Assignment A7: Belief, Desire, Intention and Reinforcement Learning

CS 6380
Spring 2020

Assigned: 24 March 2020

Due: 21 April 2020/ latest 28 April 2020 with max grade of B

For this problem, we examine the use of reinforcement learning to develop a policy for a BDI (Belief, Desire, Intention) agent to select a plan to achieve its goal (intention) in a given context. You are to extend the A4 assignment as follows:

- **environmental effects**: introduce the effect (random) of wind and rain into the simulation. That is, rain will slow an aircraft, while wind will change its pose.

- **multiple plans for a goal**: for example, for a flight to return to the NOMINAL state, it could handle any subset of conditions from the power set of {IN_LANE,ON_HEADING,SPEED_OK}.

Scenarios should be run which clearly demonstrate the result of these.

You should handin the source code used in the study. The code should conform to the style requested in the class materials.