Deployment plan

Process of Deployment

Currently the deployment process for our project is simply updating the main branch GitHub, then GitHub Pages redeploys automatically. The process is simple but if in the future we deploy it into a real production environment it would be best to follow the deployment process of development, testing, and monitoring. The first step would be to develop the graduation plan according to the necessary requirement of the department/university which includes adding all majors and courses offered. Other useful features could be added including an SSO user login page so we could retrieve user data (such as name and student ID) from the server and save plans to their account. The second step is to test the code by using our test suite to make sure the critical functionality is working and does not have any major faults. The last step would be to monitor the software and look for any bug which would cause a bigger issue in the future. We could also monitor the traffic to this application by including client-side tracking such as Google Analytics or server-side tracking if we deployed somewhere more sophisticated than GitHub Pages. Since it is currently just for EECS students only the traffic would be low, but if in future we expand this application we would need to update the hosting option so that our hosting provider could handle several users accessing the application without any hurdles. These three steps would be helpful if any university or department was interested in using our project in an official capacity, but for now the deployment works fine through GitHub Pages.

Potential Market

Our current market is KU EECS students because our project as the only majors available to select within the project are Computer Science, Computer Engineering, Electrical Engineering, and all variants of Interdisciplinary Computing. The size of this market is currently about 750 undergraduates according to data from the School of Engineering website. However, in the future we could expand the available majors by adding the courses these majors require and the information about them, which could lead to it being useful for every undergraduate at KU, reaching a potential market of approximately 20,000 students. Other universities are also the potential market to expand our project into because we are capable of changing and inserting new data for the courses and majors. This would expand our potential market to 20 million college students within the United States. In summary, there are various potential markets that could use this application and we could adapt this product to meet the needs of the larger markets.

Cost for Deployment

The cost of deployment depends on the market and the platform. As this project is static (written using entirely client-side JavaScript with no server-side backend), there are a large number of free and low-cost hosting options available. The actual act of deploying does not have any direct costs associated with it (e.g. publishing to an app store or printing physical media), but rather costs are incurred over time to keep the application running. Currently GitHub Pages is being used as a free and easy deployment option. There is also the potential of free hosting being provided by KU or other universities the application is utilized at. It is also worth

considering hosting our project with one of the big-name cloud providers for increased scalability. With the current scale and scope of the project, GitHub Pages is an adequate solution and KU provided hosting would be ideal to increase speed and reliability for KU students. These options are explored in more detail in the maintenance plan.