EE 267 Virtual Reality: Lab 6

Instructions

Homework 6 mostly uses the same tools as the last weeks: the VRduino and JavaScript. So if you had trouble with your C/C++ or Arduino programming skills last week, you may want to take a few more tutorials on these topics online this week. In this homework, we will also use some basic concepts of linear algebra.

If your algebra skills are a bit rusty, you may want to brush on that before starting this homework. You should be familiar with concepts such as the condition number of a matrix, matrix inverses, and eigenvectors. A few great resources for general introductions to these and related concepts include Stanford courses EE103 and EE263. Take a look at the relevant sections of the course slides!

Other than algebra, we will be using HTC's Lighthouse tracking system in this homework. We already discussed it in class but want to point you to additional information if you would like to learn more. You can find a lot more details in the Unofficial Documentation for the Lighthouse Tracking System. You can find pretty much all technical details on optical communication protocols, base station and sensor specs, and other material on this website. We used this information to reverse-engineer the system and implement it on the VRduino.

Note that this lab is optional and not required to complete the homework – all necessary information was already discussed in class.