

Assignment #7: Project Constraints

Team Members: Sean Butterfield

For this senior design project, several design constraints exist, that heavily impact the direction of the project. For a start, this project is a sole effort, meaning that one person will be doing all of the work in the project. This will heavily reduce the total scope of the project, meaning that I will need to be more focused and careful what the project ends up turning into. This is something I need to keep in mind when I am designing this, as I want to be able to show off this project in a professional setting and be genuinely proud of what I will have accomplished, and making sure I keep on track is the only way to manage that. That brings us to the second constraint, the professional image of the product, I am making an interactive simulation in a web-app that I want to showcase on a resume, to show my skills as a programmer; Therefore, I want the finished product to look and feel professional when interacting with it, and the code behind it should be clean and well documented in a professional manner.

On another note, since the project will be an interactive simulation inside of a web-app, the performance of the simulation will be important, as having a real-time simulation when the performance is bad, defeats a lot of the purpose of being able to see changes happening in real time. So the project will need to be structured and set up in a way that a large amount of calculations can be done quickly to render frames at an acceptable speed. On top of the performance constraint, I am also operating this on an extreme budget, hoping to spend as little as possible, as so for solving performance issues, I want to make sure that computations are done on the client side as much as possible, to save on server or cloud computation costs which can balloon very quickly. Making sure the heavy computational parts are done in a way that are scalable and cost-effective is a very important part of this project.