

ME 410 - Week 7 Summary

Logan Boswell

Summary

This week's main objectives were to hover to a waypoint in a controller manner and achieve a controlled flight about 2 feet off the ground.

We started this week by working on the waypoint milestone. In the previous week, we felt like we had come close to meeting this milestone, but needed to spend a little more time slightly tuning our controller and practicing hovering in a controller manner. After spending a little bit of time doing this, we were both able to achieve this milestone relatively quickly.

Next, we shifted our focus to the controlled flight milestone. The first steps taken were to adjust the thrust neutral and thrust amplitude values in our code so that the drone had enough thrust to reach a height of about 2 feet off the ground. After we confirmed that there was enough thrust to fly high enough in the air, we spent time practicing flying in controller manner and adjusting settings (joystick bounds, PID gains, etc.) if needed. We did not achieve this milestone within the class period on Thursday, but I was able to get checked off in the Tuesday office hours.

Assessment - What Went Well

The hovering milestone went pretty quickly this week. I think our practice in the previous class and office hours helped up in completing this milestone.

Assessment - What Did Not Go Well

The main holdup this week was having to take turns flying the drone. I completed the hovering milestone pretty quickly and had to wait around/assist Ben while he worked on the milestone. Also, another thing that slowed us down is that Ben and I seem to prefer different settings when flying, so some minor changes to the code are necessary before flying.

Assessment - Adjustments for Next Class

Overall, I think we just need to add lines to our code for each of our preferred settings. Having to change the settings back and forth does not hold us up that much, but being able to comment and uncomment these settings would save a little bit of time.

Team Member Effort

Me - 52% (Helped Ben with editing our .cpp file; Kept batteries charging)

Ben - 48% (Worked on .cpp file on Ben's laptop)