Introduction to Artificial Intelligence

Program – LunarLander GA

Nov 3, 2021

Objectives

Practice and get familiar with the way to solve problem by searching. In this assignment you need to make use of the taught subject matters about Genetic Algorithm (ch. 4.3.5).

Program

Design and implement GA to optimize the control policy for the lunar lander. The lunar lander continuously observes its status and environment and pilots itself according to the control policy you provided. A GA and test framework have been presented in this assignment. You are required to design the evolutionary operators and set appropriate parameters for the GA so that the lunar lander can work effectively and efficiently.

Please download the code and find more details via the website at `https://sites.google.com/gapp.nthu.edu.tw/lunarlander-ga`.

Report

Considering randomness, you must execute your LunarLander GA more than 10 times.

1. Describe your methods and list their parameter settings for the experiments.
2. Present the experimental results:
   (a) List all the fitness values obtained.
   (b) Draw the anytime behavior.
3. Try different operators and parameter settings, and compare their results.

Submission

- **2021/11/23 24:00 (degrade by 10 points for each day delay)**
- Source code + Report
- Zip the files and **upload it to eeclass**