IARC Research Paper

Texas Aerial Robotics

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Abstract

Texas Aerial Robotics will compete in Mission 7 of the International Aerial Robotics Competition (IARC) in 2017. The goal is to direct Roombas (iRobot Create 2's), known as ground robots, using a quadcopter. We use a camera (put name here) for vision, a Nvidia Jetson for vision processing, and a Pixhawk for controlling the quadcopter.

Contents

1 Introduction

Description of mission with link to rules.

2 Background, Preliminary, and Related Work

Describe history, work, or projects that serve as direct contributors to the subject of your research paper

3 Quadcopter

Vehicle information

3.1 Hardware

Probably have a table for what is what.

3.2 Controls

3.3 Vision

3.4 Business

4 Safety

4.1 Pre-flight Checklist

1. Make sure lidar and pix flow are not covered
2. Make sure that escs are plugged in to the right ports.
3. Make sure that the props are on in the correct direction.
4. Make sure that the props are not upside down
5. Make sure drone is level before powering on
6. Hold safety button
7. Make sure ground station has good telemetry
8. Verify critical sensors are giving good data
9. Make sure everyone is clear of drone

5 Simulations

6 Conclusion

Hopefully we do well at Georgia Tech! gl hf!

7 Acknowledgements

References