Homework 6

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For my project, I want to create a program that models “crown shyness” in trees. Crown shyness is a natural phenomenon where fully grown trees do not touch each other, so it looks like there are paths in between the trees’ canopies. It usually occurs in trees of the same species but can occur between species. I would also like the user to be able to select the number of trees used for the simulation. An additional feature could be movement of the view both closer and farther from the tree tops and in other directions. Some examples of this phenomenon can be seen below.

The base code for this project would be an L-systems generator for fractal trees with some modifications and additions. I can also utilize the concept of agent based forms and agent movement to create the effect of trees not touching each other. Some examples of this being implemented are included below. Diffuse limited aggregation structures could also be a good foundation for the program. So far in my research, I have not seen any programs that already model crown shyness, so this project will be a unique spin on traditional 3D fractal programs.

Gantt Chart:



