

Brendan McOmber

CS 206 Final Project: Weekly Report #2

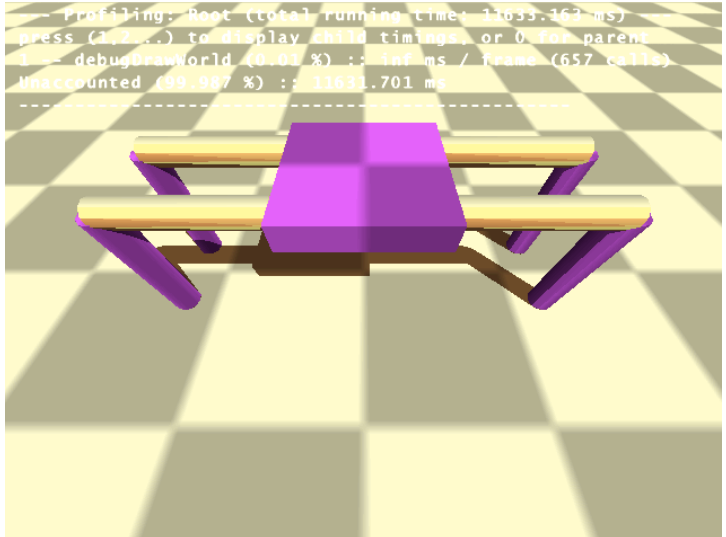
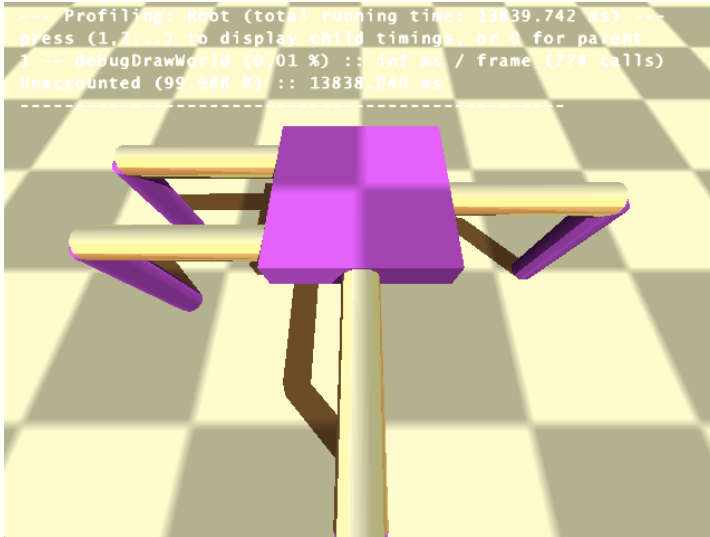


Fig. 11.2a: One Leg moved from the z-positive to x-negative side

Fig. 11.2b: Two legs on both of each the x-negative (left) and x-positive (right) side of the robot

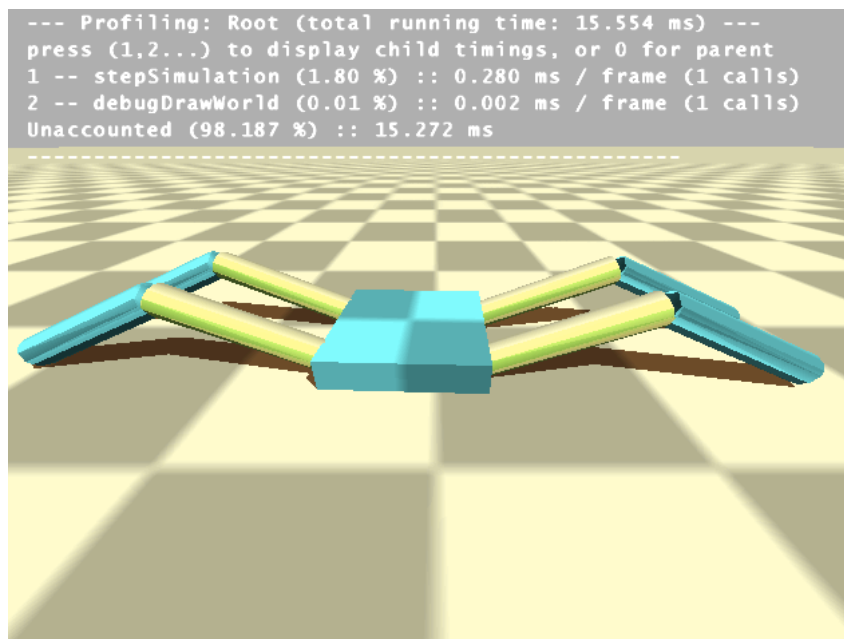


Fig. 11.2c: Quadrupedal robot with proper joint angle limits

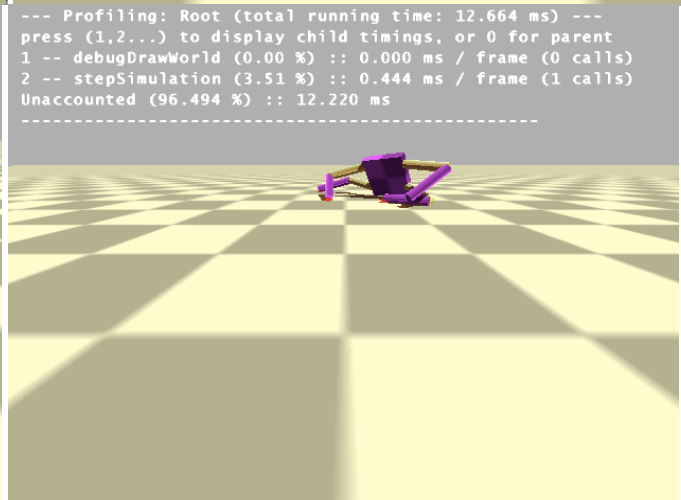
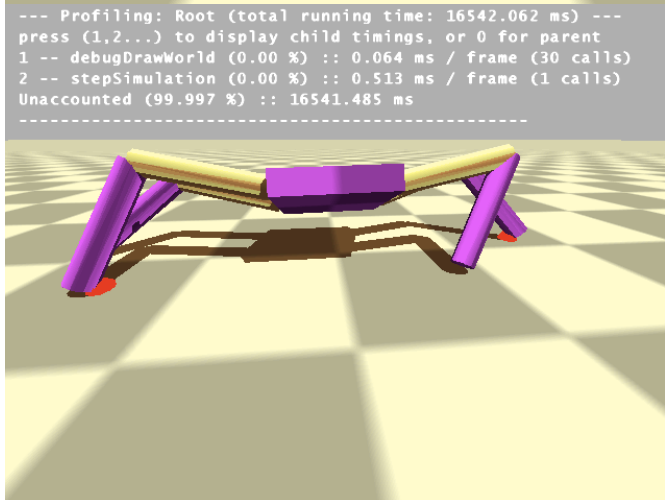
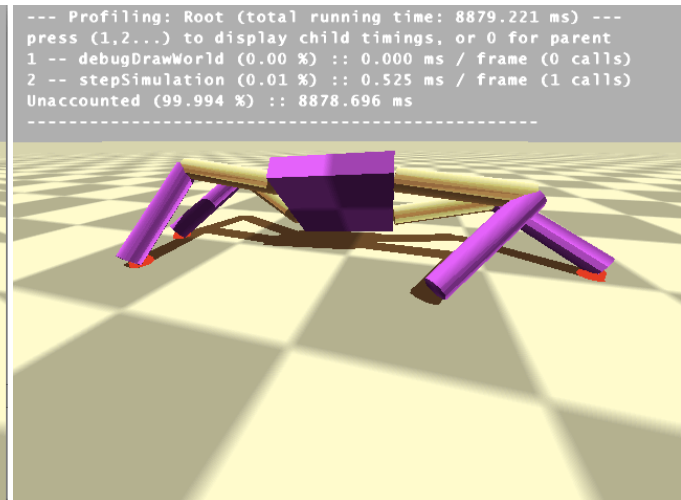
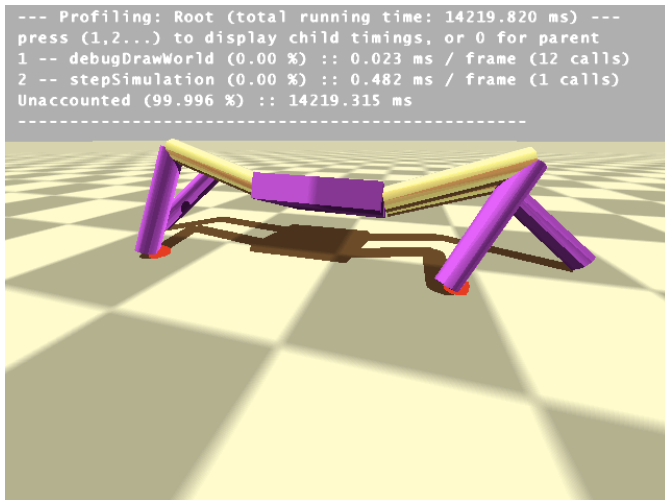


Fig 10.2d, 10.2e, 10.2f and 10.2g: Robot moving with random neural network and touch sensors firing on contact of four leg points

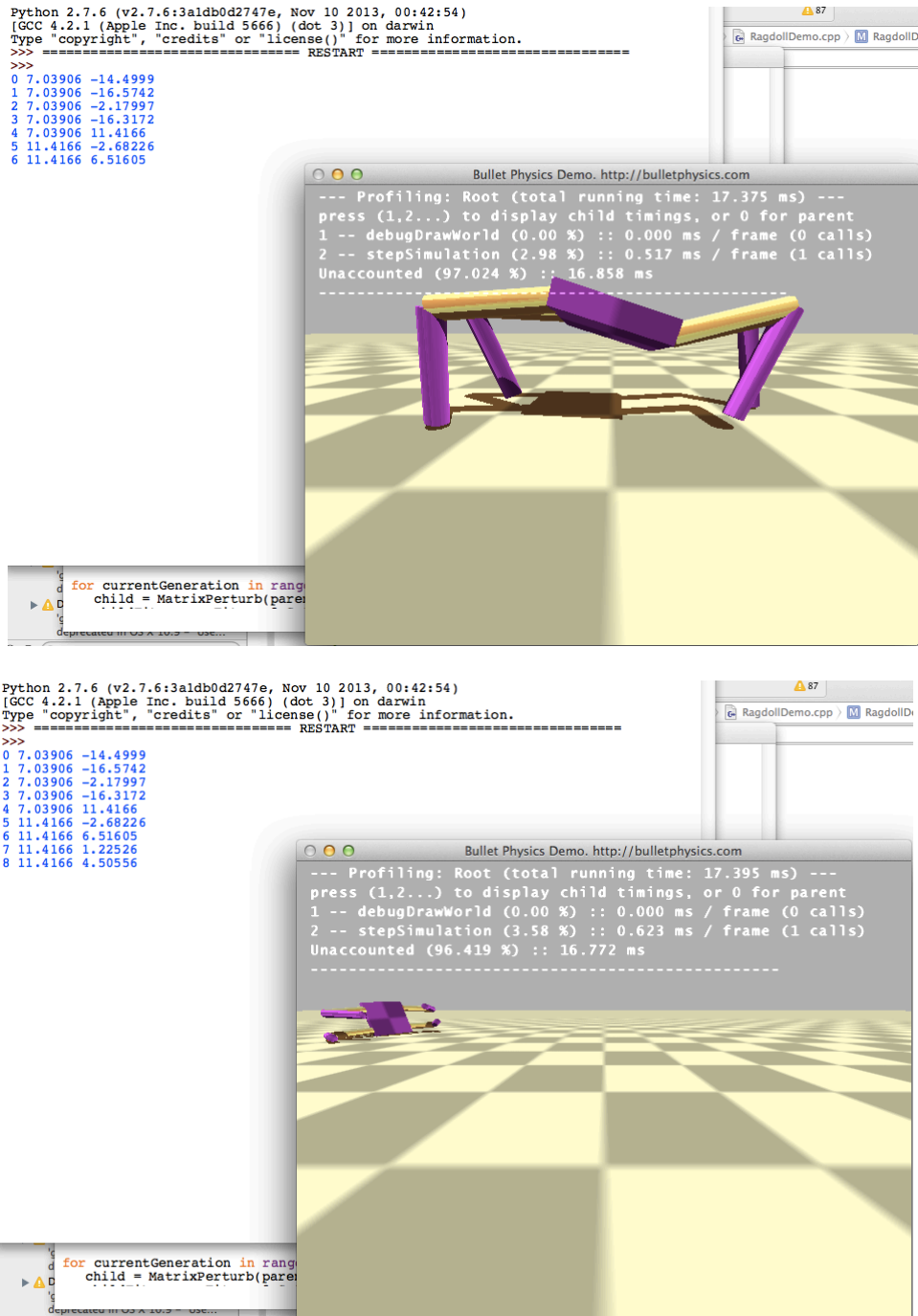


Fig 10.h and Fig 10.2i: Quadruped Robot with high fitness moving into the screen. Evolution found a way to “scoot” the robot forward using the force of only the two back legs to do so. I plan on adding touch sensors to the sides and top of the square body that, when triggered, will punish for this kind of motion and for flipping over. The punishment will be added to the evolutionary algorithms of the quadruped we created and the hexapod I am working on for weekly report three as well. This will keep the evolutionary algorithms and neural networks of the three robots as similar as possible, allowing me to test which morphology is most desirable.