KGiSL Institute Of Technology

NAAN MUDHALVAN

Project Title:

Project Sales Analysis

Team Members:

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PROJECT DESCRIPTION:

PHASE-4:

- **Continue building the analysis by creating visualizations that display insights such as top-selling products, sales trends, and customer preferences.**

OBJECTIVES:

STEPS:

IN GOOGLE COLAB NOTEBOOK

- **MOUNT THE GOOGLE DRIVE**
- **LOAD THE DATASET**

VISUALIZATIONS THAT DISPLAY:

- **TOP-SELLING PRODUCTS**
- **SALES TRENDS**
- **CUSTOMER PREFERENCE**

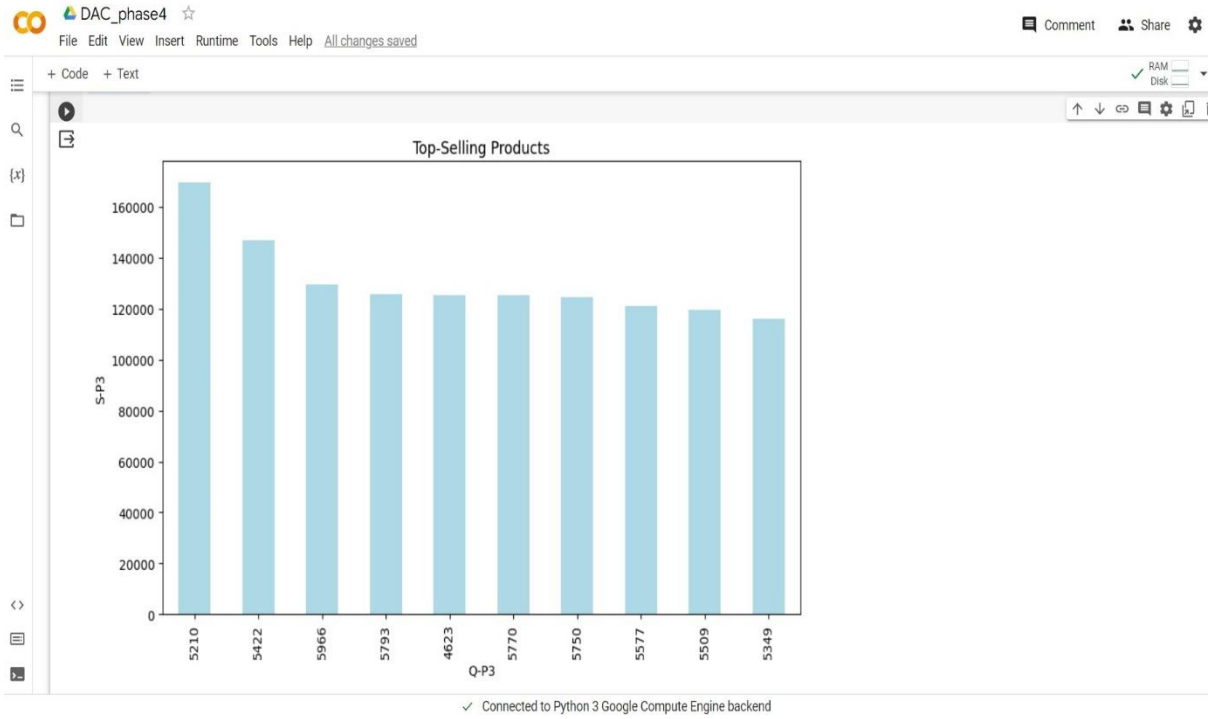
#TOP-SELLING PRODUCTS:

CODE:

```
# Group data by product and sum sales to find top-selling products
top_products = data.groupby('Q-P3')['S-P3'].sum().nlargest(10)

# Plotting top-selling products
plt.figure(figsize=(10, 6))
top_products.plot(kind='bar', color='lightblue')
plt.title('Top-Selling Products')
plt.xlabel('Q-P3')
plt.ylabel('S-P3')
plt.show()
```

OUTPUT:



#SALES TRENDS:

CODE:

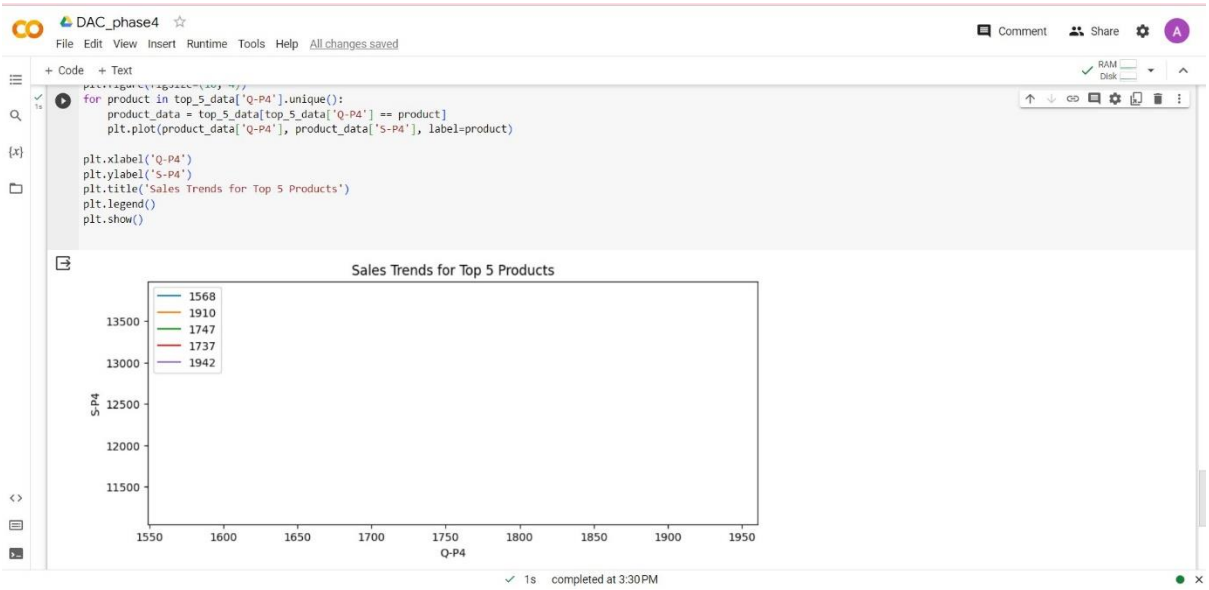
```
import pandas as pd
import matplotlib.pyplot as plt
top_5_products = data.groupby('Q-P4')['S-P4'].sum().nlargest(5).index

# Filter data for the top 5 products
top_5_data = data[data['Q-P4'].isin(top_5_products)]

# Plotting sales trends for the top 5 products
plt.figure(figsize=(10, 4))
for product in top_5_data['Q-P4'].unique():
    product_data = top_5_data[top_5_data['Q-P4'] == product]
    plt.plot(product_data['Q-P4'], product_data['S-P4'], label=product)

plt.xlabel('Q-P4')
plt.ylabel('S-P4')
plt.title('Sales Trends for Top 5 Products')
plt.legend()
plt.show()
```

OUTPUT:



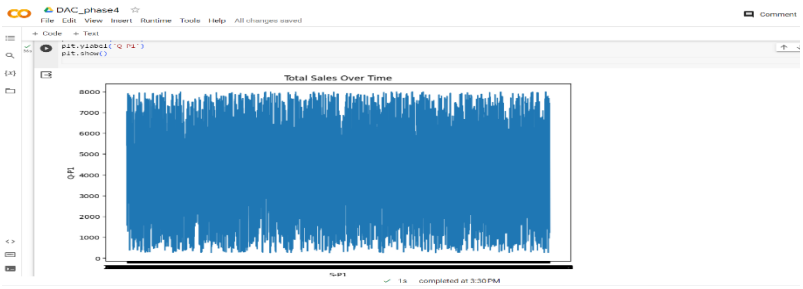
#TOTAL SALES TRENDS USING LINE CHART:

CODE :

```
import matplotlib.pyplot as plt


# Plotting total sales over time
plt.figure(figsize=(10, 6))
plt.plot(data['Date'], data['Q-P1'])
plt.title('Total Sales Over Time')
plt.xlabel('S-P1')
plt.ylabel('Q-P1')
plt.show()
```

OUTPUT:

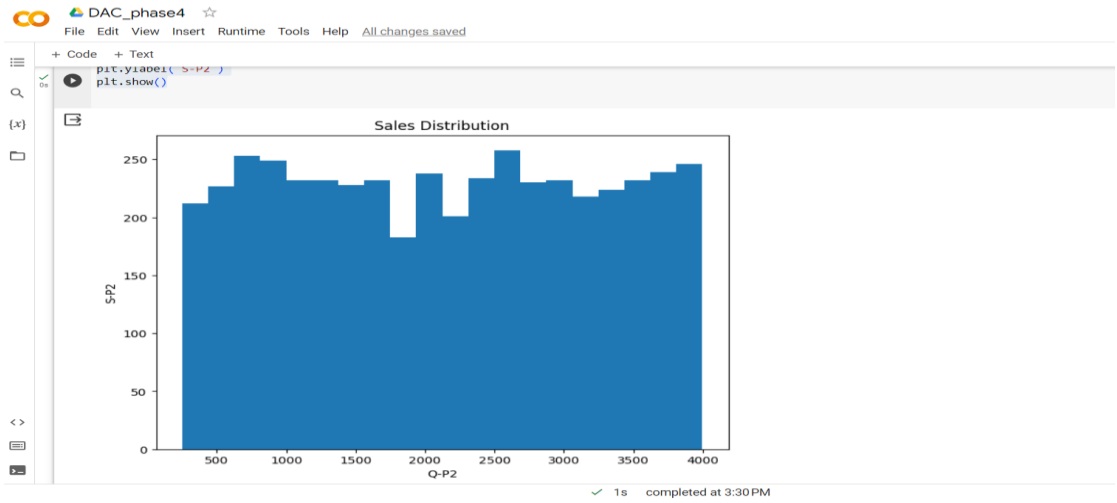


#SALES DISTRIBUTION:

CODE :

```
# Sales distribution using a histogram
plt.figure(figsize=(8, 6))
plt.hist(data['Q-P2'], bins=20)
plt.title('Sales Distribution')
plt.xlabel('Q-P2')
plt.ylabel('S-P2')
plt.show()
```

OUTPUT :



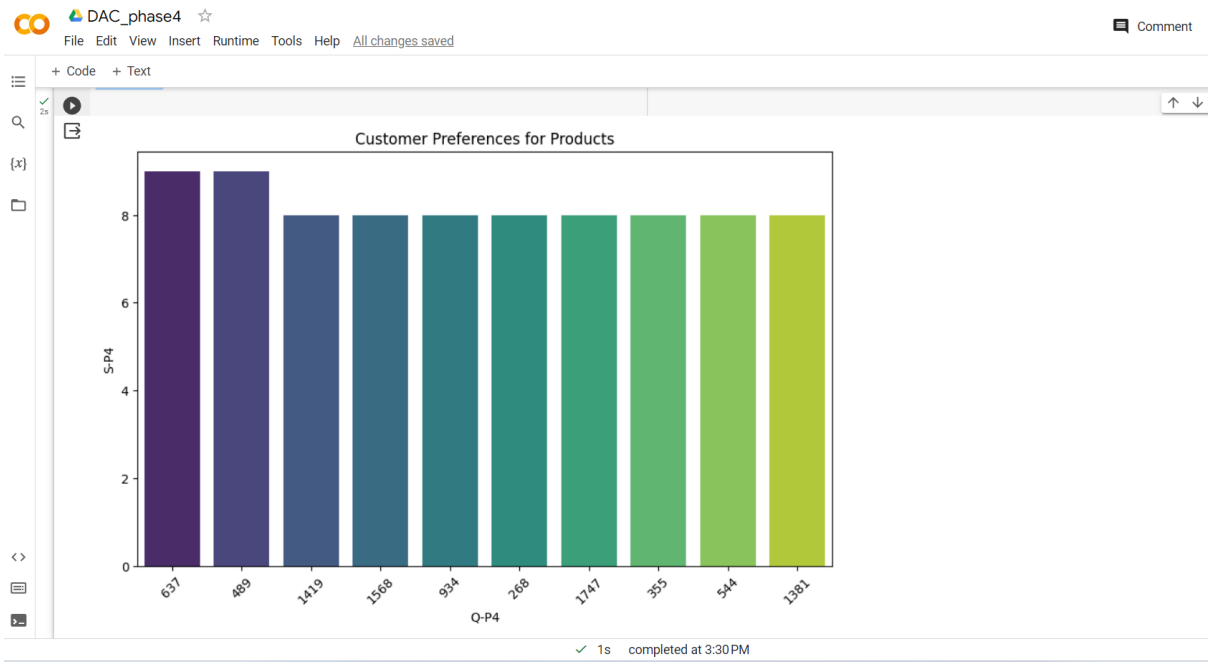
#CUSTOMER PREFERENCES:

CODE:

```
import seaborn as sns

# Visualizing customer preferences for products
plt.figure(figsize=(10, 6))
sns.countplot(data=data, x='Q-P4', order=data['Q-
P4'].value_counts().index[:10], palette='viridis')
plt.title('Customer Preferences for Products')
plt.xlabel('Q-P4')
plt.ylabel('S-P4')
plt.xticks(rotation=45)
plt.show()
```

OUTPUT:


DAC_phase4
File Edit View Insert Runtime Tools Help All changes saved
Comment
+ Code + Text
Customer Preferences for Products
S-P4
Q-P4
637
489
1419
1568
934
268
1747
355
544
1381
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