CS 410 Final Project Proposal

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.

    - **Zhan Zhang: zhanz3 (Team leader)**
    - **Shuo Wang: shuow6**
    - **Qianmeng Chen: qc15**

2. What is your free topic? Please give a detailed description. What is the task? Why is it important or interesting? What is your planned approach? What tools, systems, or datasets are involved? What is the expected outcome? How are you going to evaluate your work?

    - **We decide to create a website where users (students) can query topics to search for related courses within UIUC. We noticed that many students, especially freshmen, have a hard time looking for the classes they are interested in. There are also some other considerations like the professors, prerequisites, etc. Our plan is to add more features on Course Finding tools like including more information about professors, providing a prerequisite graph showing the course's prerequisites, if it is a prerequisite for another course, and what its follow-up courses are, allowing students to plan ahead. We will be using scrapers to extract the information about courses and professors, and build our feature on top of that.**
    - **Our expected outcome is a complete application that can help students find the right courses by giving them more information about the course so that they no longer have to jump around different pages or ask someone else about the course. Our evaluation of work will be based on how relevant the queries user entered is to the course we return to the user and if we successfully build the features or not.**

3. Which programming language do you plan to use?
    - **Python for backend, JS for front end, Flask for API**

4. Please justify that the workload of your topic is at least 20*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.

Our team has three team members, so our total workload should be at least 60 hours. Our estimated total workload is about 66 hours.

- **Scraper of course information, including the course number, course name, course description, and professor. - 7 hrs**
- **Scraper of professor information of the relevant course, including the comment and score in Ratemyprofessor. -7 hrs**
- **Scraper of pre-requisite courses information. We want to make a dendrogram to present the result. -2 hrs**
- **Parsing texts from the scraper and storing them in databases. - 5 hrs**
- **Search engine for the courses. -15 hrs**
- **Recommender for the courses, store preferences. -15hrs**
- **Front-end website development and Flask API set up. - 15 hrs**