Untitled2

December 19, 2024

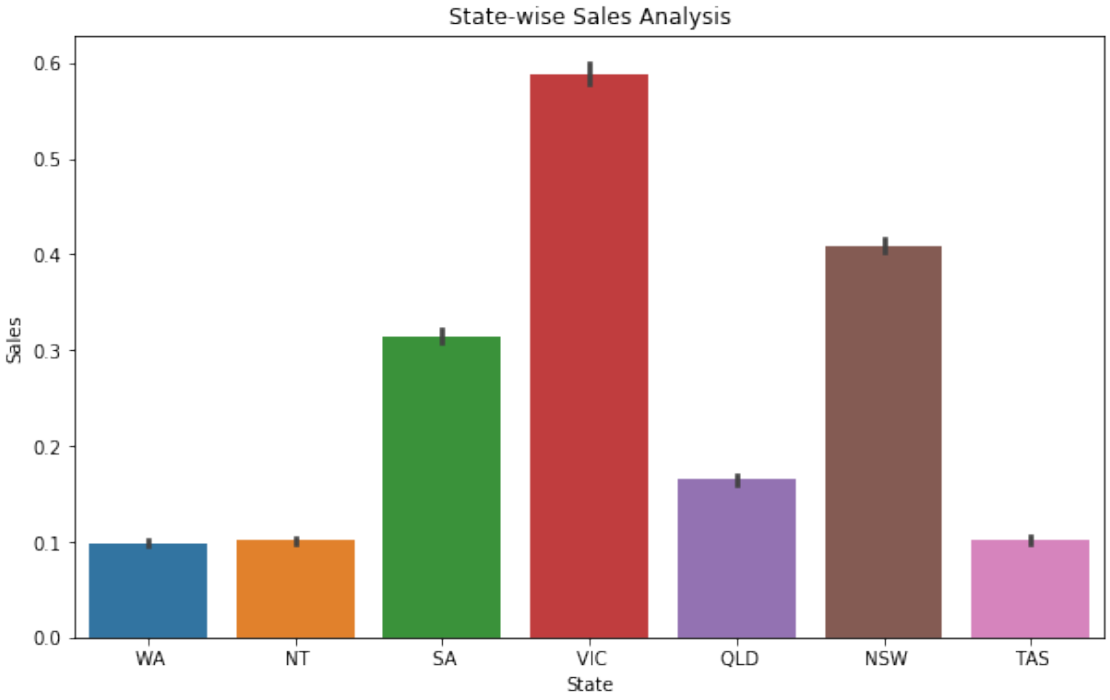
[1]:
```
import pandas as pd
import numpy as np
import seaborn as sns
import matplotlib.pyplot as plt
data = pd.read_csv('AusApparalSales4thQrt2020.csv')
print("Missing values:")
print(data.isna().sum())
data.dropna(inplace=True)
from sklearn.preprocessing import MinMaxScaler
scaler = MinMaxScaler()
data[['Sales', 'Unit']] = scaler.fit_transform(data[['Sales', 'Unit']])
print("\nDescriptive statistics:")
print(data['Sales'].describe())
print(data['Unit'].describe())
highest_sales_group = data.groupby('State')['Sales'].sum().idxmax()
print("\nGroup with the highest sales:", highest_sales_group)
lowest_sales_group = data.groupby('State')['Sales'].sum().idxmin()
print("Group with the lowest sales:", lowest_sales_group)
plt.figure(figsize=(10,6))
sns.barplot(x=data['State'], y=data['Sales'])
plt.title('State-wise Sales Analysis')
plt.xlabel('State')
plt.ylabel('Sales')
plt.show()
plt.figure(figsize=(10,6))
sns.barplot(x=data['Group'], y=data['Sales'])
plt.title('Group-wise Sales Analysis')
plt.xlabel('Group')
plt.ylabel('Sales')
plt.show()
plt.figure(figsize=(10,6))
sns.lineplot(x=data['Time'], y=data['Sales'])
plt.title('Time-of-the-day Sales Analysis')
plt.xlabel('Time')
plt.ylabel('Sales')
plt.show()
```

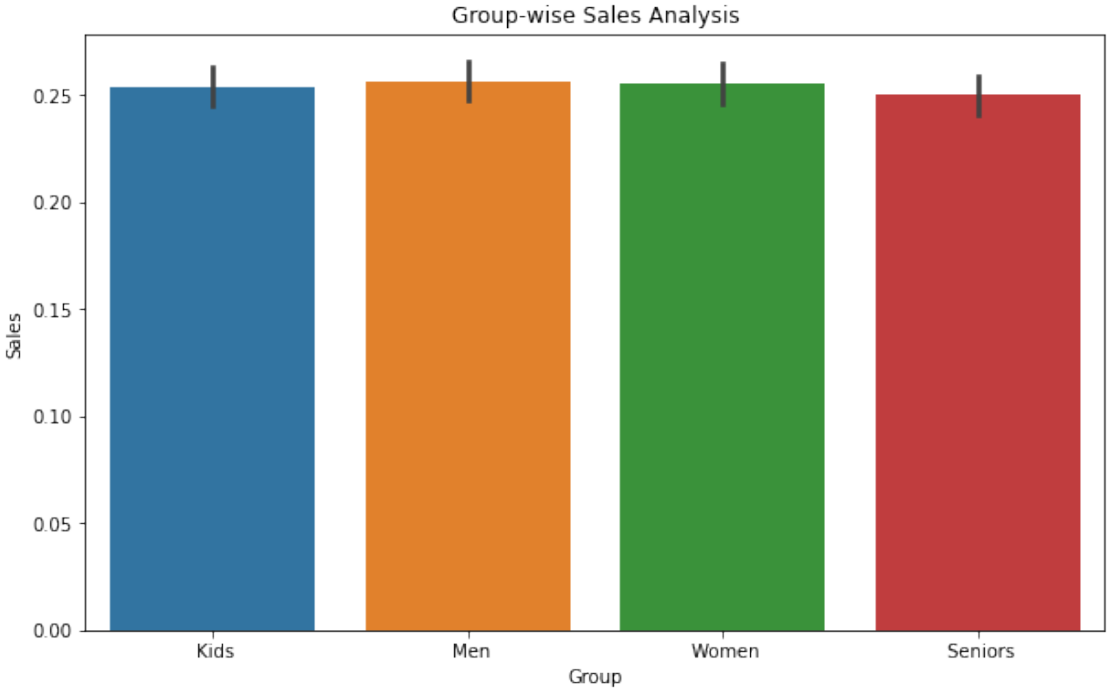
```
Missing values:
```

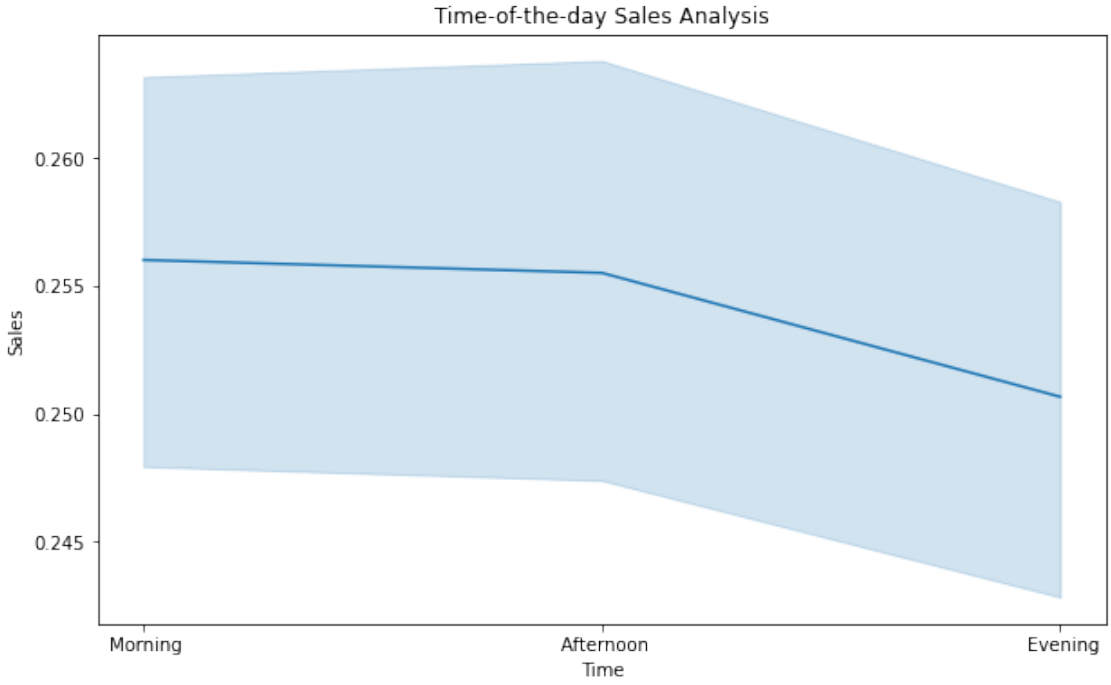
```
Date     0
Time     0
State    0
Group    0
Unit     0
Sales    0
dtype: int64

Descriptive statistics:
count    7560.000000
mean        0.254054
std         0.204784
min         0.000000
25%         0.095238
50%         0.190476
75%         0.380952
max         1.000000
Name: Sales, dtype: float64
count    7560.000000
mean        0.254054
std         0.204784
min         0.000000
25%         0.095238
50%         0.190476
75%         0.380952
max         1.000000
Name: Unit, dtype: float64

Group with the highest sales:  VIC
Group with the lowest sales:  WA
```


State-wise Sales Analysis
Sales
0.0
0.1
0.2
0.3
0.4
0.5
0.6
WA
NT
SA
VIC
QLD
NSW
TAS
State


Group-wise Sales Analysis
Sales
0.00
0.05
0.10
0.15
0.20
0.25
Kids
Men
Women
Seniors
Group


Time-of-the-day Sales Analysis
0.260
0.255
0.250
0.245
Sales
Morning
Afternoon
Evening
Time

[ ]: