

– Intro to Machine Learning

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

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.

b. Write a program to compute the eigenvalues and right eigenvectors of a given square array given below:

```
[[ 3 -2]
```

```
[ 1  0]]
```

c. Compute the sum of the diagonal element of a given array.

```
[[0 1 2]
```

```
[3 4 5]]
```

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]]
```