**3D Controller And Trajectory Generation**

Files included

1. controller.m – Controller for a full 3D quadrotor (Code written by me).
2. traj\_generator.m – Trajectory generator for generating a trajectory passing through all given waypoints (Code written by me).
3. runsim.m – Test script to be called for testing. (Code provided by Coursera).
4. Simulation\_3d.m – Simulation code that will be called by runsim. . (Code provided by Coursera).
5. Evaluate.p – Code that evaluates your controller. (Code provided by Coursera).
6. Traj\_helix.p – Pre-defined helical trajectory for controller (Code provided by Coursera).
7. Traj\_line.p – Pre defined line trajectory for controller. (Code provided by Coursera).
8. Utlis/ - Folder containing helper function (Code provided by Coursera).

Steps

1. Open and run **‘runsim.m’** file
2. Quadrotor will travel in straight line trajectory.
3. Comment ‘%’ line number 9 and uncomment line number 10.
4. run file **‘runsim.m’,** quadrotor will follow helical trajectory.
5. Now comment line 10 and uncomment line 14, 15, 16, 17, 18, 19, 20.
6. Run file **‘runsim.m’,** quadrotor will pass through waypoints given in line 15.