import pandas as pd

import numpy as np

import matplotlib.pyplot as plt

data = pd.read\_csv('/content/drive/MyDrive/DataSet/Mall\_Customers.csv') df = data.copy()

df.head()

**CustomerID Genre Age Annual Income (k$) Spending Score (1-100) 0** 1 Male 19 15 39 **1** 2 Male 21 15 81 **2** 3 Female 20 16 6 **3** 4 Female 23 16 77 **4** 5 Female 31 17 40

df.isnull().sum()

df.describe()

df.info()

<class 'pandas.core.frame.DataFrame'>

RangeIndex: 200 entries, 0 to 199

Data columns (total 5 columns):

# Column Non-Null Count Dtype

--- ------ -------------- -----

0 CustomerID 200 non-null int64

1 Genre 200 non-null object

2 Age 200 non-null int64

3 Annual Income (k$) 200 non-null int64

4 Spending Score (1-100) 200 non-null int64

dtypes: int64(4), object(1)

memory usage: 7.9+ KB

data.dtypes

CustomerID int64

Genre object

Age int64

Annual Income (k$) int64

Spending Score (1-100) int64

dtype: object

data.isnull().sum()

CustomerID 0

Genre 0

Age 0

Annual Income (k$) 0

Spending Score (1-100) 0

dtype: int64

X = df.iloc[:, [3, 4]].values

data.describe()

**CustomerID Age Annual Income (k$) Spending Score (1-100) count** 200.000000 200.000000 200.000000 200.000000 **mean** 100.500000 38.850000 60.560000 50.200000

**std** 57.879185 13.969007 26.264721 25.823522 **min** 1.000000 18.000000 15.000000 1.000000 **25%** 50.750000 28.750000 41.500000 34.750000 **50%** 100.500000 36.000000 61.500000 50.000000 **75%** 150.250000 49.000000 78.000000 73.000000 **max** 200.000000 70.000000 137.000000 99.000000

import matplotlib.pyplot as plt

import seaborn as sns

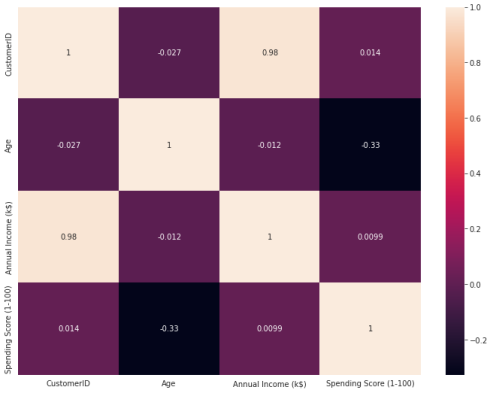
%matplotlib inline

sns.set\_style('whitegrid')

plt.figure(figsize=(12,9))

sns.heatmap(data.corr(), annot=True)

<matplotlib.axes.\_subplots.AxesSubplot at 0x7fdb96fec110>

import pandas as pd 

data = {'Name': ['Jai', 'Princi', 'Gaurav',

'Anuj', 'Ravi', 'Natasha', 'Riya'],

'Age': [17, 17, 18, 17, 18, 17, 17],

'Gender': ['M', 'F', 'M', 'M', 'M', 'F', 'F'],

'Marks': [90, 76, 'NaN', 74, 65, 'NaN', 71]}

df = pd.DataFrame(data)

df

**Name Age Gender Marks**

**0** Jai 17 M 90

**1** Princi 17 F 76

**2** Gaurav 18 M NaN

**3** Anuj 17 M 74

**4** Ravi 18 M 65

**5** Natasha 17 F NaN

**6** Riya 17 F 71

df['Gender'] = df['Gender'].map({'M': 0,

'F': 1, }).astype(float)

df

**Name Age Gender Marks**

**0** Jai 17 0.0 90

**1** Princi 17 1.0 76

**2** Gaurav 18 0.0 NaN

**3** Anuj 17 0.0 74

**4** Ravi 18 0.0 65

**5** Natasha 17 1.0 NaN

**6** Riya 17 1.0 71

import pandas as pd

details = pd.DataFrame({

'ID': [101, 102, 103, 104, 105, 106,

107, 108, 109, 110],

'NAME': ['Jagroop', 'Praveen', 'Harjot',

'Pooja', 'Rahul', 'Nikita',

'Saurabh', 'Ayush', 'Dolly', "Mohit"],

'BRANCH': ['CSE', 'CSE', 'CSE', 'CSE', 'CSE',

'CSE', 'CSE', 'CSE', 'CSE', 'CSE']})

print(details)

ID NAME BRANCH

0 101 Jagroop CSE

1 102 Praveen CSE

2 103 Harjot CSE

3 104 Pooja CSE

4 105 Rahul CSE

5 106 Nikita CSE

6 107 Saurabh CSE

7 108 Ayush CSE

8 109 Dolly CSE

9 110 Mohit CSE

import pandas as pd

fees\_status = pd.DataFrame(

{'ID': [101, 102, 103, 104, 105,

106, 107, 108, 109, 110],

'PENDING': ['5000', '250', 'NIL',

'9000', '15000', 'NIL',

'4500', '1800', '250', 'NIL']})

print(fees\_status)

ID PENDING

0 101 5000

1 102 250

2 103 NIL

3 104 9000

4 105 15000

5 106 NIL

6 107 4500

7 108 1800

8 109 250

9 110 NIL

DETAILS STUDENTS DATA WHO WANT TO PARTICIPATE IN THE EVENT\*

import pandas as pd

student\_data = {'Name': ['Amit', 'Praveen', 'Jagroop',

'Rahul', 'Vishal', 'Suraj',

'Rishab', 'Satyapal', 'Amit',

'Rahul', 'Praveen', 'Amit'],

'Roll\_no': [23, 54, 29, 36, 59, 38,

12, 45, 34, 36, 54, 23],

'Email': ['xxxx@gmail.com', 'xxxxxx@gmail.com',

'xxxxxx@gmail.com', 'xx@gmail.com',

'xxxx@gmail.com', 'xxxxx@gmail.com',

'xxxxx@gmail.com', 'xxxxx@gmail.com',

'xxxxx@gmail.com', 'xxxxxx@gmail.com',

'xxxxxxxxxx@gmail.com', 'xxxxxxxxxx@gmail.com']}

df = pd.DataFrame(student\_data)

print(df)

Name Roll\_no Email

0 Amit 23 xxxx@gmail.com

1 Praveen 54 xxxxxx@gmail.com

2 Jagroop 29 xxxxxx@gmail.com

3 Rahul 36 xx@gmail.com

4 Vishal 59 xxxx@gmail.com

5 Suraj 38 xxxxx@gmail.com

6 Rishab 12 xxxxx@gmail.com

7 Satyapal 45 xxxxx@gmail.com

8 Amit 34 xxxxx@gmail.com

9 Rahul 36 xxxxxx@gmail.com

10 Praveen 54 xxxxxxxxxx@gmail.com

11 Amit 23 xxxxxxxxxx@gmail.com

import pandas as pd

student\_data = {'Name': ['Amit', 'Praveen', 'Jagroop',

'Rahul', 'Vishal', 'Suraj',

'Rishab', 'Satyapal', 'Amit',

'Rahul', 'Praveen', 'Amit'],

'Roll\_no': [23, 54, 29, 36, 59, 38,

12, 45, 34, 36, 54, 23],

'Email': ['xxxx@gmail.com', 'xxxxxx@gmail.com',

'xxxxxx@gmail.com', 'xx@gmail.com',

'xxxx@gmail.com', 'xxxxx@gmail.com',

'xxxxx@gmail.com', 'xxxxx@gmail.com',

'xxxxx@gmail.com', 'xxxxxx@gmail.com',

'xxxxxxxxxx@gmail.com', 'xxxxxxxxxx@gmail.com']}

df = pd.DataFrame(student\_data)

non\_duplicate = df[~df.duplicated('Roll\_no')]

print(non\_duplicate)

Name Roll\_no Email

0 Amit 23 xxxx@gmail.com

1 Praveen 54 xxxxxx@gmail.com

2 Jagroop 29 xxxxxx@gmail.com

3 Rahul 36 xx@gmail.com

4 Vishal 59 xxxx@gmail.com

5 Suraj 38 xxxxx@gmail.com

6 Rishab 12 xxxxx@gmail.com

7 Satyapal 45 xxxxx@gmail.com

8 Amit 34 xxxxx@gmail.com

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