**Data visualization in python**

Data visualization is actually a process by which large number of datasets and metrics are transformed into visual representations like graphs, charts and maps. The whole point of this process is to easily understand the trend, patterns and outliers in data.

This will help organizations to easily understand their performance metrics and allows them to make proper managerial decisions.

Python has a great array of graphing libraries which is really useful when you’re trying to create interactive, live data representation. The main libraries we use are matplotlib and seaborn.

Let’s take a look into matplotlib and seaborn

**Matplotlib**

it is a plotting library for python where the its numerical mathematic extension is in NumPy. A large part of the matplotlib lies under the pyplot submodule. Matplotlib handles 2d data visualization for the large part and is excellent at it. It has an object-oriented API for embedding plots into applications using GUI toolkits.

**Seaborn**

Seaborn is another data visualization library based on matplotlib. Unlike matplotlib, which uses a low-level interface and provide lot pf freedom, Seaborn provides a high-level interface for drawing attractive and informative statistical graphics. The main aim of seaborn is to make data visualization the central part of understanding and reading data. The fact that it provides dataset-oriented APIs helps us to switch between different visual representations for same variables for better understanding.

**Why data visualization is important?**

We as human beings are comfortable in acknowledging graphical representations rather than reading data. We are culturally visual. As we’ve been consuming visual content for a very long time, it’s easier for us to quickly understand the patterns and trends when we see a chart, a graph etc. By the introduction of big data, it is practically impossible for us to take decisions without proper visualization solely because the quantity of data we’ve to understand is too huge.

**Who all should use data visualization?**

If you think the advantages of data visualization is limited to a specific industry, you’re wrong! Every STEM field benefits from the visualization and understanding of data. The more innovative you are at handing the data, the more useful the representation is for the organization. The diversity in use-cases of all things that revolve around data makes it a very integral part in the progress of any career.

**What will you be learning from this course?**

In this data visualization course, you’ll be learning about the techniques required to make great visual representation of large amount of data and how to use matplotlib and seaborn to your aid.