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Senior Design 1
Intermediate Planning Assignment

Updates:

- Our scope has changed in the way that our new scope involves simply getting an environment made with basic creatures that evolve over generations. This is the minimum project we will have done by April next semester. We have more ideas that we intend to add if we have ample time. These involve adding functionality to how the creatures are created using a joint-based system. We would also like to add procedural world generation to give the creatures a larger space to utilize.
- Our goal has remained the same, but the focus is now based more on giving people a visualization tool for how genetic AI algorithms work, and to create a fun game that people can play. By focusing more on the visual aspect of this game, we can make this more possible. We have also changed the programming language we plan on using. We decided against Java since getting a working UI that looks good in Java would be harder. In lieu of this, we are planning to use the game engine GoDot to complete the project.
- Our plan/timeline has remained the same.

What we will deliver:

- We can promise to deliver a working UI/game with a 2D environment that has creatures that reproduce and evolve over generations in order to better survive. This is the minimum viable project that we can definitely do by April 2024.
- Currently we don't have diagrams or a visual description of our project. Our idea for the project is to make a UI/game with a visualization feature that would display the evolution of species and how they interact with the environments. We plan on using a select few genetic learning algorithms to compute and create offspring for species. We plan on synchronizing these Machine Learning processes with an interactive UI developed using a game engine. We plan on using GoDot for our game engine.
- Our original plan is as follows, I will handle the visuals for our 2D display. Austin will work on the UI, Zakk and I will work on creating and developing the classes for the genomes as well as working on the genetic learning algorithms. We will all work together to synchronize our UI with the Machine learning.