Project Proposal – Group MJ3

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.**

   Members: Joonpyo Jun (joonpyo3)

   Captain: Joonpyo Jun

2. **What is your free topic? Please give a detailed description. What is the task?**

   The Free Topic that I chose is *Education Recommender System for specific majors*. In this project, I will create an application to recommend college/university or any educational institutions for specific major that each user selects, based on the ratings and reviews of institutions.

   Why is it important or interesting?

   Because the education nowadays is semi-mandatory for all students who want to make their dreams come true, selecting the best places to learn what they want to learn for their dreams is very important.

   What is your planned approach?

   I would start from researching popular majors in U.S. colleges then I will start to scrape the ratings and reviews (stars, out of 5, etc.) of each institution where researched majors are available.

   What tools, systems or datasets are involved? What is the expected outcome?

   I am planning to use JavaScript and React/Angular Framework along with Node.js. I may use some external database (Firebase) and some of Python to facilitate the development. Datasets, as stated above, will be scraped through the webpages that provide overall ratings and rankings of educational institutions. By the end of this project, I expect users to be able to see a list of institutions that provide the best education for the majors that they selected.

How are you going to evaluate your work?

Since it will be a development, there will be a lot of pre-builds and builds before the completion that I will review and self-assess each build to evaluate the application.

3. **Which programming language do you plan to use?**

As stated in **2.**, I will be using JavaScript, React/Angular Framework, and Node.js modules mainly, but external database (Firebase) and Python might also be used.

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.**

Setup (initialize React/Angular application and Firebase if needed): 3 hours

Research Majors & Scrape Institutions' datasets: 5 hours

Front-end: 2 hours

Back-end: 5 hours

Build, Review, and Optimize: 10 hours