Alex Mills
September 12, 2022
Senior Design
Group Members: Liz Tremblay, Jash Gada

Individual Capstone Assessment

Oftentimes the importance and impact of local government is overlooked, especially by younger voters. For my group's senior design project, we will create a mobile and web application that would connect people with their local government, as well as local campaigns and initiatives. This app will help voters who are unfamiliar with their local government but want to learn how to get involved. Our app will allow users to learn and understand the values and goals of local politicians and create initiatives to connect with others in their community to rally for change. This project will be heavily front-end development focused, since we believe that this will be the most important aspect that users will judge and rely on when using this app. All the members of our team have worked in frontend as well as full stack development during previous co-op rotations, so we all feel very capable to create a successful end product for this project.

Throughout my college experience, I have taken many different courses that have prepared me for this project. This semester I am taking User Interface 1 (CS6067) , in which I have already learned many useful design principles and how to best brainstorm ideas to make usable and intuitive interfaces. This class is extremely relevant to our project since our work will be mainly front-end focused. I am also currently taking Requirements Engineering (CS5127), which has helped me learn how to design our app and track our progress in a way that will best achieve our end goals. Some of the earlier, foundational Computer Science courses such as Data Structures (CS2028C) and Software Engineering (EECE3093C) gave me the grounds to work on more complicated projects both in school and at work, and will be further utilized on this project. Along with classes, my position as the president UC's student chapter of ACM-W has greatly helped me with organization, planning, communication, and leadership skills.

While I learned many skills and concepts from classes that will be applicable to this project, I have learned even more during my co-op rotations. During my past four rotations, I worked at 84.51 in full stack development with a frontend focus. I worked on several of the company's web apps, which all varied greatly in size, architecture, and technologies used. I became very familiar with using Angular, Spring, and MongoDB. These co-op rotations helped me learn web development languages and frameworks that will be relevant to this senior design project. During my first co-op rotation, I worked as a research assistant for Dr. Jiaqi Ma at the Next Mobility Lab, which has now moved to UCLA. This research was focused on automated vehicle simulation and I worked heavily in Python, Linux, and ROS. While this work was very different from web development, much of the work was very individual, and helped me learn that being persistent and patient are the main necessities when it comes to solving problems.

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While many people are able to easily stay up to date on national politics and news, local politics is usually overlooked and not widely discussed. Many sources of current information on local government are newspapers, which are becoming increasingly obsolete, especially among young voters. Even those who are very passionate and care deeply about current social and economic issues are usually only well-informed about politics on the national level. I often find myself voting somewhat blindly in local elections, and often wish I was better informed on the issues and candidates. Othertimes voting is simply not enough, further action and organization is needed to make a difference. Our goal is to make this app a platform for many types of political outreach and action, whether that be for politician's campaigns, local issues, or grassroots organization.

However, while my group members and I are very passionate about political issues, we are definitely not experts in political organization and do not have insight into what real users need and desire from our app. Therefore, we plan to reach out to many potential users who work in local politics and organizations and heavily depend on their feedback to shape our design and goals. Some of these users include local politicians and their volunteers, organizers of fundraising events, volunteer recruiters, and political movement or protest organizers. This feedback will be the main basis of the user-stories we create and the requirements that we will strive for our app to fulfill. We plan to utilize the Agile methodology to increase and track the productivity of our work. By working closely with our users, we will be able to use continuous feedback to ensure that we are satisfying their needs and also track our success.