

# Demo Videos

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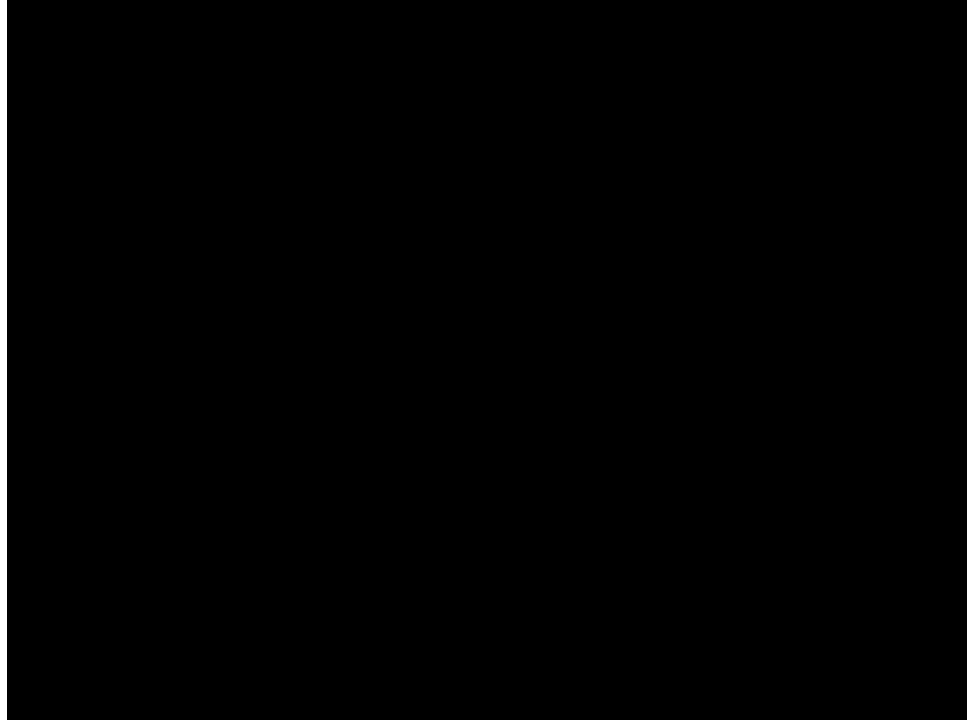
**Group 13:** Safe Construction Unmanned Aerial Vehicle

Nicola DaSilva, Veronica Love, Baian Elmazry, Alan Hernandez

# Picking up and Placing Blocks

The Raspberry Pi gives the commands to open and close the claw. The rangefinder senses when a block is close enough to grab and then the claw performs the closing operation.

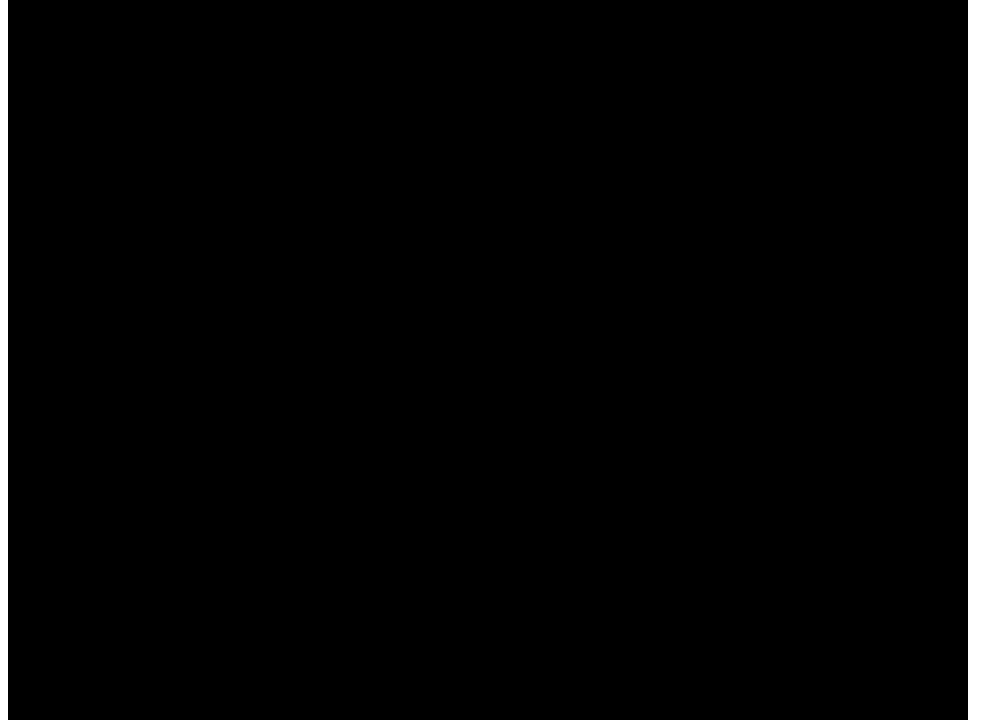
Link: [https://youtu.be/0\\_zHWxvjh8s](https://youtu.be/0_zHWxvjh8s)



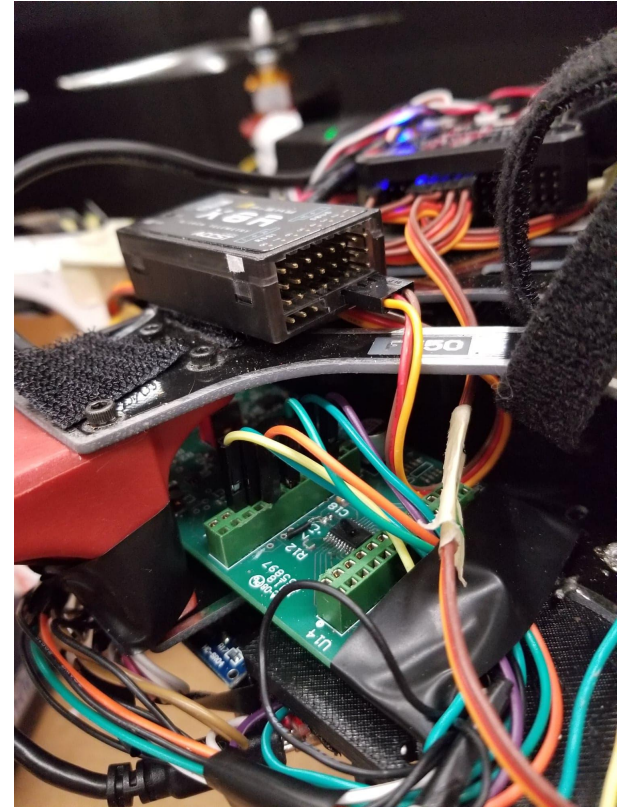
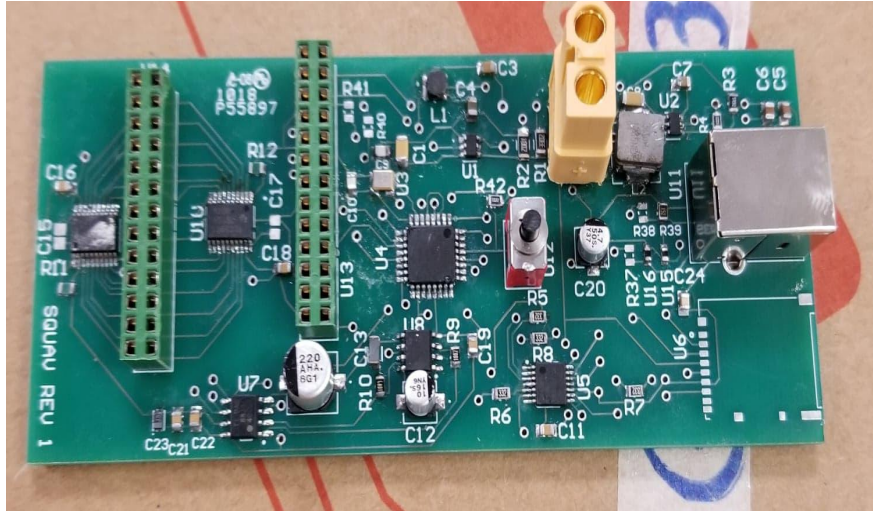
# PCB and Rangefinder

Demonstration of how the rangefinder and claw works together when plugged into the PCB. This video is meant to show how the claw works underneath the drone.

Link: <https://youtu.be/GCM2d2xrwr0>



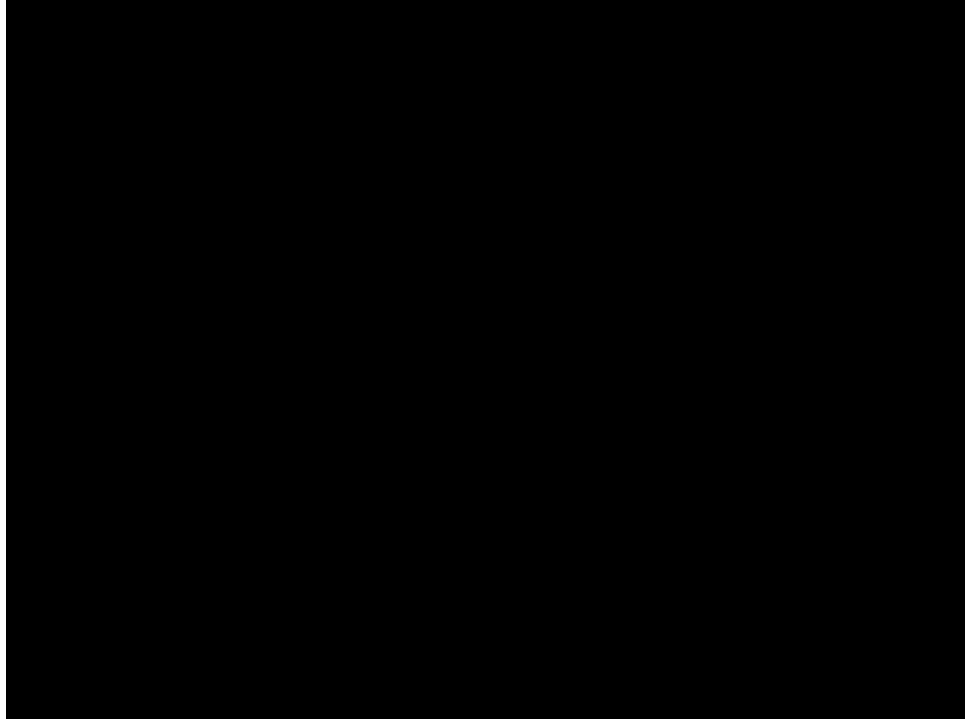
# Picture of PCB on Drone



# April-tag Detection

Algorithm tells if the tag was located on the center. If it is not centered, then the direction of which the tag should be moved will be displayed until the focus is centered. These signals would be instructions for the drone to move in that specific direction until the block is centered enough to be picked up.

Link: <https://youtu.be/kxloAgH7dA8>



# Autonomous Flight

Take-off flight and landing.

Raspberry Pi controls the drone once the program is set to run.

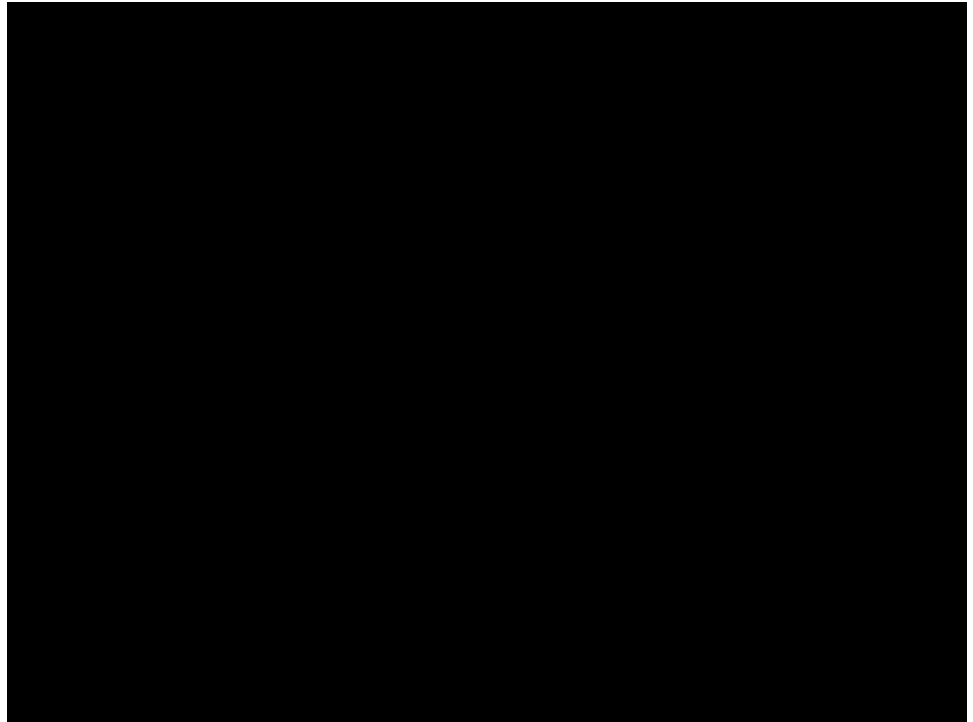
Strings are attached for safety reasons.

Link: <https://youtu.be/3amGt356oRY>



# Burnt Motor and ESC

During testing, all the power of the battery went directly to one motor once the program was set to run. As shown in the video, this caused the motor and ESC to burn. The ESC and motor were replaced but it seems like the particular spot on the power distribution board was damaged as well. The new ESC gets extremely hot and has a burning smell.



Link: <https://youtu.be/uRv6oV9WwuY>

# Bloopers

Fun video to demonstrate how dangerous it is to fly a drone manually.

