**ASSIGNMENT-02**

**DATA VISUALIZATION AND PRE PROCESSING**

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| --- | --- |
| **Assignment Date** | 22 September 2022 |
| **Student Name** | Nivitha S |
| **Student Roll Number** | 113219071027 |
| **Maximum Marks** | 2 Marks |

1. Download the dataset: Dataset downloaded in csv form.
2. Load the dataset.

import pandas as pd

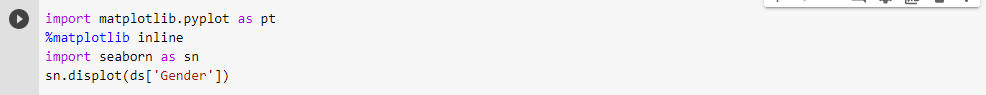
ds = pd.read\_csv("/content/drive/MyDrive/IBM/Churn\_Modellin g.csv")

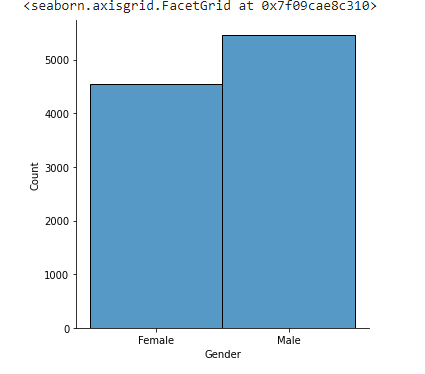


1. Perform Below Visualizations.

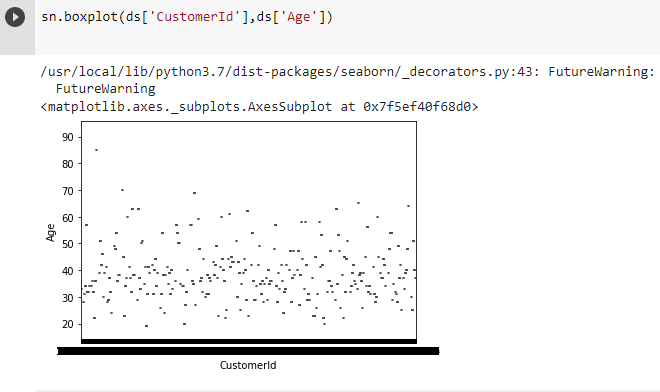
* Univariate Analysis

sn.displot(ds['Gender'])



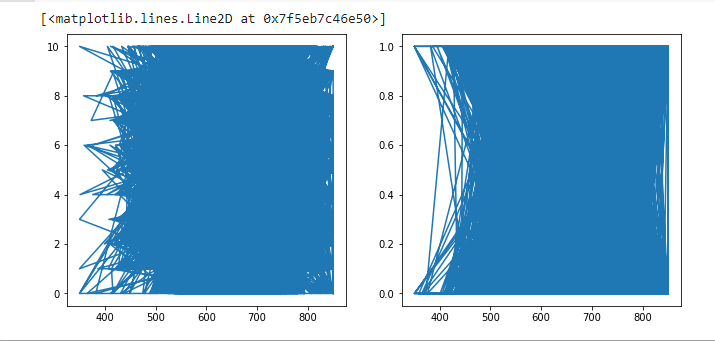


* Bi - Variate Analysis sn.boxplot(ds['CustomerId'],ds['Age'])

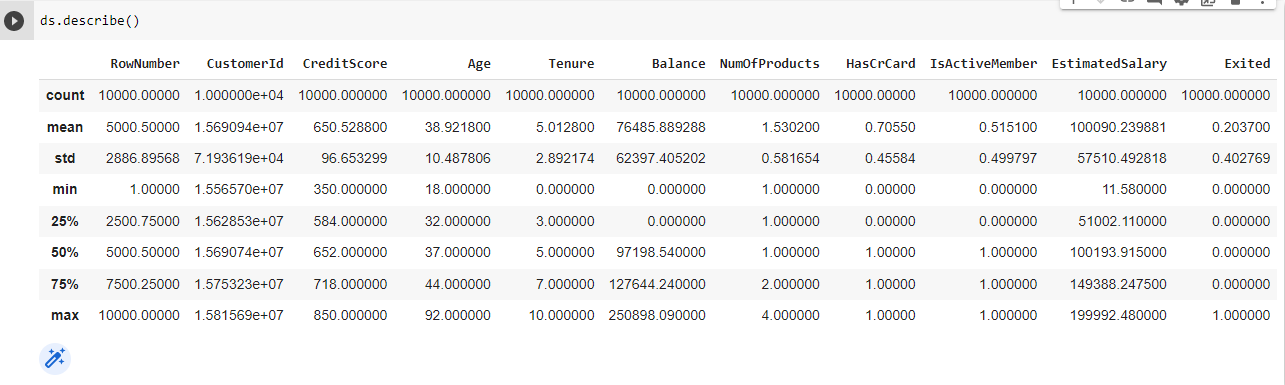


* Multi - Variate Analysis

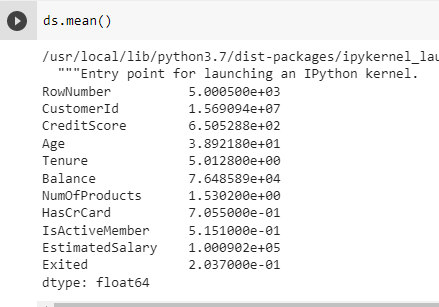




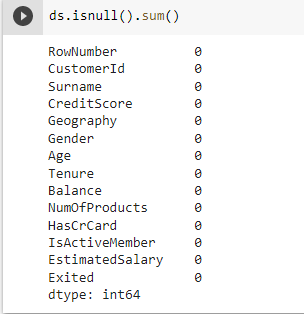
1. Perform descriptive statistics on the dataset.



Mean:



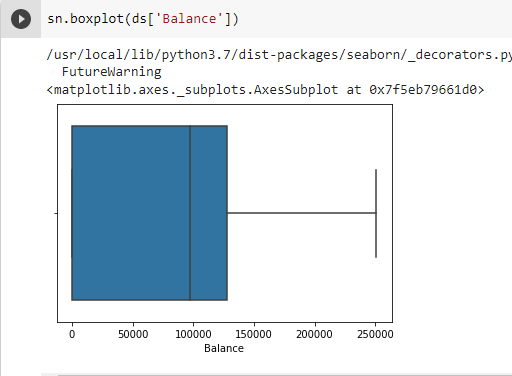
1. Handle the Missing values.



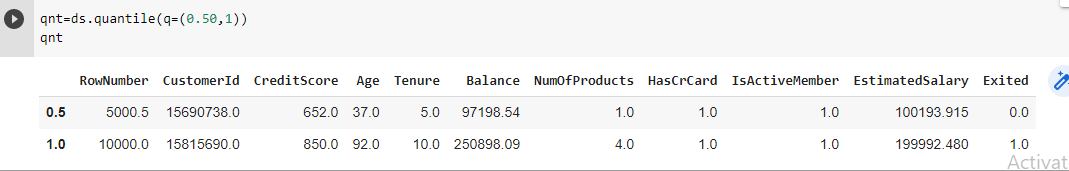
1. Find the outliers and replace the outliers

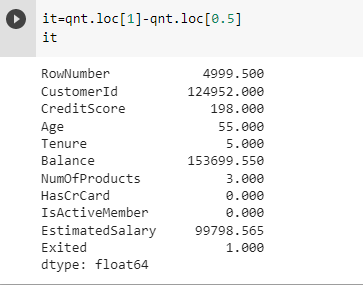
Finding Outliers:

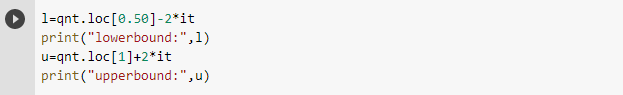
Using Boxplot

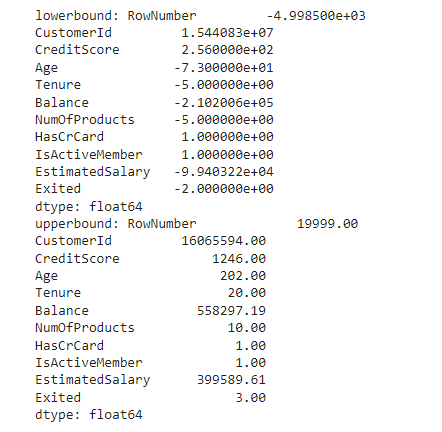


Using method

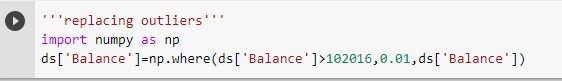






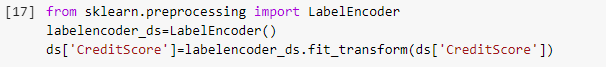


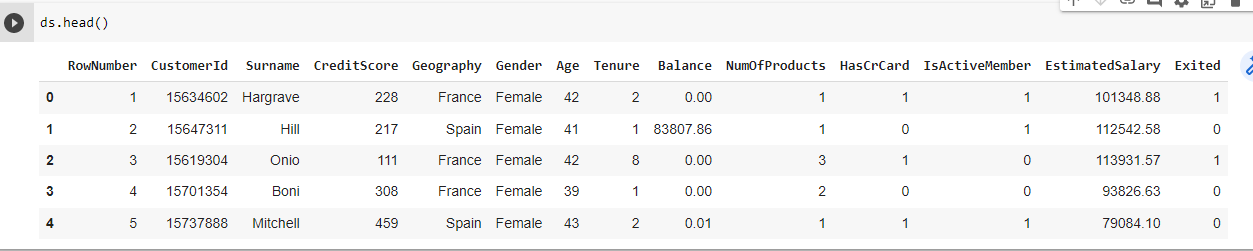
Replacing Outliers:

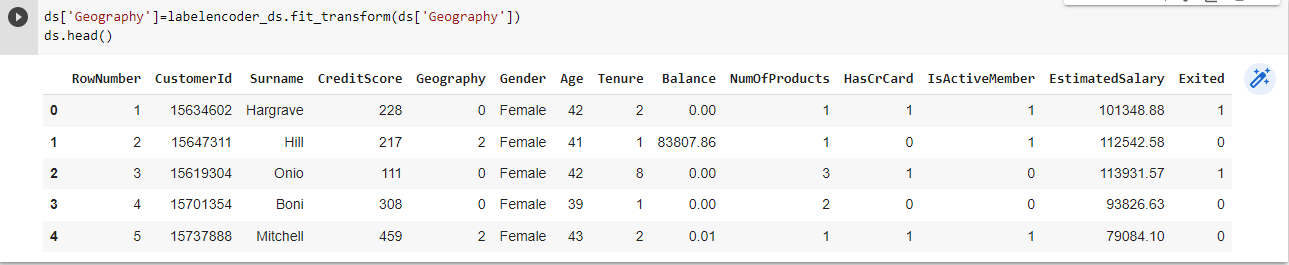


1. Check for Categorical columns and perform encoding.

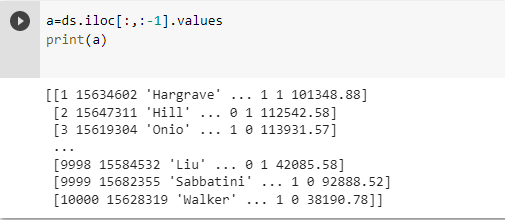
Categorical columns: CreditScore,Geography

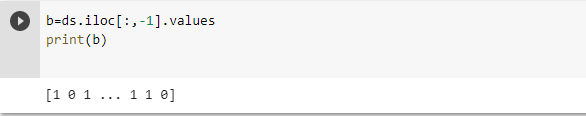




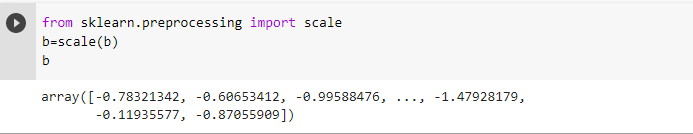


1. Split the data into dependent and independent variables.





1. Scale the independent variables



1. Split the data into training and testing

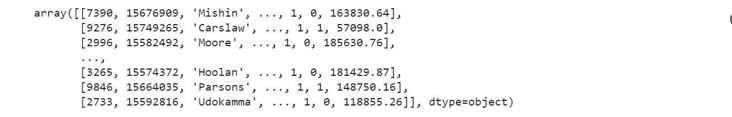
b\_train



b\_test



a\_train



a\_test

