**Assessment Week Tasks:**

YouTube as a platform has a lot of factors in which a viewer decides which or what kind of content they consume which might be very personal for them, but it’s our concern to use the type of data we have to recommend more and more similar types of content to them.

The title and thumbnail of a video can be said to be the first impression of a viewer which can also represent as the quality of the video and so does the comments under the video which can represent what a viewer felt about that video which can later be quantified for use, so are the tags which represent the type of video and can also leads us to find similarity between multiple videos and now values which are already quantified can represent a video that will be likes and dislikes, comments, parts in a playlist etc.

For gathering data we have decided to use Google YouTube API v3 which can be used to gather/ fetch data, based on different factors.

<https://developers.google.com/youtube/v3/docs>

Now, you have to read up the documentation and

1.      Understand the working of the API

2.      How and What kind of data can be gathered

3.      Make use of your domain knowledge as a consumer to understand what can you make of the data you gathered

4.      Formalize a plan to implement recommendation system with that data

 We have to understand the factors we can gather through the YouTube API v3. It is built with multiple data factors which you can find the details through these links.

<https://www.presentslide.in/2019/09/extracting-youtube-data-api-python.html?utm_campaign=News&utm_medium=Community&utm_source=DataCamp.com>

<https://www.analyticssteps.com/blogs/how-extract-analyze-youtube-data-using-youtube-api>

<https://www.analyticsvidhya.com/blog/2021/06/build-book-recommendation-system-unsupervised-learning-project/>

Now, as you have to create a product based completely India specific.

Now, as you must have formalized how things work, you should study what are the methods and techniques to create a recommendation system, using these factors.

It's your responsibility to understand the data you can gather through and identify and understand that factors and formalize how to implement those factors.

We are working in a team of five which consists of Tanya, Ramya, Vivek, Pradheep and Saurabh.

With this project being consisted of different working we need to have a set of tasks for each of the team members, only way to do those tasks is to be to break down the problem into 5 parts.

The 5 tasks breakdown, should look something like this.

1. What are Recommendation Systems? What kind of learning we use to create Recommendation System? Type of Data we need? And Pre-Processing Techniques?
2. How YouTube works? What kind of Recommendation System does it apply? How Notification System works? And, how can we apple that for ourselves?
3. To gather YouTube data we can use Google API based of our geolocation (which in our case will be India), now what kind of data we can access through the API an how we can use it.
4. What kind of Recommendation Systems do we have? Filtering and Clustering techniques? Which should do we choose?
5. How do we deploy a Recommendation Engine? What is an API? How should notifications work?

Now as we have broken down are problem and we have created a list of references you might need to go through these specific tasks, we should assign each task to the five of you to complete in a span of two days.

After, you have completed the task we will have a group discussion where we will discuss the insights you have gathered in the span of 2 days. That insight is basically your specific task of the project like the nodes of a neural network with the help of a group discussion you can solve the problem of creating an architecture/blueprint for your project and now you have an architecture you can move on to building the project based of that blueprint which you have to showcase the next day of the group discussion.

**The task breakdown as suggested-**

Saurabh, will be taking care of the 1. Task.

Tanya, will taking care of the 2. Task.

Pradheep, will be taking care of the 3. Task.

Vivek, will be taking care of the 4. Task.

Ramya, will be taking care of the 5. Task.