DRDO DRGE'S VISION BASED OBSTACLE AVOIDANCE DRONE

Inter IIT Tech Meet, IIT Patna

Installation

This readme assumes that ROS, Ardupilot, and MAVROS have been installed and SITL has been set up. It assumes that the testing worlds provided are running.

1. Put the required models and worlds in the corresponding folders.
2. A launch file has been provided in this package. It is a generic launch file that requires just the name of the world file.
3. Check the start_sim.sh file on how to put the world file name.

Libraries

This package depends on standard ROS packages (rospy, std_msgs, geometry_msgs, sensor_msgs), mavros, numpy, OpenCV, cv_bridge and ros_numpy. We assume that ROS and mavros is installed.

Numpy - pip install numpy

OpenCV - pip install opencv-python opencv-contrib-python

Cv_bridge - sudo apt install ros-melodic-vision-opencv

Ros_numpy - ros-melodic-ros-numpy

Executing the code

There is only 1 file to execute - controller.py in the src folder. Run it with the command:

rosrun interiit21 controller.py

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