

Short Project Update  
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My focus for the project so far has primarily involved 1) understanding Drake's Quadrotor dynamical model which I will use for my project and 2) obtaining a good understanding of controller/trajectory optimization for quadrotors that I am implementing for my project as described in [1]. For simulating my trajectory generation and control I will use Drake's QuadrotorPlant model shown in Fig. 1. From studying the work in [1] I have decided to proceed with the following plan to implement the work. First, I will show that I can generate simple minimum snap trajectories between and follow those trajectories with no disturbances. Next, I will add in the controller to stabilize trajectories. Finally I will investigate performing more interesting trajectory generation with state constraints and show that I can follow those trajectories using the controller I will have implemented.

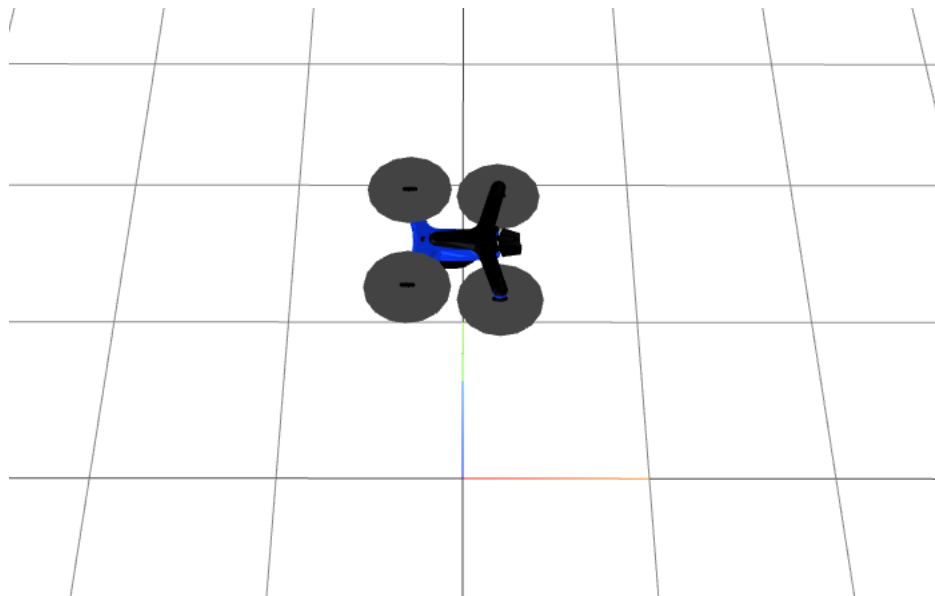


Figure 1 – QuadrotorPlant and visualization from Drake