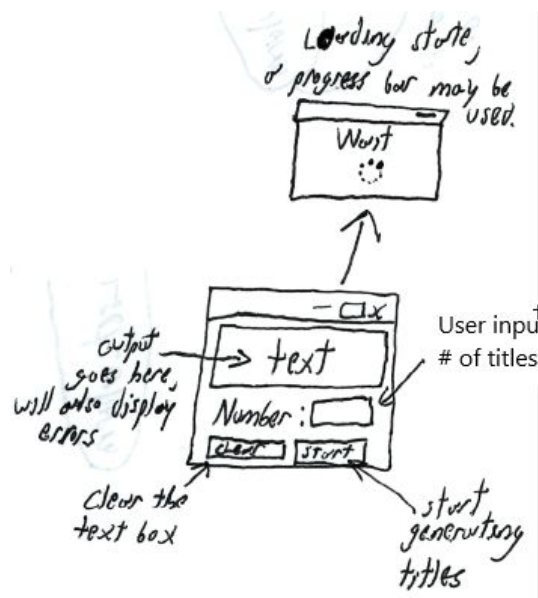Project 3 Proposal

- Team Name
"Epic Team Tuba #108"

- Team Members
Angelica Avila
Trevor Richardson

- Project Title
Clickbait Generator

- Problem: What problem are we trying to solve? [0.25 point]
It has become harder for smaller creators to gain exposure on YouTube due to its growing popularity. Everyday thousands of hours of videos are uploaded to the website, already putting smaller creators at a disadvantage. This does not even account for the algorithms YouTube uses that promotes larger corporations and productions over creators with less resources.

- Motivation: Why is this a problem? [0.25 point]
YouTube was originally created for everyone to have a chance to produce content themselves and gain exposure for their talent. In the beginning, this was effective and even led to some creators having stable careers. However, over time YouTube has changed its algorithms for promoting content, leading to the top trending videos relying on who has more resources rather than who has the better talent. As a result, many creators who were once fruitful are now struggling to keep careers. It is unfair to expect small creators to have the same resources to keep up with the trending videos, which is why we want to help give them an advantage with a title generator.

- Features: When do we know that we have solved the problem? [0.25 point]
We will know the problem is solved when smaller creators start appearing more often in the YouTube trending page, rather than large productions which use many resources. We are not asking for the trending page only to consist of small creators, rather we would at least like there to be an even playing field.

- Data: (Public data set we will be using and the link to the public data set) or (Schema of randomly generated data - i.e. what are the different columns in our dataset and the respective datatypes) [0.25 point]
YouTube (API): https://developers.google.com/youtube/v3/docs/videos/list
Parts of Speech Database: https://archive.org/details/mobypartofspeech03203gut
Word Web: https://wordweb.info/developer/SQL/search.pl?w=hello

- Tools: Programming languages or any tools/frameworks we will be using [0.25 point]
  Python (Beautiful Soup library for web scraping and/or YouTube API) , Java (JavaFX library for visual output), C++ (for processing data), Batch Script (for one click execution).

- Visuals: Wireframes/Sketches of the interface or the menu driven program [0.25 points]
  Interface will have a text box for output, text box for input, start button, and clear button. A loading screen will display when the algorithm is running (with a progress bar if possible). If possible, add a region button for location of the creator. If possible, add a category button for the creator to choose.

Loading state, or progress bar may be used.
Wait
output goes here, will also display errors
→ text
Number :
Clear   Start
User input # of titles
Clear the text box
start generating titles

- Strategy: Preliminary Data Structures/Algorithms we may want to implement [0.25 points]
  Max Heap for storing most frequently used words found from YouTube titles.
  Lists for storing groups of words (verbs, nouns, etc.).
  Elements will be removed from the max heap, compared to a database for part of speech, and pushed to the lists. Then, words will be removed from the lists to generate a sentence. The intention is that the creator may not use the title generated but would be inspired by the somewhat random generation to create something.

- Distribution of Responsibility and Roles: Who is responsible for what? [0.25 points]
  Gathering data (Python): Trevor Richardson
  Implementing data (C++): Angelica Avila
  Designing visual interface & executable(Java, Batch): Trevor Richardson

- References
  YouTube API (https://developers.google.com/youtube/v3/docs/videos/list)

Geeks for Geeks (if needed)