Assignment 2 Documentation

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1.1, 1.2

Create a numpy array with 15 random integers between 1-20 using numpy.random.randint()

Reshape it to (3,5) array using numpy.reshape()

1.3

Find max values in each row using numpy.max() with axis=1

Check where these values are in array using numpy.isin()

Then equate those places to 0.

2.1

Read data.csv using pandas.read\_csv() and this will generate a dataframe

2.2

Check data statistics with dataframe.describe()

2.3

Check if there are any null values in dataframe using dataframe.isnull().any()

Then fill dataframe where there are null values with column means using dataframe.fillna()

Check for null values again this time it should all be false

2.4

To aggregate columns in dataframe use

dataframe.aggregate({“<col-name>”:[“condition1”,”condition2”]})

2.5, 2.6

Filter dataframe with dataframe.loc[(condition1) & (condition2)]

2.7

Create a new dataframe with selected columns like dataframe[[“col1”,”col3”]]

2.8

Delete column in old dataframe by using dataframe.drop(colname,inplace=True)

2.9

Check data type of columns in dataframe with dataframe.dtypes

Change it with dataframe[“colname”].astype(<newtype>)

2.10

For scatter plot use dataframe.plot.scatter(x=<col1>,y=<col2>,other conditions of plot)

3

Use matplotlib to plot pie chart . Have two list with labels and values.

Have another list with explode option to highlight any piece of pie chart.

fig1, ax1 = plt.subplots()

ax1.pie(values, explode=explode, labels=labels, other customizations of pie)

ax1.axis('equal') # Equal aspect ratio ensures that pie is drawn as a circle.

plt.show()