sagar-250-lab11

September 23, 2023

[2]:
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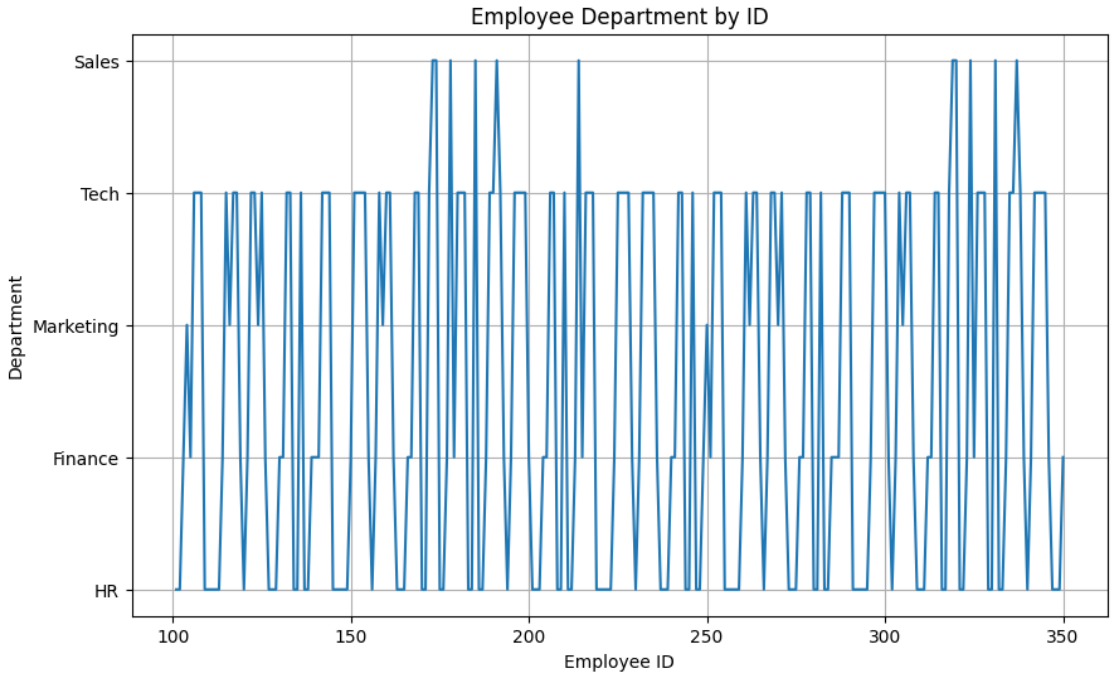
#LAB11
# Perform the Exploratory Data Analysis on your domain-based dataset and␣
 ↪demonstrate the retrieved insights using "Matplotlib" modules. Visualize␣
 ↪hidden insights using appropriate plots (graphs) [Usage of line plot and␣
 ↪scatter plot are mandatory]

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

# Loading the dataset
data = pd.read_csv("myDataset.csv")

# Line Graph
plt.figure(figsize=(10, 6))
plt.plot(data['Employee ID'], data['Department'])
plt.title('Employee Department by ID')
plt.xlabel('Employee ID')
plt.ylabel('Department')
plt.grid(True)
plt.show()
```



[3]:
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#Bar graph

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

# Loading the dataset
data = pd.read_csv("myDataset.csv")

department_counts = data['Department'].value_counts()
plt.figure(figsize=(10, 6))
department_counts.plot(kind='bar')
plt.title('Department Distribution')
plt.xlabel('Department')
plt.ylabel('Count')
plt.xticks(rotation=45)
plt.show()
```

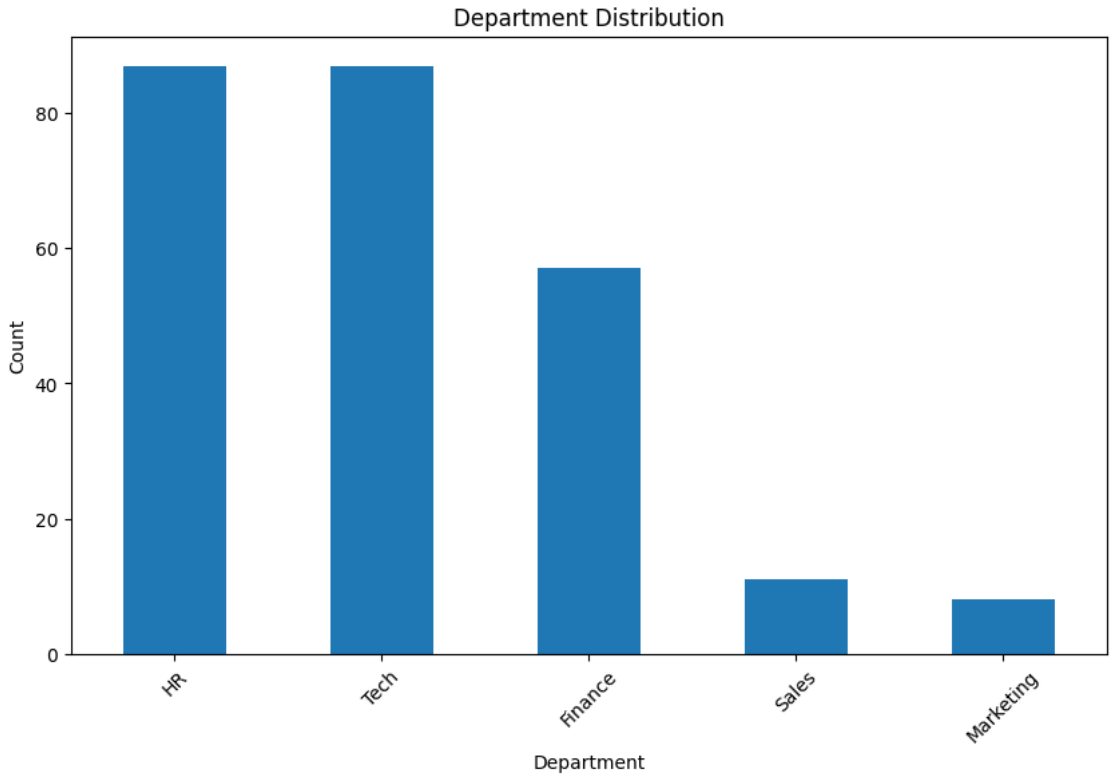

[4]:
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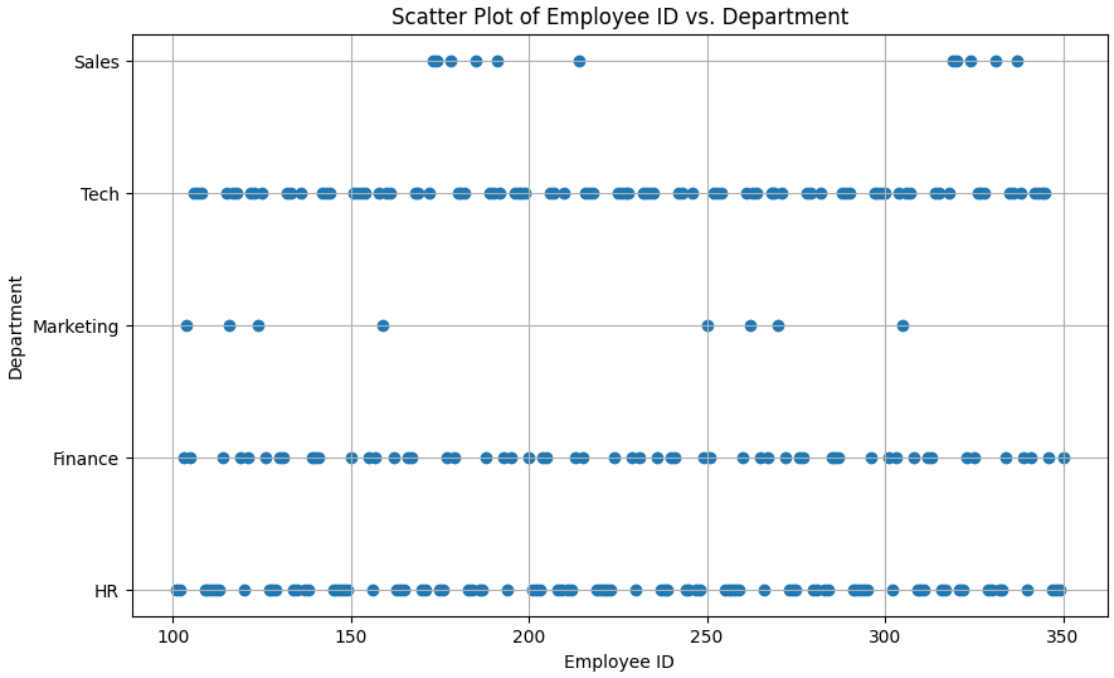
#Scatter plot

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

# Loading the dataset
data = pd.read_csv("myDataset.csv")

plt.figure(figsize=(10, 6))
plt.scatter(data['Employee ID'], data['Department'])
plt.title('Scatter Plot of Employee ID vs. Department')
plt.xlabel('Employee ID')
plt.ylabel('Department')
plt.grid(True)
plt.show()
```



[5]:
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import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns

# Loading the dataset (assuming it's in a CSV file)
data = pd.read_csv("myDataset.csv")

# Calculating the correlation between Employee ID and Salary
correlation = data['Employee ID'].corr(data['Salary'])

# Creating a correlation heatmap for Employee ID and Salary
correlation_matrix = data[['Employee ID', 'Salary']].corr()

# Creating the heatmap
plt.figure(figsize=(8, 6))
sns.heatmap(correlation_matrix, annot=True, cmap='coolwarm', fmt=".2f")
plt.title(f'Correlation Heatmap: Employee ID vs. Salary␣
  ↪(Correlation={correlation:.2f})')
plt.show()
```

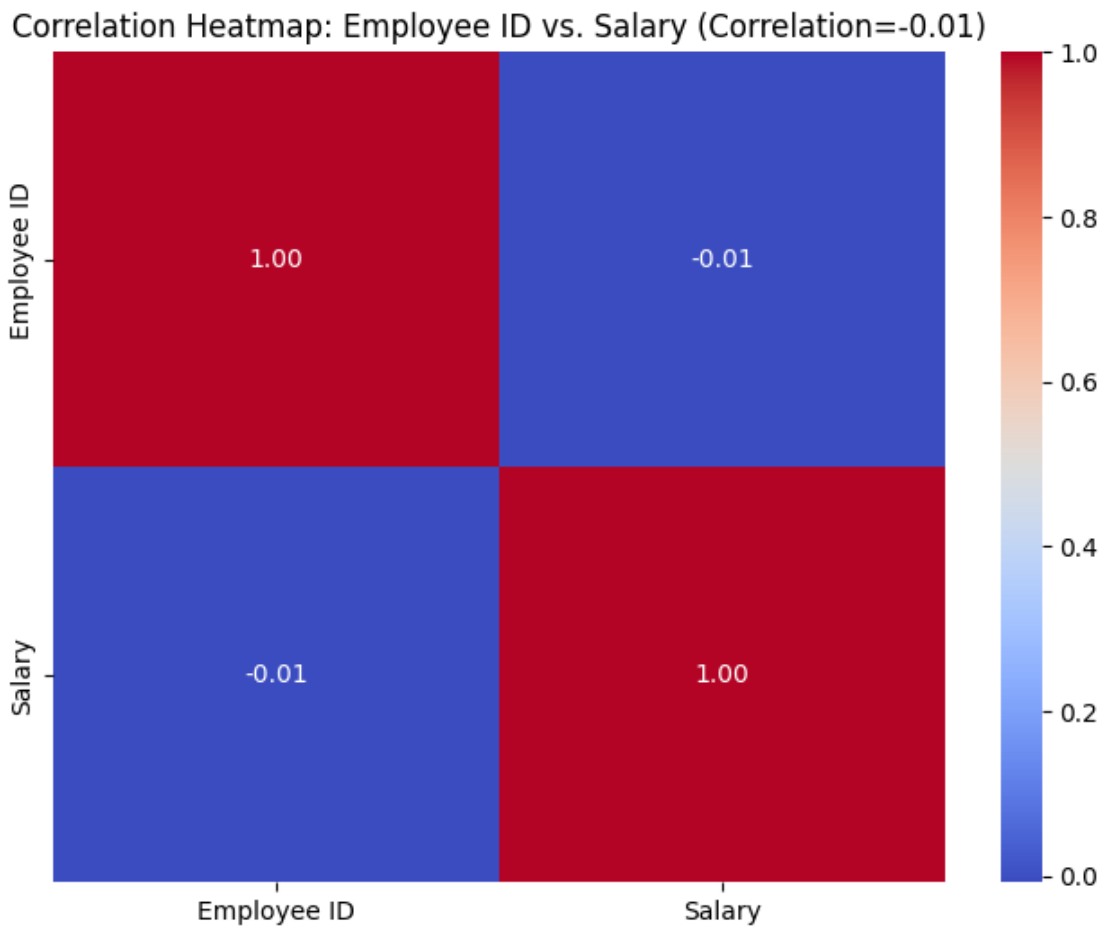
Correlation Heatmap: Employee ID vs. Salary (Correlation=-0.01)
Employee ID
Salary
1.00
-0.01
-0.01
1.00
Employee ID
Salary
1.0
0.8
0.6
0.4
0.2
0.0