Project Proposal - VidStatWizard
Team 102 Oracles

1. Describe what data is stored in the database. (Where is the data from, and what attributes and information would be stored?)

We are using the “Youtube trending videos dataset”, which is one of the TA-proposed datasets. The data comes from Kaggle and it includes an updated list of trending videos with their respective trending dates. We are using the trending videos in the US region for now as the Minimum Viable Product. We will be using 14 features from the data per column, excluding “comments_disabled” and “ratings_disabled.” These chosen features will all be used for our app to function optimally.

2. What are the basic functions of your web application? (What can users of this website do? Which simple and complex features are there?)

Basic functions:

- Users can look up the top 8 most recent trending videos based on all the different genres, when the app is open for the first time or when it refreshes.
- Users can sort the trending videos based on number of likes, views, trending date, or published date.
- Users can filter videos based on a range of features (trending date, published date, likes, categories, and view count).
- Users can also filter videos based on the top # of trending videos (# any number).
- Users can filter videos by the Youtubers name or channel as substrings.
- Direct Youtube links within thumbnails will be available so that users can open the video automatically on a new tab.

Creative Feature:

- To watch list: users can add videos to a list of videos to watch / study to keep track of videos they want to watch.

Complex / reach feature:

- Users can login to Youtube to make a playlist in their account with said videos or to add videos to Watch Later inside Youtube
- Users can get Youtube video ideas through a text-input prompt.

3. What would be a good creative component (function) that can improve the functionality of your application? (What is something cool that you want to include? How are you planning to achieve it?)

    - A creative component to our application will be an interactive feature where users can add videos to a Watch Later list. This will be implemented inside the website. If we have time, we hope to implement this feature with Oauth capabilities, so users can login to their Youtube accounts so the videos are added to Youtube's Watch Later functionality, or so they can save the videos in a separate playlist.
    - A potential secondary creative component to our application (if we have enough time / technical ability) will be an interactive feature where users can get back information on potential video ideas based on user input, so for example, if a user wants to become a successful cooking Youtuber, they could input something like "niche cooking college student youtuber," and receive back video ideas and information based on their query and the data on what's trending.

4. Project Title: VidStatWizard

5. Project Summary: It should be a 1-2 paragraph description of what your project is.

VidStatWizard is a web application that allows users to navigate through the dataset to view what types of videos are trending on Youtube through various timeframes, such as for the past week, the past month, the past year, etc. In addition, users can view trending genres and tags for videos, such as music videos, sports videos, etc. Users can also add videos to a Watch Later list so they can keep exploring the tool and saving videos as needed.

6. **Description** of an application of your choice. State as clearly as possible what you want to do. What problem do you want to solve, etc.?

    We decided to make this application to allow Youtube users to easily search up all types of trending videos that they want to see. Various new users are confused on what content they should make. With the product we wish to develop, we hope to help them narrow down their ideas into finding what the whole Youtube population are genuinely interested in (trends). Contrarily, different users with different interests

will be taken into account and therefore the set of data of trending videos and searches will be filtered efficiently to give adequate suggestions to both producers and consumers.

7. **Usefulness**. Explain as clearly as possible why your chosen application is useful. Make sure to answer the following questions: Are there any similar websites/applications out there? If so, what are they, and how is yours different?

    - This application is useful because many companies, teams, and individuals are aiming to maximize the reach and virality of their video - getting a good gauge on what people are currently interested in is useful in ensuring their work is viewed and appreciated. There are some similar websites and features that exist
    - For example, the Youtube Trending feed allows users to visually scroll through and explore trending videos in general, as well as in different categories such as music, gaming, and movies. Additionally, Google Trends (https://trends.google.com/trends/explore?gprop=youtube&q=cooking) allows one to search terms and view interest over time on Youtube, as well as specific video searches that people are interested in. This feature also allows users to filter by time frame (past week, past year, etc.) and region. Finally, this feature shows trending related topics and queries and where the term may be trending in the United States. Thus, some Youtube analytics websites do exist. However, while they are useful for giving a general overview of what's trending, they are limited in specifics. Our website will allow users to quickly view historical data on Youtube video titles, content, and categories that are trending, as well as receive customized feedback based on that data.

8. **Realness**. Describe what your data is and where you will get it.

    The dataset includes several months of data on daily trending YouTube videos. Data includes up to 200 listed trending videos per day for the US . Data includes attributes like Video title, Channel Title , Publish time, Tags, View Count, Likes, Dislikes, Thumbnails, Description and comment count etc. There are also unique IDs such as video_id, channel_id, and category_id. We are getting this data from Kaggle [Link].

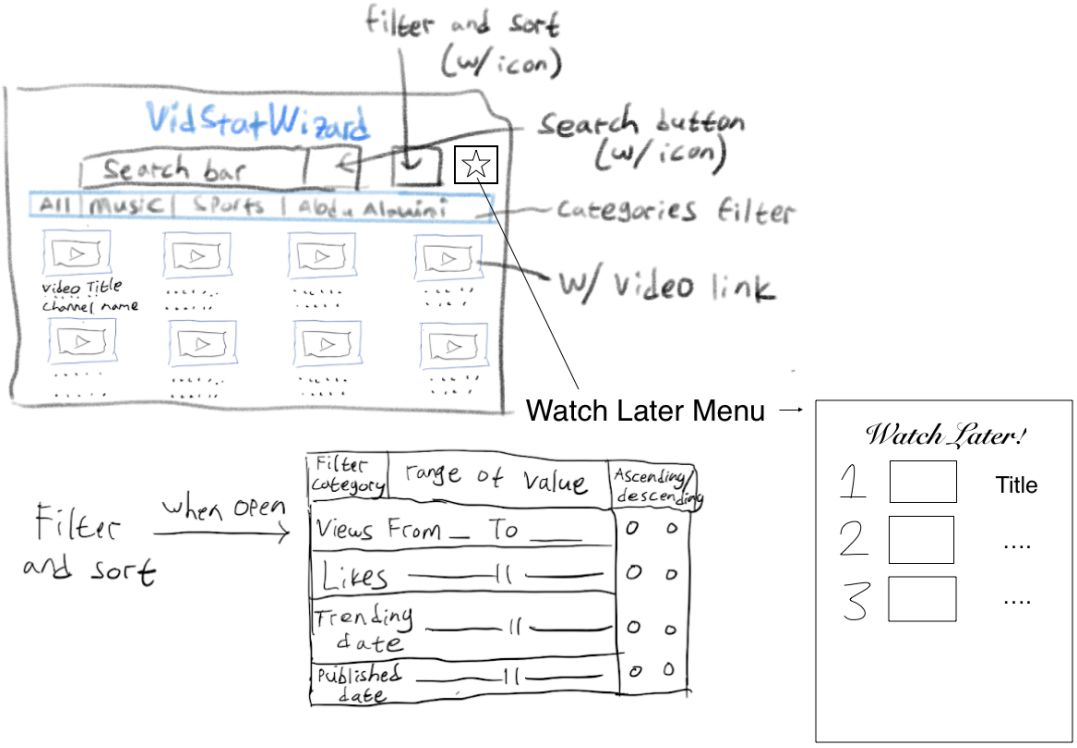
9. Description of the **functionality** that your website offers. This is where you talk about what the website delivers. Talk about how a user would interact with the

application (i.e., things that one could create, delete, update, or search for). Read the requirements for stage 4 to see what other functionalities you want to provide to the users. You should include:

The functionalities of the web application will include the following:

- Search for tags and receive results for matching trending videos
- Filter and sort default results and received results after query, using openable menu
- Use preset filters / categories - Music, Sports, Abdu Alawini
- Click on videos to watch video
- Add videos to Watch Later list, click on thumbnails to open video in New Tab

1. **A low-fidelity UI mockup**: What do you imagine your final application's interface might look like? A PowerPoint slide or a pencil sketch on a piece of paper works!



2. **Project work distribution**: Who would be responsible for each of the tasks or subtasks?
   List of the person responsible for which exact functionalities in section 6. Explain how backend systems will be distributed across members. Be as specific as possible as this could be part of the final peer evaluation metrics.

- Initially, we are planning to distribute the work on backends. Our application will be built on JavaScript. Stefan will work on the models, creating the database initialization such as the entities and also some configurations. Lisa will work on the routes and controllers, specifying which http url requests (GET, POST, PUT, DELETE) correspond to the database query. Sakhi and Saksham will work on the services, which is the essential part of the backend where database queries are made.
- Then for the frontend, Stefan and Sakhi will work on the Youtube videos display, categories filter, and to-watch lists. Lisa and Saksham will work on the search bar, other filters, and sorting. The frontend will be built on ReactJS with corresponding UI components libraries (React bootstrap or MaterialUI).