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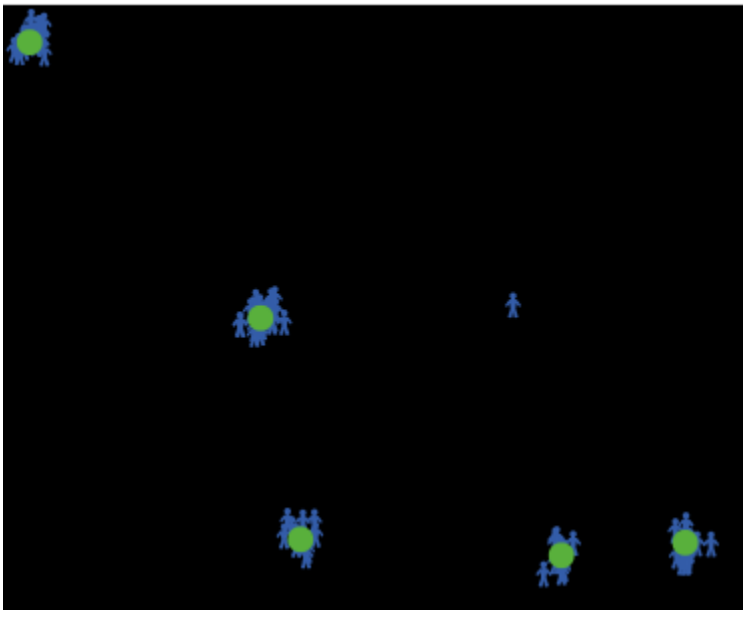
Lab 01 (L01)
ITAI 4373
Professor McManus

Lab 01: NetLogo

1. ***Learning Outcomes**:*
    - Discovered new, web-hosted technology for quickly, and effectively committing realtime experimentation with model development.
    - With the plethora of examples available off of the main site, nearly anything could be modeled with these agent systems; gas/fluid simulation, foraging agents and the like.
2. ***Technical Skills**:*
    - Learned about the interesting system behind NetLogo itself
    - Introduced to a relatively uncomplex system for rapid model development and running.
3. ***Challenges and Solutions**:*
    - The code provided by the assignment failed to compile; had to do a full refactor inclusive of newline characters, and adjusting the “agents” declaration into “animals,” to avoid erroring out on attempted loads.
4. ***Critical Analysis**:*
    - At present, even in its primitivity the model displays how naturally herding tends to develop when motivated by a particular goal; in this instance food sources that exist within a common space.



    - A limitation to the initial model provided, there is no logic for the actual consumption of the food (that I could discern, the lack of delimiting characters in the language is a bit restrictive, compounded by the severe lack of newline characters from canvas’ monospace code blocks), so agents violently oscillate in

position on top of the food for the remainder of their lifetime, only to inevitably perish.

5. ***Course Connections:***
    - The flexibility and quick mutability of the agents in this digital simulation are an excellent example as to the boons of such a system; it is incredibly quick and easy to modify behaviours on the spot, as need arises. Fast, safe prototyping is invaluable in general, especially so in the current climate of artificial intelligence.
6. ***Personal Reflection:***
    - As one of my primary pillars for working in artificial intelligence is in video gaming, this exercise felt much similar to establishing behaviours for enemies/allies, and no doubt the idea could be expanded even further in that direction, allowing for this tool to aid in building such robust creature models.