Our senior design project is going to be designing a website for planning trips/events. Our idea is that we can input how much we’re looking to spend for something in the area and get all the relevant options back. This will definitely be a learning experience as I’m lacking in web development skills but I want to learn front end at some point so this seemed like a great experience. I’ve enjoyed building working projects from the ground up in classes and in co-ops so this will be a great opportunity. My cloud and scripting experience be immensely useful for this so it’s comforting to know part of the project can easily be accomplished. The reason for this project is that as a busy/working student, I often find myself questioning what to do when I finally get some free time and building something to curate a list will be immensely helpful.

Personally I feel like 3 classes mainly stand out to me for this project and kind of guiding my career as a whole. Firstly, CS2028C, Data Structures, this class really sets the stage for anything and everything we do in programming as we’re always going be using lists or heaps or arrays to store data and without that class, I’d be missing a very fundamental building block. We’re going to have to be storing data somewhere that we pull/scrape for our project as well. The second class is EECE4029, Operating Systems. This was personally my favorite class I’ve taken in college so far. We got experience with Linux which was huge and even more important, we really dove into the low level behind the scenes with how processes work and communicate and really just makes you stop and think about what’s actually going on behind my programming. I use Linux to manage most of my AWS stuff so it also directly applies to this project. Finally, CS4065, Computer Networks, in my DevOps job we’re constantly using networking principles to make sure our infrastructure is secure and unable to be hacked or compromised. The same thing applies for this project in that we need to keep everything secure.

My first two co-op rotations were with Crown Engineering Corporation and I did DevOps work with them for my first rotation, primarily building pipelines to automate builds and building AMIs to stand up elastic agents. My second rotation with them was an Embedded role and I did a lot of python scripting to parse binary data as well as making a GUI to make working with this data easier. My two main takeaways from that job was minor AWS experience and relevant Python scripting. This carried over into my 2nd and current company, Sierra Nevada Corporation. I work as a DevOps co-op for them, primarily working in AWS and creating infrastructure to host and run a variety of different things as well as creating some data visualization dashboards. My main takeaways from this job have been cloud experience and network security as well. Soft skills that I have learned are, teamwork, collaboration, how to ask for help among others.

My motivation for this project really comes from 2 things. Number one is that I enjoy building fully functioning solutions and I think its really cool to see something progress from the ground up. I learn so much more from troubleshooting and doing something wrong, which is why I like co-op so much more then classes since we’re not getting points taken off if I do something wrong. The second reason is I really want to get some front end experience and I’ve never been able to before. Designing a website and building it will be phenomenal experience for myself and to put on my resume. There’s so many different components to web design and I know I’ll come away with good experience in all the main ones.

Our preliminary approach is to build a working back end first. We need to decide if we’re relying more on webscraping, api requests, or a combo of the two. After we do this, and can repeatedly demonstrate that its working without fail, then we can start moving into a more design phase. Actually creating the website, and learning how to link api requests to our website and all that good stuff. The final step will then be constructing cloud infrastructure to host everything as needed. I think we’re all pretty honest with ourselves and each other. We’re going to be done when we have something that we’re proud of, that works as it should, and that looks good as well.