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import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns

df = pd.read_csv('/mnt/data/Supermart Grocery Sales - Retail Analytics Dataset.csv')
print(df.info())
print(df.head())

print(df.isnull().sum())

plt.figure(figsize=(8, 5))
sns.histplot(df['Sales'], bins=30, kde=True)
plt.title('Sales Distribution')
plt.xlabel('Sales')
plt.ylabel('Frequency')
plt.show()

plt.figure(figsize=(8, 5))
sns.histplot(df['Profit'], bins=30, kde=True)
plt.title('Profit Distribution')
plt.xlabel('Profit')
plt.ylabel('Frequency')
plt.show()

plt.figure(figsize=(10, 5))
sns.barplot(x='Category', y='Sales', data=df, estimator=sum)
plt.title('Total Sales by Category')
plt.xlabel('Category')
plt.ylabel('Total Sales')
plt.xticks(rotation=45)
plt.show()
```

```
plt.figure(figsize=(10, 5))
sns.barplot(x='Category', y='Profit', data=df, estimator=sum)
plt.title('Total Profit by Category')
plt.xlabel('Category')
plt.ylabel('Total Profit')
plt.xticks(rotation=45)
plt.show()
```

```
plt.figure(figsize=(12, 6))
sns.lineplot(x='Month', y='Sales', data=df, estimator=sum)
plt.title('Monthly Sales Trend')
plt.xlabel('Month')
plt.ylabel('Total Sales')
plt.xticks(rotation=45)
plt.show()
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```
plt.figure(figsize=(10, 6))
sns.heatmap(df.corr(), annot=True, cmap='coolwarm')
plt.title('Feature Correlation Heatmap')
plt.show()
```