

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()
```