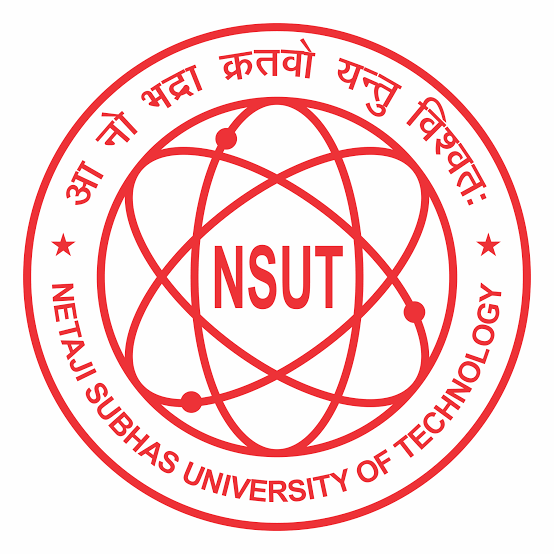
**COMPUTER HARDWARE SOFTWARE WORKSHOP ( COCSC19 )**

**Title: Power BI tool;**

**UNIT -3**



Submitted by :

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**PRACTICAL 03: -**

**1.Explore Power View, Power Query**  
Create a table Employee (empid, gender, department, salary, country, year\_of\_joining)  
connect to Employee data file.  
Remove missing gender and department values.  
Extract year\_of\_joining column and visualize number of employees w.r.t year of experience in the company.  
Perform self-join using Power Query.  
Aggregate salary with gender and Visualize using Pie chart.  
  
**2. Visualize the result of any Machine Learning algorithm on any dataset of your choice in PowerBI.**

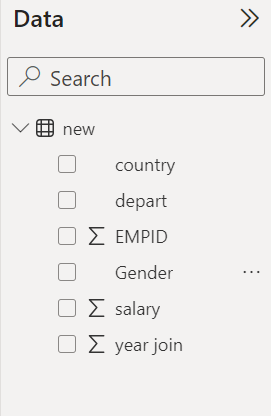
**EMPLOYEE DATA SET:-**

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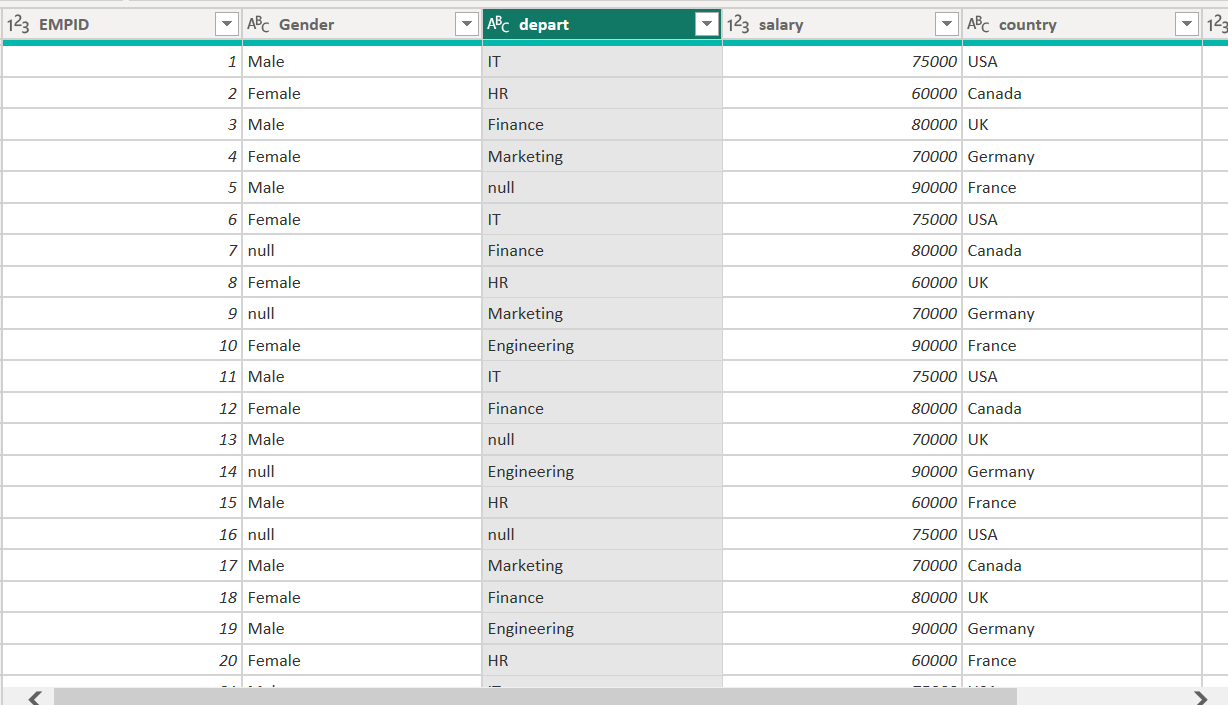
Loading the dataset in powerbi :

1. Click on get data, and make sure file extension is csv(comma separated) and select suitable employee file.

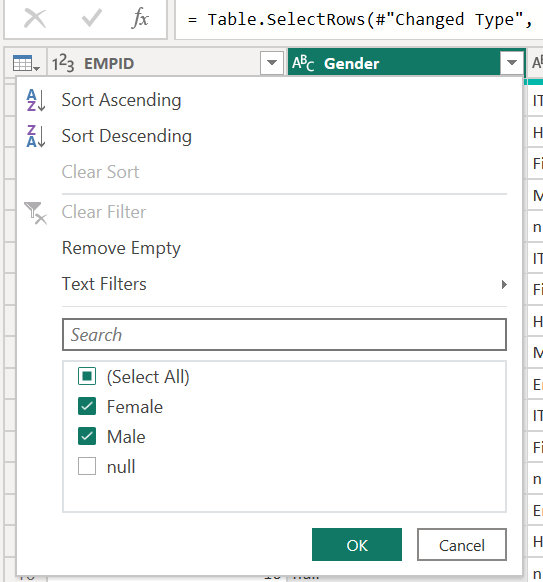
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**Removing missing values on gender and department**

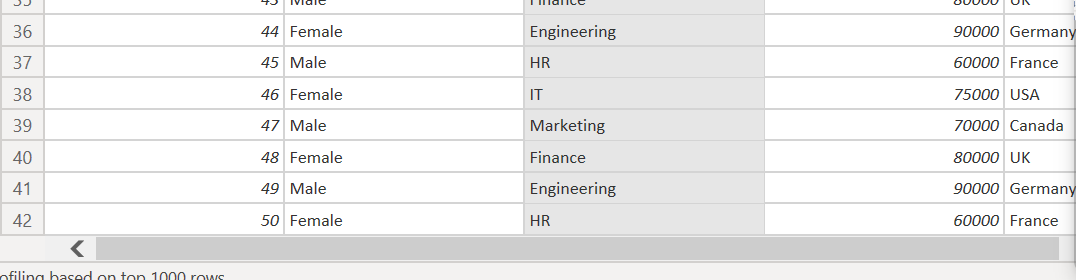
1. Click transform data on navigation, a power query window will pop up with the selected dataset (containing null values).

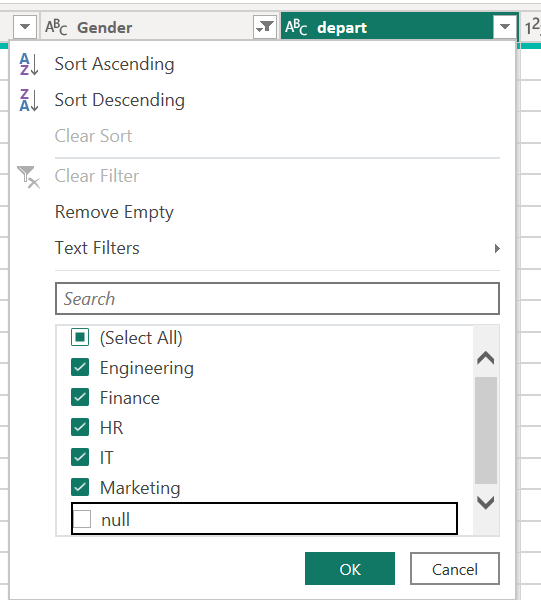
****

1. Click on gender and unselect the null values from checkbox, click ok. Do same for department.

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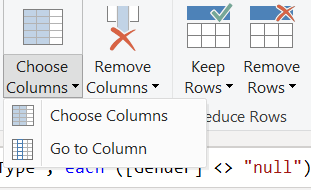
1. Results: size reduces from 50 rows to 42 rows.

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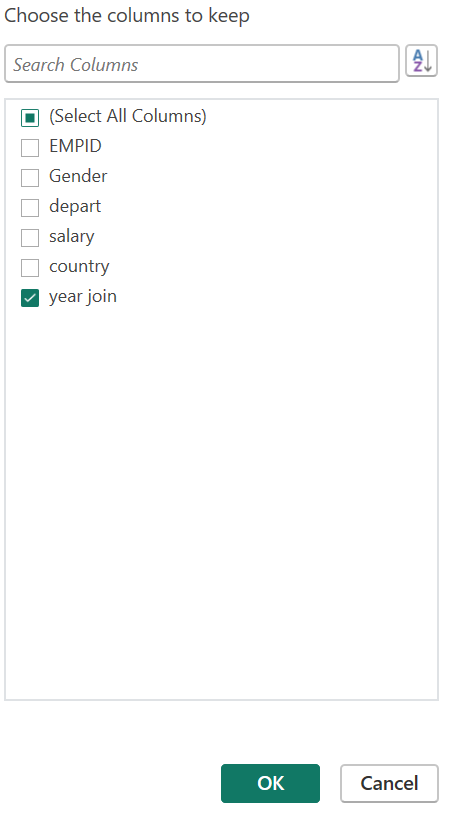
****

**Extract year\_of\_joining column.**

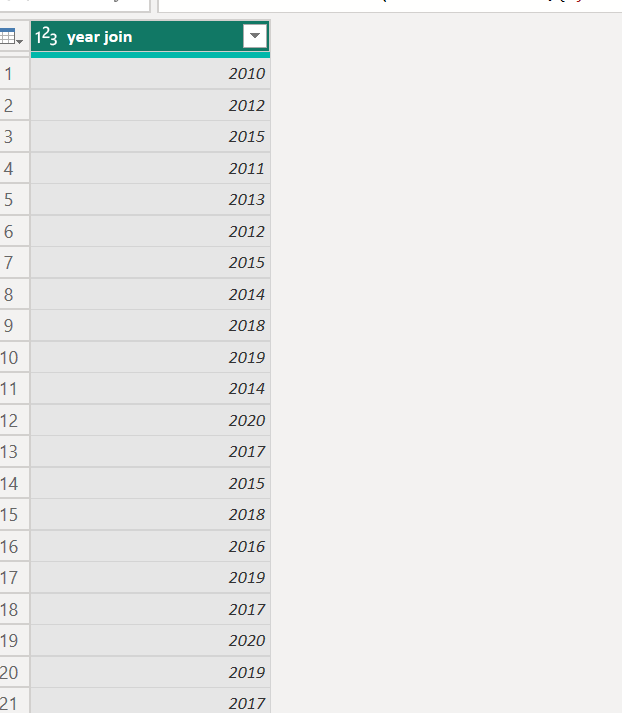
1. Click on choose column from the power query editor window.

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1. Click on year of joining column, click ok.

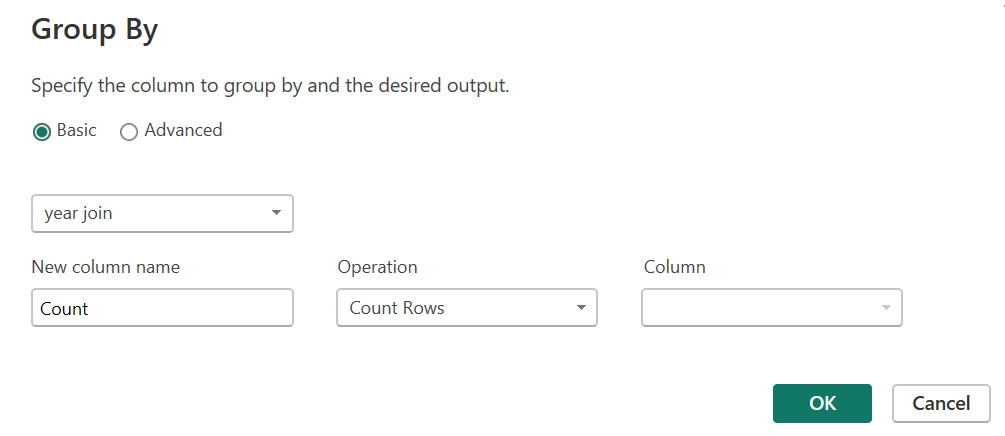
****

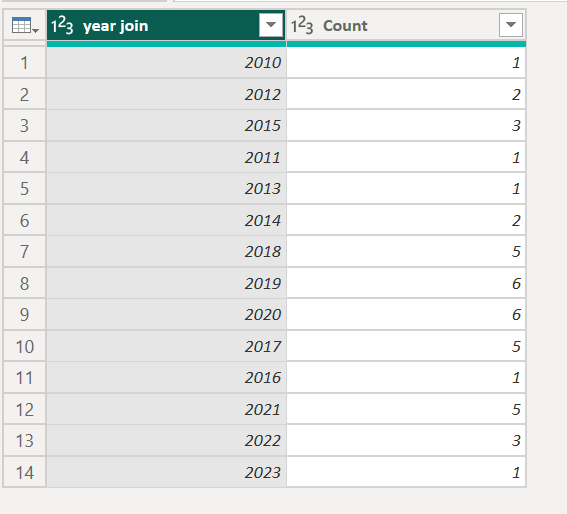
Output : year of joining column is extracted.

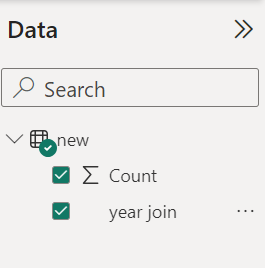
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**Visualize number of employees w.r.t year of experience in the company.**

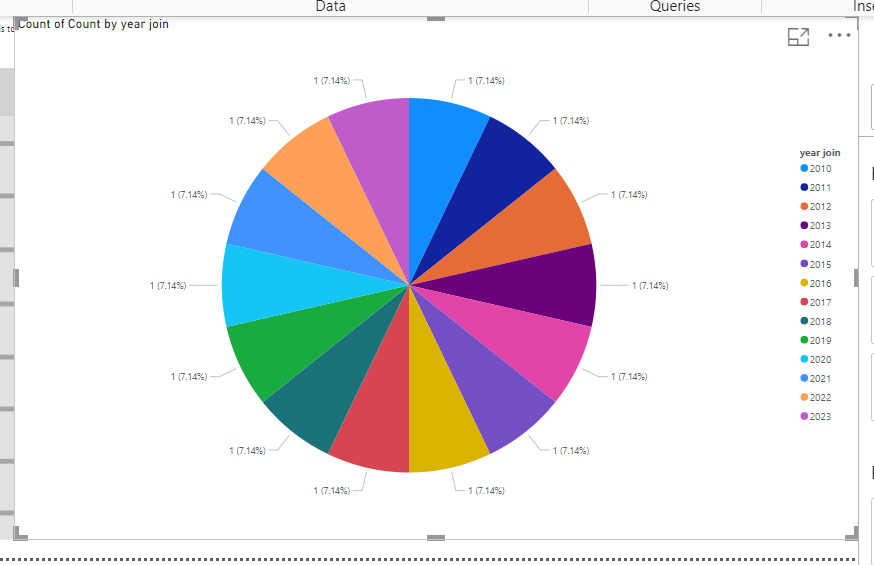
1. **Click on group by, click ok.**

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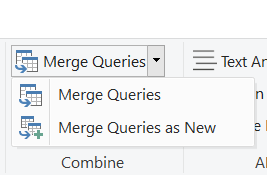


Visualisation

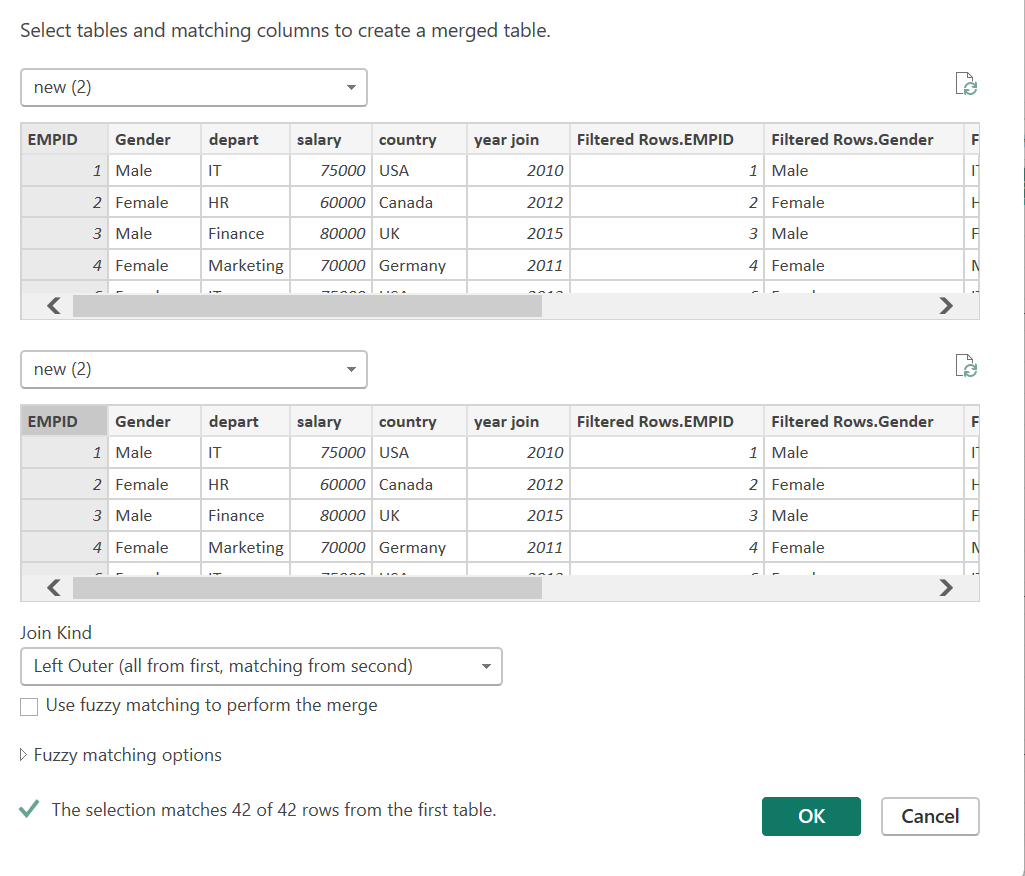
****

**Perform self-join using Power Query.**

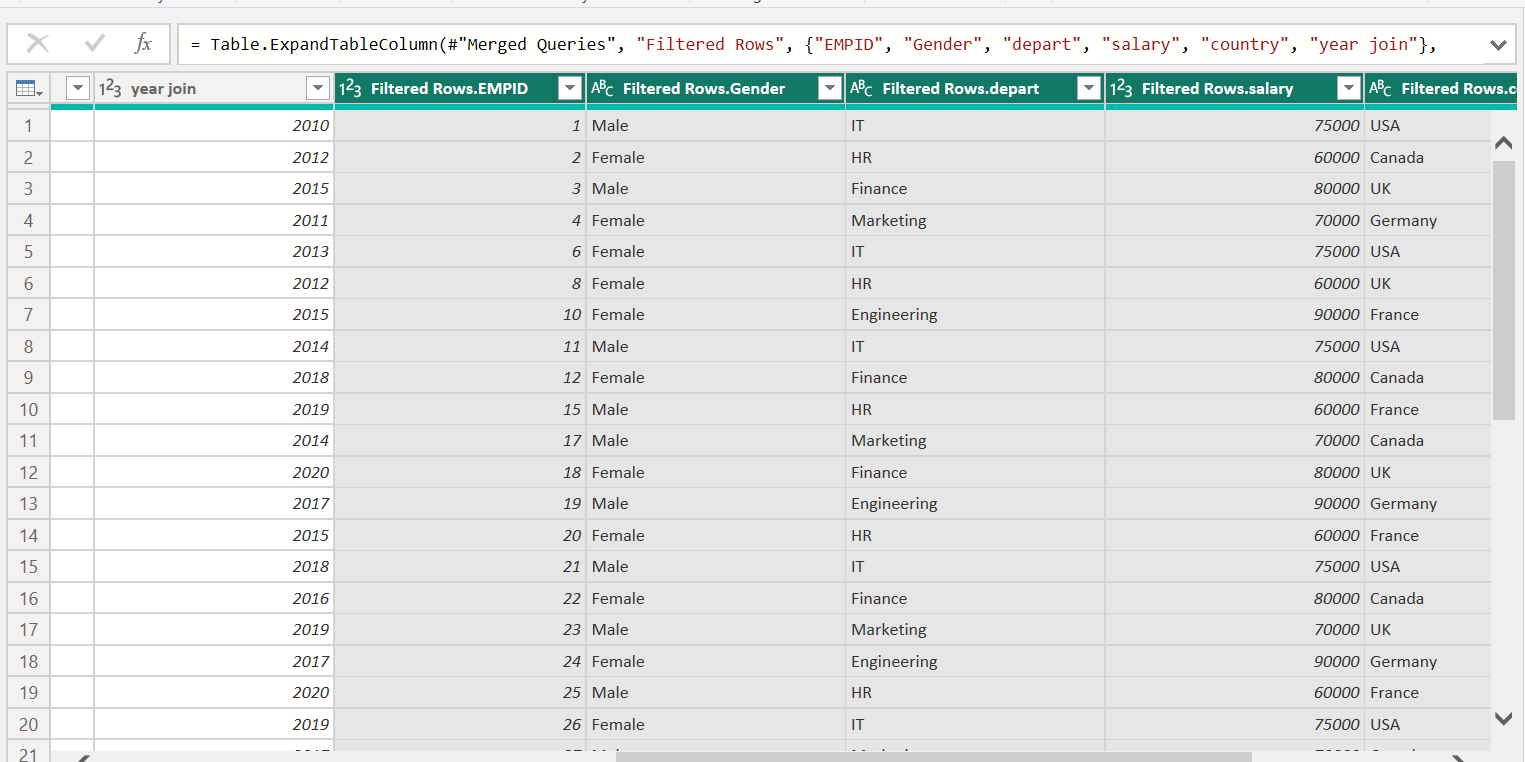
1. Click on merge queries, then merge new queries.



1. Select new table on second choice and select empid on both tables, click ok.

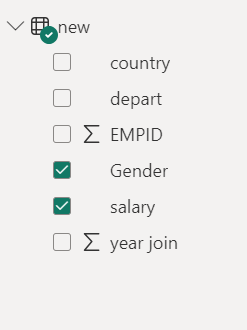


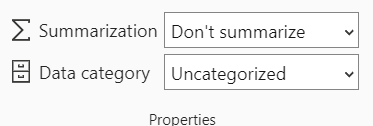
Output : self join table



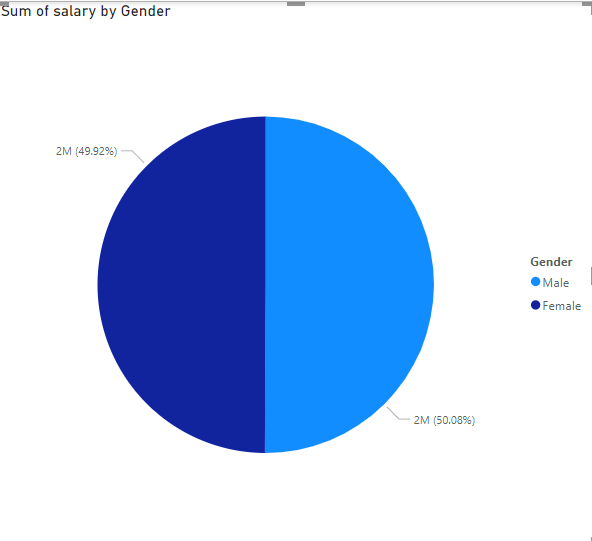
Aggregate salary with gender and Visualize using Pie chart.

1. Select gender and salary and un-summarise the gender category and summate the salary.



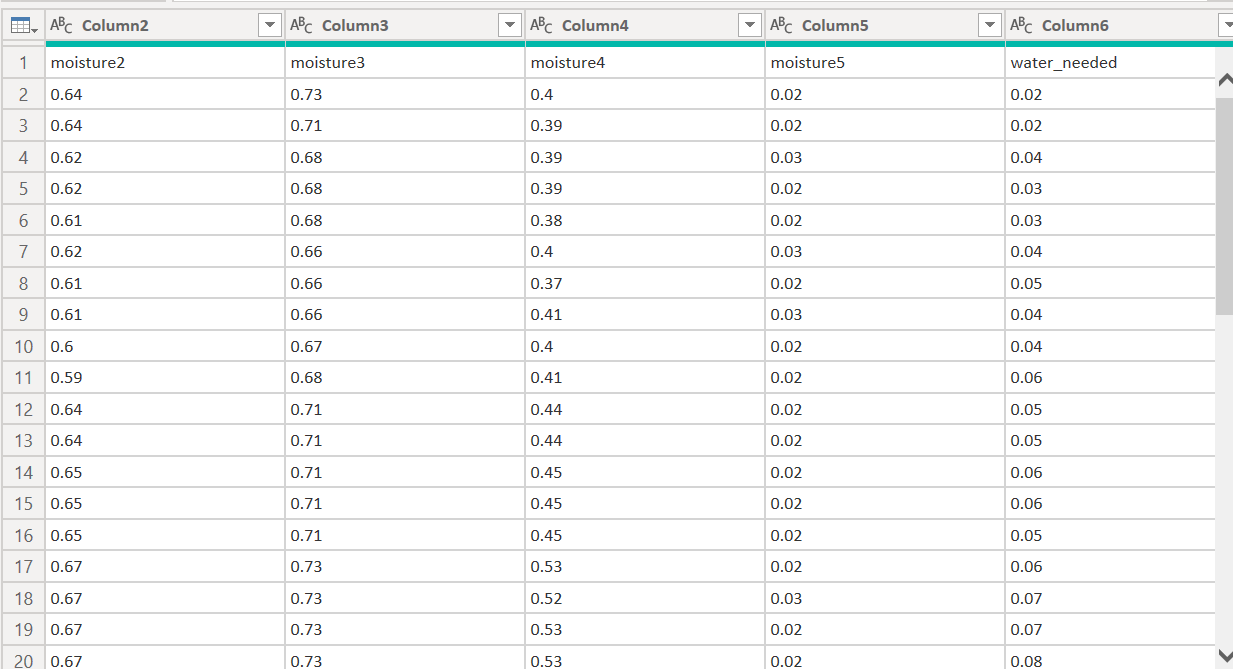


Output:

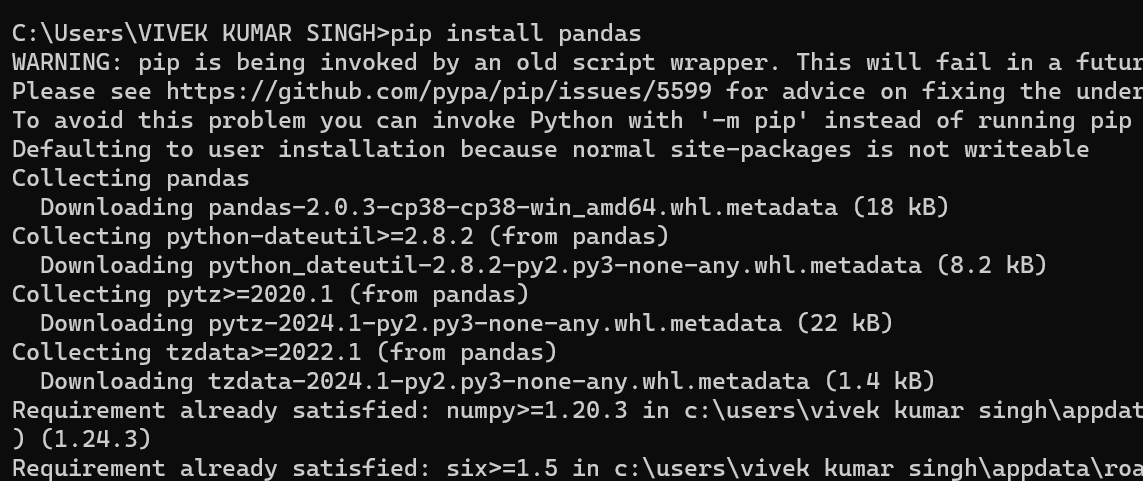


**Visualize the result of any Machine Learning algorithm on any dataset of your choice in PowerBI**

1. Load the dataset.
2. Click on data transform a new powerbi query terminal will pop up and then click pyscript.



1. Install necessary libraries in the terminal, which you have used.



1. Paste the code on pyscript 🡪 click ok.

# 'dataset' holds the input data for this script

import numpy as np

import pandas as pd

dataset = pd.read\_csv(r'C:\Users\VIVEK KUMAR SINGH\Desktop\powerbi\dataset\_soil.csv')

real\_x = dataset.iloc[:,:5].values

real\_y = dataset.iloc[:,5].values

real\_x

from sklearn.model\_selection import train\_test\_split

train\_x, test\_x, train\_y, test\_y = train\_test\_split(real\_x,real\_y,test\_size=0.1, random\_state=99)

from sklearn.linear\_model import LinearRegression

le = LinearRegression()

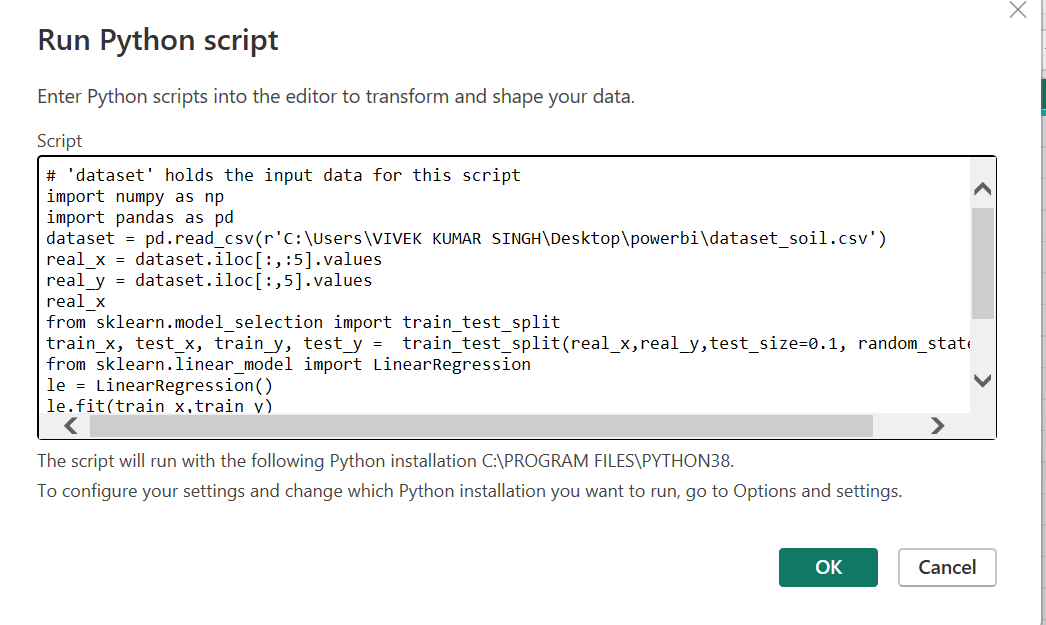
le.fit(train\_x,train\_y)

y\_pred = le.predict(test\_x)

y\_pred

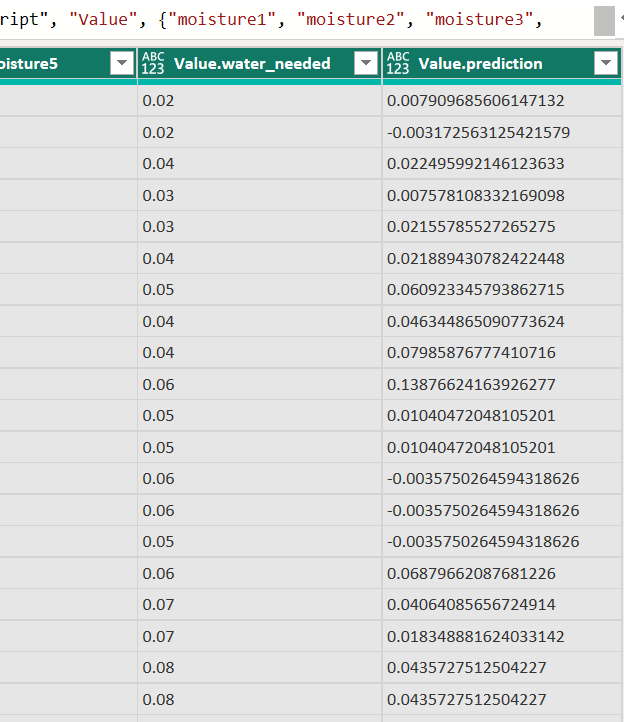
y\_out = le.predict(real\_x)

dataset['prediction']=y\_out



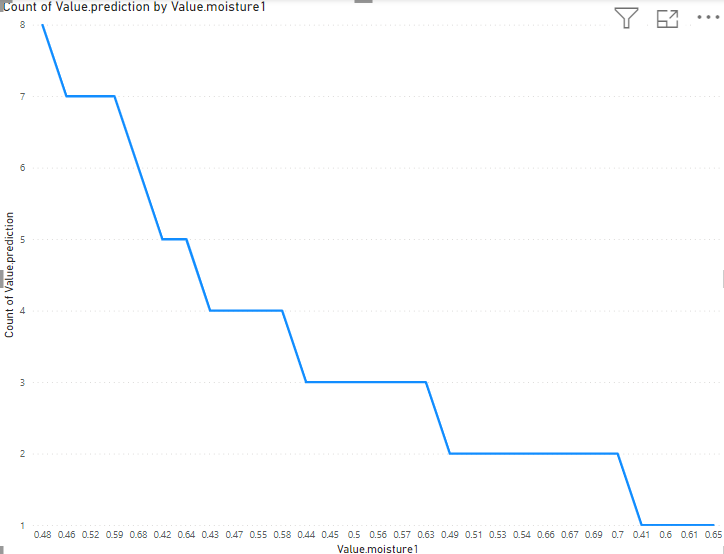
1. Save changes to the file.

Prediction column will be added.

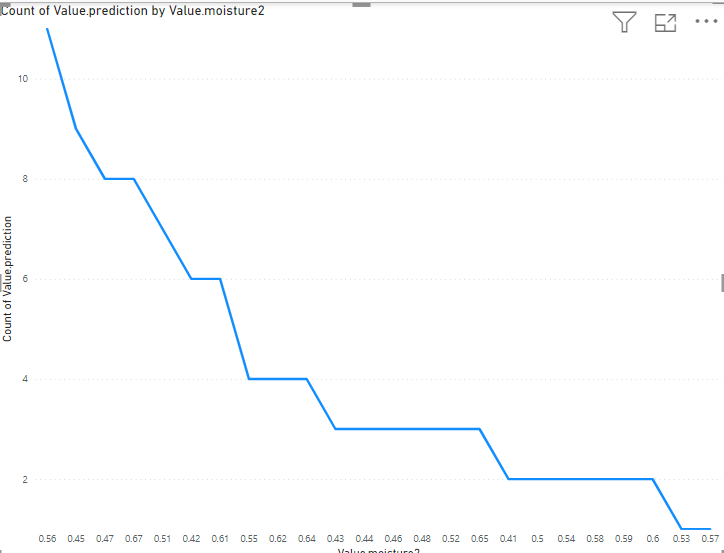


1. Apply various visualisation plot using the predicted value and the input value.

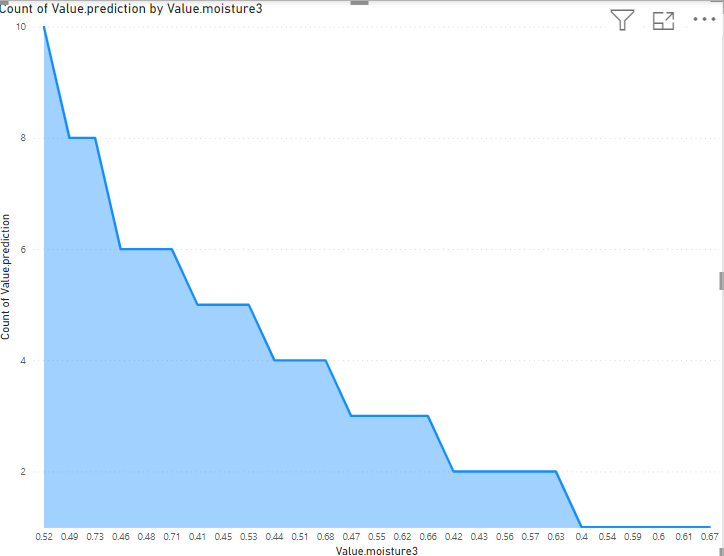
Depth 1 vs predicted value🡪



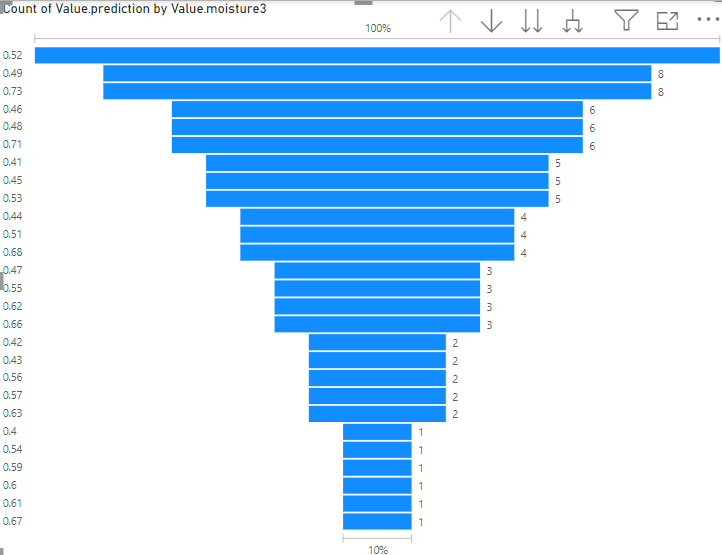
Depth2 vs prediction



Depth3 vs prediction



Funnel view for depth4



Ribbon chart

