Name: Bora Ocbe

Task List

Since I am working with the software, all my tasks will include integrating the following tasks using software.

1. Test Parts:   
     
   Since we don’t have time to order more parts, we need to dedicate the first week to testing the Crazyflie. This includes, testing the IMU, the Radio signal, the battery, the firmware updater, etc.
2. Stabilization:   
     
   We need to make sure that the drone does not steer off course, so we need to write code that can pick up the current state of the drone and stabilize it to the desired Yaw, Pitch, and Roll. For example, if we wanted the drone to hover in place, then we should set the Yaw, Pitch, and Roll to 0. If the sensors detect that one property is not 0, they we re-adjust the motors.
3. Sensors:   
     
   For basic collision detection, we need to integrate third party sonic sensors. So after the drone can fly itself, we need to dedicate time to make sure it doesn’t hit into an object.
4. Brushless motors:   
     
   Since the Crazyflie controller is meant for the stock motors, I need to rewrite their Hardware Abstraction Layer, to interface with the controller we bought for our brushless motors.
5. Navigation:   
     
   We will be using the Raspberry Pi for the navigation, so we need to implement a communication between the Crazyflie and the Raspberry Pi. The Raspberry Pi will send movement commands to the Crazyflie. I will be working on the Crazyflie aspect of the navigation.
6. Motherdrone integration:  
     
   Finally, we will need to find a way to communicate between the mother drone and the child drone. Once the child drone is fully automated. The coupling between the mother and child drone will be reduced. The mother will only need to send basic communication to the child (where to land, when to return, etc.)