

1. **What are the names and NetIDs of all your team members? Who is the captain? The captain will have more administrative duties than team members.**

Daniel Zhang - dlzhang2
Shrey Patel - shreysp3
Apaar Bhatnagar - apaarb2
Sarang Mohaniraj - sarangm2

2. **What topic have you chosen? Why is it a problem? How does it relate to the theme and to the class?**

We have decided to create a search engine for Coursera to allow students to search through an entire course about topics/key words. This will allow students to quickly find the materials (text and video) they need for a specific topic they want to learn about. As well, it allows students to go to the part of videos that are most relevant to the topic they want to know more about. This relates to the theme since it helps students quickly find learning materials and relates to the class since we are creating a search engine.

3. **Briefly describe any datasets, algorithms or techniques you plan to use**

Coursera will be searched as the dataset. We will use ranking functions and/or pagerank for text retrieval and possibly a recommender system for suggesting topics close to what a user asks for.

4. **How will you demonstrate that your approach will work as expected? Which programming language do you plan to use?**

We will plan tests for our search engine (makeshift dataset or live coursera data). We are planning to use Python.

5. **Please justify that the workload of your topic is at least $20 \cdot N$ hours, N being the total number of students in your team. You may list the main tasks to be completed, and the estimated time cost for each task.**

We have 4 main components for our project:

- 1 - Web scraping data/course from Coursera 10
- 2 - Search Engine Algorithm 30
- 3 - Video Search Algorithm 20
- 4 - Recommender based Algorithm 30