

## CODE OF MN PROJECT

The screenshot shows a Google Colab notebook titled "miniproject\_383 - Colaboratory". The code cell contains Python code for data analysis using NumPy and Pandas. The CSV file "company1 (1).csv" is loaded and displayed in a table view on the right.

```
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt

data=pd.read_csv('/content/company1 (1).csv')

array_data = data.to_numpy()

# Numpy functions
# 1. numpy.mean()
mean_salary=np.mean(array_data[:, 4]) # Calculate the mean salary in Rs

# 2. numpy.median()
median_salary_usd=np.median(array_data[:, 5]) # Calculate the median salary in USD

# 3. numpy.std()
std_deviation_salary=np.std(array_data[:, 4]) # Calculate the standard deviation of salary in Rs

# 4. numpy.max()
max_salary_usd=np.max(array_data[:, 5]) # Find the maximum salary in USD

# 5. numpy.min()
min_salary=np.min(array_data[:, 4]) # Find the minimum salary in Rs

# 6. numpy.unique()
unique_locations=np.unique(array_data[:, 7]) # Get unique company locations

# 7. numpy.argsort()
sorted_salaries=array_data[np.argsort(array_data[:, 4])] # Sort the data based on salary in ascending order
```

work_year	experiNewce_level	employment_type	job_title	sa
2023	below10	Full	Principal Data SciNewlist	80
2021	above10	Part	ML Newgineer	30
2023	above10	Part	ML Newgineer	25
2023	below10	Full	Data SciNewlist	17
2023	below10	Full	Data SciNewlist	12
2021	below10	Full	Applied SciNewlist	22
2022	below10	Full	Applied SciNewlist	13
2023	below10	Full	Data SciNewlist	21
2023	below10	Full	Data SciNewlist	14
2023	below10	Part	Data SciNewlist	14

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```
# 6. numpy.unique()
unique_locations=np.unique(array_data[:, 7]) # Get unique company locations

# 7. numpy.argsort()
sorted_salaries=array_data[np.argsort(array_data[:, 4])] # Sort the data based on salary in ascending order

# 8. numpy.argmax()
highest_paid_employee=array_data[np.argmax(array_data[:, 4]), 3] # Find the job title with the highest salary

# 9. numpy.sum()
total_salaries_usd=np.sum(array_data[:, 5]) # Calculate the total sum of salaries in USD

# 10. numpy.transpose()
transposed_data=np.transpose(array_data) # Transpose the data array

# Pandas functions
# 1. pandas.DataFrame.head()
first_5_rows=data.head(5) # Get the first 5 rows of the DataFrame

# 2. pandas.DataFrame.describe()
data_stats=data.describe() # Generate descriptive statistics of the DataFrame

# 3. pandas.DataFrame.groupby()
grouped_by_job_title=data.groupby('job_title').size() # Group data by job titles and calculate their sizes

# 4. pandas.DataFrame.mean()
mean_salary_in_usd=data['salary_in_usd'].mean() # Calculate the mean salary in USD

# 5. pandas.DataFrame.sort_values()
sorted_by_salary_desc=data.sort_values('salary Rs', ascending=False) # Sort data by salary in descending order
```

work_year	experiNewce_level	employment_type	job_title	sa
2023	below10	Full	Principal Data SciNewlist	80
2021	above10	Part	ML Newgineer	30
2023	above10	Part	ML Newgineer	25
2023	below10	Full	Data SciNewlist	17
2023	below10	Full	Data SciNewlist	12
2021	below10	Full	Applied SciNewlist	22
2022	below10	Full	Applied SciNewlist	13
2023	below10	Full	Data SciNewlist	21
2023	below10	Full	Data SciNewlist	14
2023	below10	Part	Data SciNewlist	14

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```

# 4. pandas.DataFrame.mean()
mean_salary_in_usd=data['salary_in_usd'].mean() # Calculate the mean salary in USD

# 5. pandas.DataFrame.sort_values()
sorted_by_salary_desc=data.sort_values('salary Rs', ascending=False) # Sort data by salary in descending order

# 6. pandas.DataFrame.loc[]
high_salary_employees=data.loc[data['salary Rs']>150000] # Get employees with salary above 150,000

# 7. pandas.DataFrame.drop_duplicates()
unique_employees=data.drop_duplicates(subset=['job_title','company_location']) # Drop duplicates

# 8. pandas.DataFrame.isnull()
null_values=data.isnull().sum() # Count the number of null values in each column

# 9. pandas.DataFrame.pivot_table()
pivot_table=data.pivot_table(index='company_location', columns='employment_type', values='salary_in_usd')

# 10. pandas.DataFrame.value_counts()
job_title_counts=data['job_title'].value_counts() # Count the occurrences of each job title

#printing all numpy functions
print("Mean = \n", np.mean(array_data[:, 4]))
print("Median = \n", np.median(array_data[:, 5]))
print("Standard Deviation = \n", np.std(array_data[:, 4]))
print("Maximum Salary (USD) = \n", np.max(array_data[:, 5]))
print("Minimum Salary = \n", np.min(array_data[:, 4]))
print("Unique Locations = \n", np.unique(array_data[:, 7]))
print("Sorted Salaries = \n", sorted_salaries)
print("Highest Paid Employee's Job Title = \n", highest_paid_employee)
print("Total Salaries (USD) = \n", total_salaries_usd)

```

company1 (1).csv

work_year	experiNewce_level	employment_type	job_title	sa
2023	below10	Full	Principal Data SciNewtist	80
2021	above10	Part	ML Newgineer	30
2023	above10	Part	ML Newgineer	25
2023	below10	Full	Data SciNewtist	17
2023	below10	Full	Data SciNewtist	12
2021	below10	Full	Applied SciNewtist	22
2022	below10	Full	Applied SciNewtist	13
2023	below10	Full	Data SciNewtist	21
2023	below10	Full	Data SciNewtist	14
2023	below10	Part	Data SciNewtist	14

Show 10 per page 1 2 3

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```

print("Sorted Salaries = \n", sorted_salaries)
print("Highest Paid Employee's Job Title = \n", highest_paid_employee)
print("Total Salaries (USD) = \n", total_salaries_usd)
print("Transposed Data = \n", transposed_data)

#printing all pandas functions
print("First 5 Rows= \n", first_5_rows)
print("Data Statistics= \n", data_stats)
print("Job Title Counts= \n", grouped_by_job_title)
print("Mean Salary (USD) = \n", mean_salary_in_usd)
print("Sorted by Salary (Descending)= \n", sorted_by_salary_desc)
print("High Salary Employees= \n", high_salary_employees)
print("Unique Employees= \n", unique_employees)
print("Null Values= \n", null_values)
print("Pivot Table= \n", pivot_table)
print("Job Title Counts= \n", job_title_counts)

#printing all matplotlib functions
# Matplotlib functions
# 1. plt.plot()
plt.plot(data['work_year'],data['salary_in_usd'])
plt.xlabel('work Year')
plt.ylabel('Salary (USD)')
plt.title('Salary based on Work Year')
plt.show()

# 2. plt.scatter()
plt.scatter(data['experiNewce_level'],data['salary Rs'])
plt.xlabel('Experience Level')

```

company1 (1).csv

work_year	experiNewce_level	employment_type	job_title	sa
2023	below10	Full	Principal Data SciNewtist	80
2021	above10	Part	ML Newgineer	30
2023	above10	Part	ML Newgineer	25
2023	below10	Full	Data SciNewtist	17
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Show 10 per page 1 2 3

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Files

- ..
- config
- sample\_data
- company1 (1).csv

```
# 2. plt.scatter()
plt.scatter(data['experiNewce_level'],data['salary Rs'])
plt.xlabel('Experience Level')
plt.ylabel('Salary (Rs)')
plt.title('Salary based on Experience Level')
plt.show()

# 3. plt.hist()
plt.hist(data['salary_in_usd'],bins=10)
plt.xlabel('Salary (USD)')
plt.ylabel('Frequency')
plt.title('Salary Distribution')
plt.show()

# 4. plt.boxplot()
plt.boxplot(data['salary Rs'])
plt.xlabel('Salary')
plt.title('Salary Distribution')
plt.show()

# 5. plt.bar()
job_title_counts=data['job_title'].value_counts()
plt.bar(job_title_counts.index, job_title_counts.values)
plt.xlabel('Job Title')
plt.ylabel('Count')
plt.title('Job Title Counts')
plt.xticks(rotation=90)
plt.show()

# 6. plt.pie()
```

company1 (1).csv

work_year	experiNewce_level	employment_type	job_title	sa
2023	below10	Full	Principal Data SciNewtist	80
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2023	below10	Full	Data SciNewtist	17
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Show 10 per page 1 2 3

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Files

- ..
- config
- sample\_data
- company1 (1).csv

```
# 5. plt.bar()
job_title_counts=data['job_title'].value_counts()
plt.bar(job_title_counts.index, job_title_counts.values)
plt.xlabel('Job Title')
plt.ylabel('Count')
plt.title('Job Title Counts')
plt.xticks(rotation=90)
plt.show()

# 6. plt.pie()
employment_type_counts=data['employment_type'].value_counts()
plt.pie(employment_type_counts.values,labels=employment_type_counts.index, autopct='%1.1f%%')
plt.title('Employment Type Distribution')
plt.show()

# 7. plt.plot() - Line plot with multiple lines
grouped_data = data.groupby('work_year').mean()
plt.plot(grouped_data.index,grouped_data['salary Rs'], label='Average Salary (Rs)')
plt.plot(grouped_data.index,grouped_data['salary_in_usd'], label='Average Salary (USD)')
plt.xlabel('Work Year')
plt.ylabel('Salary')
plt.title('Average Salary over Work Year')
plt.legend()
plt.show()

# 8. plt.scatter() - Scatter plot with colors based on a category
plt.scatter(data['work_year'], data['salary Rs'],c=data['employment_type'].astype('category'))
plt.xlabel('Work Year')
plt.ylabel('Salary (Rs)')
plt.title('Salary based on Work Year (Colored by Employment Type)')
plt.colorbar(label='Employment Type')
```

company1 (1).csv

work_year	experiNewce_level	employment_type	job_title	sa
2023	below10	Full	Principal Data SciNewtist	80
2021	above10	Part	ML Newgineer	30
2023	above10	Part	ML Newgineer	25
2023	below10	Full	Data SciNewtist	17
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2022	below10	Full	Applied SciNewtist	13
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Show 10 per page 1 2 3

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Files

company1 (1).csv

```
# 8. plt.scatter() - Scatter plot with colors based on a categorical variable
plt.scatter(data['work_year'], data['salary Rs'], c=data['employment_type'].astype('category'))
plt.xlabel('Work Year')
plt.ylabel('Salary (Rs)')
plt.title('Salary based on Work Year (Colored by Employment Type)')
plt.colorbar(label='Employment Type')
plt.show()

# 9. plt.subplot() - Multiple subplots
plt.subplot(1,2,1)
plt.hist(data['salary_in_usd'], bins=10)
plt.xlabel('Salary (USD)')
plt.ylabel('Frequency')
plt.title('Salary Distribution')

plt.subplot(1, 2, 2)
plt.scatter(data['experiNewce_level'], data['salary Rs'])
plt.xlabel('Experience Level')
plt.ylabel('Salary (Rs)')
plt.title('Salary based on Experience Level')

plt.tight_layout()
plt.show()

# 10. plt.imshow() - Heatmap
pivot_table = data.pivot_table(index='experiNewce_level', columns='work_year', values='salary Rs')
plt.imshow(pivot_table, cmap='hot', interpolation='nearest')
plt.colorbar(label='Average Salary (Rs)')
plt.xlabel('Work Year')
plt.ylabel('Experience Level')
```

company1 (1).csv

work_year	experiNewce_level	employment_type	job_title	salary
2023	below10	Full	Principal Data SciNewtist	80
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2021	below10	Full	Applied SciNewtist	22
2022	below10	Full	Applied SciNewtist	13
2023	below10	Full	Data SciNewtist	21
2023	below10	Full	Data SciNewtist	14
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Show 10 per page

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Files

company1 (1).csv

```
# 10. plt.imshow() - Heatmap
pivot_table = data.pivot_table(index='experiNewce_level', columns='work_year', values='salary Rs')
plt.imshow(pivot_table, cmap='hot', interpolation='nearest')
plt.colorbar(label='Average Salary (Rs)')
plt.xlabel('Work Year')
plt.ylabel('Experience Level')
plt.title('Average Salary Heatmap')
plt.show()

# Machine learning line of regression
import pandas as pd
from sklearn.linear_model import LinearRegression
from sklearn.model_selection import train_test_split
from sklearn.metrics import mean_squared_error, r2_score

# Load the CSV file into a pandas DataFrame
data = pd.read_csv('/content/company1 (1).csv')

# Split the data into features (X) and target variable (y)
X = data[['work_year']]
y = data['salary_in_usd']

# Split the data into training and testing sets
X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.2, random_state=42)

# Create a Linear Regression model
model = LinearRegression()

# Fit the model to the training data
model.fit(X_train, y_train)
```

company1 (1).csv

work_year	experiNewce_level	employment_type	job_title	salary
2023	below10	Full	Principal Data SciNewtist	80
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2023	above10	Part	ML Newgineer	25
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2023	below10	Full	Data SciNewtist	12
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2022	below10	Full	Applied SciNewtist	13
2023	below10	Full	Data SciNewtist	21
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2023	below10	Part	Data SciNewtist	14

Show 10 per page

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Files

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```
# Create a Linear Regression model
model = LinearRegression()

# Fit the model to the training data
model.fit(X_train, y_train)

# Predict on the test data
y_pred = model.predict(X_test)

# Linear Regression functions
# 1. Linear Regression - Coefficients
print("Coefficients:", model.coef_)

# 2. Linear Regression - Intercept
print("Intercept:", model.intercept_)

# 3. Linear Regression - Mean Squared Error (MSE)
mse = mean_squared_error(y_test, y_pred)
print("Mean Squared Error (MSE):", mse)

# 4. Linear Regression - Root Mean Squared Error (RMSE)
rmse = mean_squared_error(y_test, y_pred, squared=False)
print("Root Mean Squared Error (RMSE):", rmse)

# 5. Linear Regression - R-squared Score
r2 = r2_score(y_test, y_pred)
print("R-squared Score:", r2)

# printing km functions
# 1.scatter
```

company1 (1).csv

work_year	experiNewce_level	employment_type	job_title	sa
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2023	above10	Part	ML Newgineer	25
2023	below10	Full	Data SciNewlist	17
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2022	below10	Full	Applied SciNewlist	13
2023	below10	Full	Data SciNewlist	21
2023	below10	Full	Data SciNewlist	14
2023	below10	Part	Data SciNewlist	14

Show 10 per page 1 2 3

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[x] .. config sample\_data company1 (1).csv

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```
# 1.scatter
import matplotlib.pyplot as plt
x = [8.42, 8.25, 8.17, 8.08, 7.92, 8.17, 8.25, 8.08, 8, 8]
y = [35, 80, 25, 22, 24, 30, 27, 90, 30, 60]

plt.scatter(x,y)
plt.show()

# 2.
from sklearn.cluster import KMeans

data = list(zip(x,y))
inertias = []

for i in range(1,11):
    kmeans = KMeans(n_clusters=i)
    kmeans.fit(data)
    inertias.append(kmeans.inertia_)

plt.plot(range(1,11), inertias , marker ='o')
plt.title('Elbow method')
plt.xlabel('Numbers of clusters')
plt.ylabel('Inertia')
plt.show()

# 3.
kmeans = KMeans(n_clusters=2)
kmeans.fit(data)

plt.scatter(x, y, c=kmeans.labels_)
plt.show()
```

company1 (1).csv

work_year	experiNewce_level	employment_type	job_title	sa
2023	below10	Full	Principal Data SciNewlist	80
2021	above10	Part	ML Newgineer	30
2023	above10	Part	ML Newgineer	25
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2023	below10	Full	Data SciNewlist	12
2021	below10	Full	Applied SciNewlist	22
2022	below10	Full	Applied SciNewlist	13
2023	below10	Full	Data SciNewlist	21
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Show 10 per page 1 2 3

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# OUTPUT OF MN PROJECT

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```

Mean = 144071.66666666666
Median = 144050.0
Standard Deviation = 59408.95693183814
Maximum Salary (USD) = 275000
Minimum Salary = 25500
Unique Locations = ['CA' 'DE' 'ES' 'GB' 'US']
Sorted Salaries =
[[2023 'above10' 'Part' 'ML Newgineer' 25500 25500 'US' 'US' 'S'],
 [2022 'above10' 'Part' 'ML Newgineer' 30000 30000 'US' 'US' 'S'],
 [2023 'below10' 'Full' 'Principal Data SciNewtist' 80000 85847 'ES' 'ES' 'L'],
 [2020 'below10' 'Full' 'Data Modeler' 90700 90700 'US' 'US' 'M'],
 [2021 'below10' 'Full' 'Data SciNewtist' 90700 90700 'US' 'US' 'M'],
 [2020 'below10' 'Part' 'Data Analyst' 100000 100000 'US' 'US' 'M'],
 [2022 'above10' 'Full' 'Data Analyst' 110000 110000 'US' 'US' 'M'],
 [2023 'below10' 'Full' 'Data SciNewtist' 120000 120000 'CA' 'CA' 'M'],
 [2022 'below10' 'Part' 'Data Analyst' 130000 130000 'US' 'US' 'M'],
 [2019 'New' 'Part' 'Applied SciNewtist' 130760 130760 'US' 'US' 'L'],
 [2022 'below10' 'Full' 'Applied SciNewtist' 136000 136000 'US' 'US' 'L'],
 [2023 'below10' 'Full' 'Data SciNewtist' 141000 141000 'CA' 'CA' 'M'],
 [2023 'below10' 'Part' 'Data SciNewtist' 147100 147100 'US' 'US' 'M'],
 [2019 'below10' 'Full' 'Data Modeler' 147100 147100 'US' 'US' 'M'],
 [2023 'below10' 'Full' 'Data SciNewtist' 150000 150000 'US' 'US' 'M'],
 [2023 'above10' 'Full' 'Data Analyst' 150000 150000 'US' 'US' 'M'],
 [2023 'below10' 'Part' 'Data SciNewtist' 170000 170000 'US' 'US' 'M'],
 [2023 'below10' 'Part' 'Rebelow10arch Newgineer' 174000 174000 'DE' 'DE' 'M']]

```

company1 (1).csv

work_year	experiNewce_level	employment_type	job_title	sa
2023	below10	Full	Principal Data SciNewtist	80
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2023	below10	Full	Data SciNewtist	14
2023	below10	Part	Data SciNewtist	14

Show 10 per page

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```

Mean = 144071.66666666666
Median = 144050.0
Standard Deviation = 59408.95693183814
Maximum Salary (USD) = 275000
Minimum Salary = 25500
Unique Locations = ['CA' 'DE' 'ES' 'GB' 'US']
Sorted Salaries =
[[2023 'below10' 'Full' 'Data SciNewtist' 175000 175000 'CA' 'CA' 'M'],
 [2020 'New' 'Part' 'Applied SciNewtist' 213660 213660 'US' 'US' 'L'],
 [2023 'below10' 'Full' 'Data SciNewtist' 219000 219000 'CA' 'CA' 'M'],
 [2021 'below10' 'Part' 'Applied SciNewtist' 222200 222200 'US' 'US' 'L'],
 [2022 'below10' 'Part' 'Analytics Newgineer' 230000 230000 'GB' 'GB' 'M'],
 [2021 'below10' 'Part' 'Rebelow10arch Newgineer' 275000 275000 'DE' 'DE' 'M']]
Highest Paid Employee's Job Title =
Rebelow10arch Newgineer
Total Salaries (USD) =
3463567
Transposed Data =
[[2023 2021 2023 2023 2021 2022 2023 2023 2021 2022 2020 2020 2019 2019 2020 2023 2023 2022 2022 2021 2023 2022],
 ['below10' 'above10' 'above10' 'below10' 'below10'],
 ['Full' 'Part' 'Full' 'Full' 'Full' 'Full' 'Full' 'Full' 'Part' 'Full' 'Part' 'Full' 'Part' 'Full' 'Full' 'Full' 'Part' 'Full' 'Part' 'Part'],
 ['Principal Data SciNewtist' 'ML Newgineer' 'ML Newgineer' 'Applied SciNewtist' 'Applied SciNewtist' 'Applied SciNewtist' 'Data SciNewtist' 'Data SciNewtist' 'Data Analyst' 'Data Analyst' 'Applied SciNewtist' 'Applied SciNewtist' 'Data Modeler' 'Data Modeler' 'Data SciNewtist' 'Data SciNewtist' 'Data Analyst' 'Data Analyst' 'Rebelow10arch Newgineer' 'Analytics Newgineer'],
 [80000 30000 25500 175000 120000 222200 136000 219000 141000 147100 90700 130000 100000 213660 130760 147100 90700 170000 150000 110000 275000 174000 230000]]

```

company1 (1).csv

work_year	experiNewce_level	employment_type	job_title	sa
2023	below10	Full	Principal Data SciNewtist	80
2021	above10	Part	ML Newgineer	30
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Show 10 per page

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[colab.research.google.com/drive/1Nivfrs84DBfJDX8d-WnFGZfk1-65GBv4?authuser=1#scrollTo=DbTh07Et3lkC](https://colab.research.google.com/drive/1Nivfrs84DBfJDX8d-WnFGZfk1-65GBv4?authuser=1#scrollTo=DbTh07Et3lkC)

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Files

- ..
- config
- sample\_data
- company1 (1).csv

+ Code + Text

```
'Analytics Newgineer"]
[80000 30000 25000 120000 222000 136000 219000 141000 147100
90700 130000 100000 213660 130760 147100 90700 170000 150000
110000 275000 175000 120000 222000 136000 219000 141000 147100
[85847 30000 25000 175000 120000 222000 136000 219000 141000
90700 130000 100000 213660 130760 147100 90700 170000 150000
110000 275000 175000 120000 222000 136000 219000 141000 147100]
['ES' 'US' 'CA' 'CA' 'US' 'US' 'US' 'US' 'US' 'US'
'US' 'US' 'US' 'US' 'US' 'US' 'DE' 'DE' 'GB']
['ES' 'US' 'CA' 'CA' 'US' 'US' 'US' 'US' 'US' 'US'
'US' 'US' 'US' 'US' 'US' 'US' 'DE' 'DE' 'GB']
['L' 'S' 'M' 'M' 'L' 'M' 'M' 'M' 'M' 'M' 'L' 'L' 'M' 'M' 'M' 'M'
'M' 'M' 'M' 'M' 'M' 'M']]
```

First 5 Rows=

	work_year	experiNewce_level	employment_type	job_title
0	2023	below10	Full	Principal Data SciNewtist
1	2021	above10	Part	ML Newgineer
2	2023	above10	Part	ML Newgineer
3	2023	below10	Full	Data SciNewtist
4	2023	below10	Full	Data SciNewtist

Data Statistics=

	work_year	salary Rs	employee_residhewe	company_location	company_size
0	80000	85847	ES	ES	L
1	30000	30000	US	US	S
2	25500	25500	US	US	S
3	175000	175000	CA	CA	M
4	120000	120000	CA	CA	M

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company1 (1).csv

work_year	experiNewce_level	employment_type	job_title	sa
2023	below10	Full	Principal Data SciNewtist	80
2021	above10	Part	ML Newgineer	30
2023	above10	Part	ML Newgineer	25
2023	below10	Full	Data SciNewtist	17
2023	below10	Full	Data SciNewtist	12
2021	below10	Full	Applied SciNewtist	22
2022	below10	Full	Applied SciNewtist	13
2023	below10	Full	Data SciNewtist	21
2023	below10	Full	Data SciNewtist	14
2023	below10	Part	Data SciNewtist	14

Show 10 per page 1 2 3

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Files

- ..
- config
- sample\_data
- company1 (1).csv

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```
Data Statistics=
  work_year      salary Rs   salary_in_usd
count    24.000000 24.000000 24.000000
mean   2021.791667 144071.666667 144315.291667
std     1.382473 60686.715090 60429.509347
min    2019.000000 25500.000000 25500.000000
25%   2021.000000 107500.000000 107500.000000
50%   2022.000000 140450.000000 140450.000000
75%   2023.000000 174250.000000 174250.000000
max   2023.000000 275000.000000 275000.000000
Job Title Counts=
  job_title
Analytics Newgineer      1
Applied SciNewtist        4
Data Analyst              4
Data Modeler              2
Data Scientist             8
ML Newgineer               2
Principal Data SciNewtist  1
Rebelowl0arch Newgineer    2
dtype: int64
Mean Salary (USD) =
144315.29166666666
Sorted by Salary (Descending)=
  work_year experiNewce_level employment_type      job_title
21       2021      below10          Part  Rebelowl0arch Newgineer
23       2022      below10          Part  Analytics Newgineer
5        2021      below10          Full   Applied SciNewtist
7        2023      below10          Full   Data SciNewtist
13      2020          New          Full   Applied SciNewtist
3        2023      below10          Full   Data SciNewtist
22      2023      below10          Part  Rebelowl0arch Newgineer
17      2023      below10          Part  Data SciNewtist
19      2022      below10          Full   Data SciNewtist
```

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company1 (1).csv

work_year	experiNewce_level	employment_type	job_title	sa
2023	below10	Full	Principal Data SciNewtist	80
2021	above10	Part	ML Newgineer	30
2023	above10	Part	ML Newgineer	25
2023	below10	Full	Data SciNewtist	17
2023	below10	Full	Data SciNewtist	12
2021	below10	Full	Applied SciNewtist	22
2022	below10	Full	Applied SciNewtist	13
2023	below10	Full	Data SciNewtist	21
2023	below10	Full	Data SciNewtist	14
2023	below10	Part	Data SciNewtist	14

Show 10 per page 1 2 3

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Sorted by Salary (Descending)= work\_year experiNewce\_level employment\_type job\_title \ salary Rs salary\_in\_usd employee\_residNewce company\_location company\_size

	work_year	experiNewce_level	employment_type	job_title	salary Rs	salary_in_usd	employee_residNewce	company_location	company_size
21	2021	below10	Part	Rebelow10arch Newgineer	275000	275000	DE	DE	M
23	2022	below10	Part	Analytics Newgineer	230000	230000	GB	GB	M
5	2021	below10	Full	Applied SciNewtist	222200	222200	US	US	L
7	2023	below10	Full	Data SciNewtist	219000	219000	CA	CA	M
13	2020	New	Full	Applied SciNewtist	213660	213660	US	US	L
3	2023	below10	Full	Data SciNewtist	175000	175000	CA	CA	M
22	2023	below10	Part	Rebelow10arch Newgineer	174000	174000	DE	DE	M
17	2023	below10	Part	Data SciNewtist	170000	170000	US	US	M
18	2022	below10	Full	Data Analyst	150000	150000	US	US	M
19	2023	above10	Full	Data Analyst	150000	150000	US	US	M
15	2019	below10	Full	Data Modeler	147100	147100	US	US	M
9	2023	below10	Part	Data SciNewtist	147100	147100	US	US	M
8	2023	below10	Full	Data SciNewtist	141000	141000	CA	CA	M
6	2022	below10	Full	Applied SciNewtist	136000	136000	US	US	L
14	2023	below10	Part	Data Analyst	130760	130760	US	US	L
11	2020	below10	Full	Data SciNewtist	130000	130000	US	US	M
4	2020	below10	Full	Data Modeler	120000	120000	CA	CA	M
20	2022	above10	Full	Data Analyst	110000	110000	US	US	M
12	2020	below10	Part	Data Analyst	100000	100000	US	US	M
16	2020	below10	Full	Data Modeler	90700	90700	US	US	M
10	2023	below10	Full	Data SciNewtist	85847	85847	ES	ES	L
0	2023	below10	Part	Data SciNewtist	30000	30000	US	US	S
1	2023	below10	Part	Data SciNewtist	25500	25500	US	US	S
2	2023	below10	Part	Data SciNewtist	25500	25500	US	US	S

High Salary Employees= work\_year experiNewce\_level employment\_type job\_title \

	work_year	experiNewce_level	employment_type	job_title
3	2023	below10	Full	Data SciNewtist
5	2021	below10	Full	Applied SciNewtist
7	2023	below10	Full	Data SciNewtist
13	2020	New	Full	Applied SciNewtist
17	2023	below10	Part	Data SciNewtist

company1 (1).csv

1 to 10 of 24 entries Filter

work_year	experiNewce_level	employment_type	job_title	sa
2023	below10	Full	Principal Data SciNewtist	80
2021	above10	Part	ML Newgineer	30
2023	above10	Part	ML Newgineer	25
2023	below10	Full	Data SciNewtist	17
2023	below10	Full	Data SciNewtist	12
2021	below10	Full	Applied SciNewtist	22
2022	below10	Full	Applied SciNewtist	13
2023	below10	Full	Data SciNewtist	21
2023	below10	Full	Data SciNewtist	14
2023	below10	Part	Data SciNewtist	14

Show 10 per page 1 2 3

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Sorted by Salary (Descending)= work\_year experiNewce\_level employment\_type job\_title \ salary Rs salary\_in\_usd employee\_residNewce company\_location company\_size

	work_year	experiNewce_level	employment_type	job_title	salary Rs	salary_in_usd	employee_residNewce	company_location	company_size
21	2021	below10	Part	Rebelow10arch Newgineer	275000	275000	DE	DE	M
23	2022	below10	Part	Analytics Newgineer	230000	230000	GB	GB	M
5	2021	below10	Full	Data SciNewtist	222200	222200	US	US	L
7	2023	below10	Full	Data Analyst	219000	219000	CA	CA	M
13	2020	New	Full	Applied SciNewtist	213660	213660	US	US	L
3	2023	below10	Full	Data SciNewtist	175000	175000	CA	CA	M
22	2023	below10	Part	Rebelow10arch Newgineer	174000	174000	DE	DE	M
17	2023	below10	Part	Data Analyst	170000	170000	US	US	M
18	2022	below10	Full	Data Analyst	150000	150000	US	US	M
19	2023	above10	Full	Data Modeler	150000	150000	US	US	M
15	2019	below10	Full	Data Modeler	147100	147100	US	US	M
9	2023	below10	Part	Data Analyst	147100	147100	US	US	M
8	2023	below10	Full	Data Modeler	141000	141000	CA	CA	M
6	2022	below10	Full	Data Modeler	136000	136000	US	US	L
14	2023	below10	Part	Data Modeler	130760	130760	US	US	L
11	2020	below10	Full	Data Modeler	130000	130000	US	US	M
4	2020	below10	Full	Data Modeler	120000	120000	CA	CA	M
20	2022	above10	Full	Data Modeler	110000	110000	US	US	M
12	2020	below10	Full	Data Modeler	100000	100000	US	US	M
16	2020	below10	Full	Data Modeler	90700	90700	US	US	M
10	2023	below10	Full	Data Modeler	85847	85847	ES	ES	L
0	2023	below10	Part	Data Modeler	30000	30000	US	US	S
1	2023	below10	Part	Data Modeler	25500	25500	US	US	S
2	2023	below10	Part	Data Modeler	25500	25500	US	US	S

High Salary Employees= work\_year experiNewce\_level employment\_type job\_title \

	work_year	experiNewce_level	employment_type	job_title
3	2023	below10	Full	Data SciNewtist
5	2021	below10	Full	Applied SciNewtist
7	2023	below10	Full	Data SciNewtist
13	2020	New	Full	Applied SciNewtist
17	2023	below10	Part	Data SciNewtist

company1 (1).csv

1 to 10 of 24 entries Filter

work_year	experiNewce_level	employment_type	job_title	sa
2023	below10	Full	Principal Data SciNewtist	80
2021	above10	Part	ML Newgineer	30
2023	above10	Part	ML Newgineer	25
2023	below10	Full	Data SciNewtist	17
2023	below10	Full	Data SciNewtist	12
2021	below10	Full	Applied SciNewtist	22
2022	below10	Full	Applied SciNewtist	13
2023	below10	Full	Data SciNewtist	21
2023	below10	Full	Data SciNewtist	14
2023	below10	Part	Data SciNewtist	14

Show 10 per page 1 2 3

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High Salary Employees=

	work_year	experiNewce_level	employment_type	job_title
3	2023	below10	Full	Data SciNewtist
5	2021	below10	Full	Applied SciNewtist
7	2023	below10	Full	Data SciNewtist
13	2020	New	Full	Applied SciNewtist
17	2023	below10	Part	Data SciNewtist
21	2021	below10	Part	Rebelow10arch Newgineer
22	2023	below10	Part	Rebelow10arch Newgineer
23	2022	below10	Part	Analytics Newgineer

salary Rs salary\_in\_usd employee\_residNewce company\_location company\_size

	salary Rs	salary_in_usd	employee_residNewce	company_location	company_size
3	175000	175000	CA	CA	M
5	222200	222200	US	US	L
7	219000	219000	CA	CA	M
13	213660	213660	US	US	L
17	170000	170000	US	US	M
21	275000	275000	DE	DE	M
22	174000	174000	DE	DE	M
23	230000	230000	GB	GB	M

Unique Employees=

	work_year	experiNewce_level	employment_type	job_title
0	2023	below10	Full	Principal Data SciNewtist
1	2021	above10	Part	ML Newgineer
3	2023	below10	Full	Data SciNewtist
5	2021	below10	Full	Applied SciNewtist
9	2023	below10	Part	Data SciNewtist
11	2022	below10	Part	Data Analyst
15	2019	below10	Full	Data Modeler
21	2021	below10	Part	Rebelow10arch Newgineer
23	2022	below10	Part	Analytics Newgineer

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company1 (1).csv

1 to 10 of 24 entries Filter

work_year	experiNewce_level	employment_type	job_title	sa
2023	below10	Full	Principal Data SciNewtist	80
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2023	above10	Part	ML Newgineer	25
2023	below10	Full	Data SciNewtist	17
2023	below10	Full	Data SciNewtist	12
2021	below10	Full	Applied SciNewtist	22
2022	below10	Full	Applied SciNewtist	13
2023	below10	Full	Data SciNewtist	21
2023	below10	Full	Data SciNewtist	14
2023	below10	Part	Data SciNewtist	14

Show 10 per page 1 2 3

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salary Rs salary\_in\_usd employee\_residNewce company\_location company\_size

	salary Rs	salary_in_usd	employee_residNewce	company_location	company_size
0	80000	85847	ES	ES	L
1	30000	30000	US	US	S
3	175000	175000	CA	CA	M
5	222200	222200	US	US	L
9	147100	147100	US	US	M
11	130000	130000	US	US	M
15	147100	147100	US	US	M
21	275000	275000	DE	DE	M
23	230000	230000	GB	GB	M

Null Values=

work_year	experiNewce_level	employment_type	job_title	salary Rs	salary_in_usd	employee_residNewce	company_location	company_size
0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0

Pivot Table=

employment_type	Full	Part
CA	163750.000000	NaN
DE	NaN	224500.000000
ES	80000.000000	NaN
GB	NaN	230000.000000
US	145595.555556	104765.714286

Job Title Counts=

Data SciNewtist	8
Applied SciNewtist	4

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company1 (1).csv

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2023	below10	Full	Principal Data SciNewtist	80
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2023	above10	Part	ML Newgineer	25
2023	below10	Full	Data SciNewtist	17
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2021	below10	Full	Applied SciNewtist	22
2022	below10	Full	Applied SciNewtist	13
2023	below10	Full	Data SciNewtist	21
2023	below10	Full	Data SciNewtist	14
2023	below10	Part	Data SciNewtist	14

Show 10 per page 1 2 3













