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CIS 4930 Python

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Flappy Bird AI

For the final project I want to create something that pictures one of the reasons I got into Computer Science, video games, these being on large systems such as PS4, Xbox or nintendo, to the more traditional systems and new growing market, Smartphones and Computers. This being my last year at Florida State University as an undergrad in Computer Science, I want to use this opportunity to put some of the knowledge I have acquired during my studies into the creation of this project.

For this project I will be making a Flappy bird AI. Last year I took Computer Graphics with Professor Gao and taught us how to make different objects and rendering images with C++, I want to put some of that knowledge into this project as I believe it will be interesting to figure out how python is able to achieve such task.

For this project I will be using the NEAT algorithm, an evolutionary algorithm that creates artificial neural networks. The libraries I will be using for this project are pygame, random, os, time, neat, visualize and pickle.

I plan on spending a total of two weeks working on this project to make sure it works the way it is intended and allowing me enough time to work on bugs and unexpected errors.

I will start by doing some research as how does python render images and what are the best way to implement the tasks I need in a proper manner to allow the program to load and run without lags.

I will also need to do some research as to how AI works and how is it able to learn the tasks I implement.

Lastly I might want to give myself somewhat of a challenge and will want to implement this game for a potential user to play & perhaps challenge this to beat the score of the AI.