

# Proposal

## Team Details:

### Strike Team

#### Members:

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## Motion Capture

### Abstract

Our aim in this project is to determine the motion of a moving drone using stationary calibrated cameras.

### Workflow

Our initial targets will be

1. Calibrate camera

Use pre-calibrated stereo cameras or calibrate 2 uncalibrated cameras using techniques (research in progress)

2. Detect Aruco Markers and their orientation (an aruco marker can be used to calibrate 2 cameras as per in 1st step, before motion detection starts)

3. Get the 3D location of drone
4. Use the stereo vision (set up in step 1) to detect the coordinate of the Aruco marker attached to the drone. The location of the markers in each frame can be tracked to give the motion trajectory while the drone moves

We need more clarity regarding the 4th step, about how we will exactly implement it. We can brainstorm ideas once we study more about the topics..

## Timeline

**Week 1-2:** Learn and implement Camera calibration and detection of Aruco Markers

**Week 2-3:** Apply the topics learnt above to live track the drone motion