

Day 1 : 12-02-2024

## **IDE - Integrated Development Environment**

## **Google colab**

**Numpy** :- Python library for Numerical computing it supports Arrays,Matrices,Scientific computing,Data Analysis,Machine learning

**Major Applications of Numpy:**

1) Data Analysis

2) Scientific computing

**Basic operations on Arrays:**

1) Zeros

2) Ones

3) arange

**Array Manipulation using Numpy:**

1) Reshape

2) Slicing

3) Stack

4) Vstack

5) split

**Mathematical Operations on arrays:**

1) Addition of arrays

2) Subtraction of arrays

3) Multiplication of arrays

4) Division of arrays

**Element wise operations on array:**

1) Broadcasting array

2) Transpose of array

**Linear Algebra with Numpy:**

1) Dot product of matrices

2) Eigen values and Eigen vectors

3) Dot sum

**Statistical operations:**

1) Mean

2) Median

3) Variance

4) Standard deviation

**Creating a txt file:**

1) Creating text file

2) Loading data

3) Saving data

**Matplotlib** :- Python library that enables to create a wide variety of plots, charts, and visualizations.

**Major Applications of Matplotlib:**

1) Data Analysis

2) Scientific computing

3) Machine learning