

Spectrum Club,  
College of Engineering and Technology  
Bhubaneswar  
[www.spectrumcet.com](http://www.spectrumcet.com)

**Dear Intern,**

Welcome to **Data Science and Machine Learning Task 0**. Before you start, remember, Data Science is just the act of telling story, the skill to **take an idea, gather the data**, and build a story with a **happy predictable ending**.

### **Technology Stack to be used:**

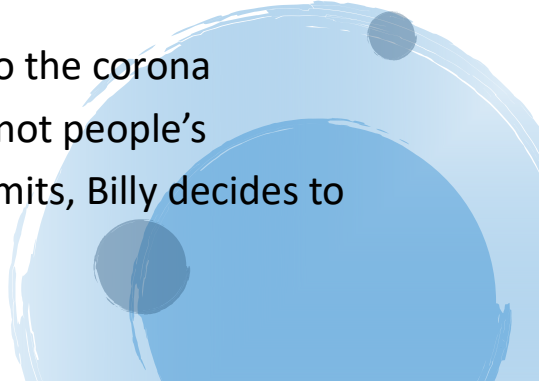
We will be mainly be working on simple python-ic concepts of arrays and dictionaries, and learning how to visualize them. The libraries we will be using for this task include:-

- Numpy
- Matplotlib

### **Stage 0:**

### **Tasks:**

Every person across the globe is in their home due to the corona pandemic. The lockdowns are getting extended but not people's patience. Finally reaching the peak of his patience limits, Billy decides to





do something interesting. He had been playing a game which has quite engrossed him, and now he wanted to actually see how he has been fairing in this game. So he decided to take the help of his friend Pyth, who with his Data Science skills, decided to help him. Billy gave Pyth a dictionary where he as stored his scores of the last 30 days. Help Pyth in processing the data and plotting a graph to show Billy's progress graph in the last 30 days.

1. First create an array **Scores[]** by extracting the scores from the dictionary Billy provided.
2. With the help of numpy functions, create another array **Days[]** consisting of numbers 1 to 30.
3. Plot the **Score vs. Days** graph, with X axis named as "**Score**", and Y axis named as "**Days**".
4. Find the **Mean, Median, Min and Max** of Billy's Scores with the help of **Numpy Functions** and display it to him so he can improve his game-play.



## RESOURCES: -

The resources provided here include both documentation and Youtube tutorials for the above tasks. In any case of any confusion, do Google once and search around or ask in the forum, but do understand the concepts behind the functions properly. Remember, Stackoverflow is your best friend for programming.

### ➤ **Numpy –**

**(Documentation)**

<https://numpy.org/doc/1.18/genindex.html>

**(Video Tutorial)**

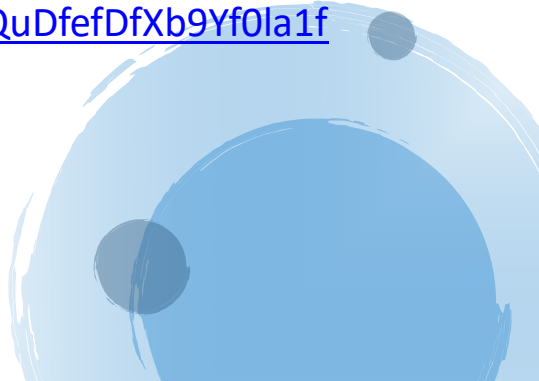
<https://www.youtube.com/playlist?list=PLZ7s-Z1aAtmIRpnGQGMTvV3AGdDK37d2b> (video 2-14)

### ➤ **Matplotlib – (Documentation)**

[https://matplotlib.org/api/pyplot\\_api.html](https://matplotlib.org/api/pyplot_api.html)

**(Video Tutorial)**

<https://www.youtube.com/playlist?list=PLQVvva0QuDfefDfXb9Yf0la1fPDKluPF> (till video 10 will give you the basic idea)





That's it for now, hope you weave a really good story at the end of this internship.  
Good luck!

**LAST DATE OF SUBMISSION:**

**WARM REGARDS,  
SPECTRUM, CET-B**

