

# Challenge 1: Fully assisted teleoperation

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<https://github.com/Robert1124/cse460>

Video URL: <https://youtu.be/lgnVjmOIT3E>

1. What are the main advantages of flying with sensor assistance?

- Reduce the self-spin
- Easy to keep the direction
- Easy to set route of the drone for the future work

2. What are the main disadvantages of flying sensor assistance?

- Bring much more cost for the drone and the complexity for the code
- Reduce fly time since the sensor needs energy from the battery
- Dependent on sensor accuracy and algorithm

3. What do you think needs to be done to allow the robot to pass through the squares without any human intervention?

- The module we used to recognize the yellow ball is useful. It can recognize the squares. Then, the distance between the drone and the squares can be calculated with given position and size of the square. The only issue is that we have not add the height calculation for the module but it can be calculated if we know the height of the squares and the drone. Finally, we can use the difference of the height and position(distance) to let the drone calculate the trace and pass through the squares.