NTupleBanditEA

Checks complete: 448795 ms elapsed

Solution: [3, 1, 0, 0, 1]

pointMutationRate: 3.00

flipAtLeastOneBit: true

useShiftBuffer: false

nResamples: 1

seqLength: 10

nEvals: 200

Overall results: NTupleBanditEA

min = -0.4

max = 0.34

ave = 0.14833333333333334

sd = 0.1701740150619326

se = 0.031069382250214796

sum = 4.45

sumsq = 1.4999000000000005

n = 30

Total time for experiment: 1076103 ms elapsed

Checks complete: 6258 ms elapsed

Solution: [3, 0, 0, 1, 1]

pointMutationRate: 3.00

flipAtLeastOneBit: false

useShiftBuffer: false

nResamples: 3

seqLength: 10

nEvals: 200

Overall results: GridSearch

min = -0.66

max = 0.34

ave = -0.12699999999999997

sd = 0.23984405853344193

se = 0.04378933371411852

sum = -3.8099999999999996

sumsq = 2.1521000000000003

n = 30

Total time for experiment: 616754 ms elapsed

**Asteroids Game Speed Test**

Old version (just game ticks, no copying)

Ran for 20000 game ticks

Score = 77100

382 ms elapsed

953 ms elapsed

Fixing Asteroids:

The code has become messy.

Time to tidy it up.

For each object we can simply apply the update method, as we do currently.

So: the main ideas are as follows:

Do all the work in the live list.

Do not distinguish between any of the items – let’s get back to a clean update method.

The exception is the Ship object, the only one that takes an action.

Remember that only some types of objects even have interactions with each other.

So maybe it is best to control the iteration more carefully.

So: have an Asteroids specific update method that goes like this:

1. Update the Ship:
   1. Move according to the thrust and rotation controls
   2. Fire a missile if required.
2. Update the Missiles:
   1. For each missile, iterate over the set of asteroids, marking each as hit if there is a collision
3. For each Asteroid:
   1. Check collisions with the ship and mark ship as dead if hit. Asteroid also dies.

The reason this can be problematic is largely due to the fact that the interactions can add further work to the lists.

This needs a bit more work to make it really clean – got a bit lost with this writing with limited oxygen!