Final Project Proposal

Emergency Hexacopter Landing Under Uncertainty

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11/12/2020

In this project, I aim to find optimal trajectories for a hexacopter to land in an emergency situation in a stochastic environment. The scale of *emergency* will be parameterized by time horizon. The following subproblems are defined:

1) An MDP will be used to formulate the problem and a Monte Carlo Tree Search (MCTS) will be used to solve the problem.
2) A POMDP will be used to formulate the problem and a Partially Observable Monte Carlo Planner with Observation Widening (POMCPOW) will be used to solve the problem. This algorithm will handle continuous state, action, and observation spaces.