**Objective:** Basics of numpy, plotting graphs, linear regression

1. Introduction to numpy:
   1. [Arrays](https://www.w3schools.com/python/numpy/default.asp)

*Note - You would be required to get familiar with creating arrays, view and resize the shapes. Cover upto the topic “Numpy Array Reshape”*

* 1. [Dot Product](https://numpy.org/doc/stable/reference/generated/numpy.dot.html) using numpy arrays.
  2. [Matrix Multiplication](https://numpy.org/doc/stable/reference/generated/numpy.multiply.html)

1. Plotting plots and graphs:

Matplotlib is data visualisation library in python which we will use to plot graphs for probability distribution functions.

* 1. [Basic Plot](https://matplotlib.org/stable/plot_types/basic/plot.html#sphx-glr-plot-types-basic-plot-py)
  2. [Scatter Plot](https://matplotlib.org/stable/plot_types/basic/scatter_plot.html#sphx-glr-plot-types-basic-scatter-plot-py)

1. Linear Regression:
   1. [Basic introduction](https://towardsdatascience.com/laymans-introduction-to-linear-regression-8b334a3dab09)
   2. [Line of best fit](https://www.khanacademy.org/math/statistics-probability/describing-relationships-quantitative-data/introduction-to-trend-lines/v/fitting-a-line-to-data)
   3. [Method of least square](https://brilliant.org/wiki/linear-regression/)

**Additional material:**

We will be using google colab for submissions to the assignment which will be released shortly after. Google colab is just a web-based coding environment. This link will help you get through working-

<https://mcgrawect.princeton.edu/guides/Google-Colab-Introduction.pdf>