# MACHINE LEARNING ASSIGNMENT3

GitHub Link : https://github.com/Divakar24/Divakar\_Assignment3

Question 1**. Numpy:**

a. Using NumPy create random vector of size 15 having only Integers in the range 1-20.

1. Reshape the array to 3 by 5

2. Print array shape.

3. Replace the max in each row by 0

Graphical user interface, text, application, email

Description automatically generated

Create a 2-dimensional array of size 4 x 3 (composed of 4-byte integer elements), also print the shape, type and data type of the array.

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b. Write a program to compute the eigenvalues and right eigenvectors of a given square array given below: [[ 3 -2] [ 1 0]]

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c. Compute the sum of the diagonal element of a given array. [[0 1 2] [3 4 5]]

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d. Write a NumPy program to create a new shape to an array without changing its data.

Reshape 3x2:

[[1 2]

[3 4]

[5 6]]

Reshape 2x3:

[[1 2 3]

[4 5 6]]

Graphical user interface, text, application, email

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**2. Matplotlib**

1. Write a Python programming to create a below chart of the popularity of programming Languages.

2. Sample data: Programming languages: Java, Python, PHP, JavaScript, C#, C++ Popularity: 22.2, 17.6, 8.8, 8, 7.7, 6.7

Graphical user interface, chart, application, pie chart

Description automatically generated