and December have the lowest demand.
  - Friday sees the most bookings.
  - Most trips range from 0 to 20 miles.

- **Future Scope:** Further analysis on price trends, city-wise demand, and seasonal patterns.

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THANK YOU

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