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COMP.4200
Professor Mwaura
Nov 17, 2017

Final Project - First Check In
Salem Shaheen, Jonathan Murphy

So far, Jonathan and I have created a representation of our version of the Wumpus model that we are using for our project. I used NumPy to create a matrix, and Jonathan added a function to make it more dynamic. Jonathan also worked on a visualization of the matrix with PyPlot. The matrix is made up of numbers then I used a dictionary to connect each number to things like 'breeze,' or 'food,' like in the Wumpus model. Jon created another dictionary that maps those attributes to colors and then used that to visualize the matrix.

For the next part of the project Jon and I plan to implement one of the foraging algorithms. We decided to start with the ant foraging method because it is the simplest of the two. Ant foraging has each agent perform the same task from the beginning to the end, whereas the bee foraging method consists of agents completing different tasks and even switching jobs.

Originally, we were confused about the methods we were using, thinking that we were supposed to use the uninformed and informed searching techniques that we learned in the beginning of the class. However, I think we are supposed to focus on the two foraging methods I mentioned above. Because of this, I'm not sure if the Wumpus model we created is actyually applicable to our project. After watching some videos about foraging algorithms with swarm robotics (using microbots as well as graphical simulations) I'm afraid that we aren't on the right

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track and may have to do some more research. This also worries me about our ability to complete and implementation of the foraging method. Hopefully, we will be able to learn everything quickly since the next part of our project is implementing the ant foraging algorithm.

We are on track regarding our schedule, but we may have to work very long and hard to complete the ant foraging model before the second check in, as planned. If not we will have to complete it before the final due date and presentation. We plan to have ant and bee foraging complete by then, but I am worried about our ability to complete the ant model, so I'm not sure if we will be able to get to the bee model. As long as we have one model working I think we will be okay.