MET CS 664-A1 **Fall 2022**
Artificial Intelligence **Due: 5 Oct 2022**

Semester Design and Implementation Project Proposal

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Team Name: ____FruitBots_____

Project Title: __Exploration into resource-limited adversarial AI stratagems_____

Technology Platforms (OS, etc.): __fruitbots.org, neural networks/TensorFlow (potentially)_____
AI Tools utilized (can be none) _____

Programming Language(s): _____Python, JavaScript_____

Project Description: (Be sure to include the area(s) of Artificial Intelligence you will focus on)

____Our project will focus on exploring the effectivity of various adversarial AI game strategies via the online fruitbots.com platform. This environment allows for competition between 2 AI agents utilizing pre-determined algorithms on a semi-random game-space. We will strive to create the best-performing 'bot' through comparing, combining, and optimizing various known search and competitive algorithms. We will be able to measure performance compared to our own bots, as well as the 1300+ bots uploaded to the platform and their ranking system.
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What we will learn from this Project: (Why did you choose this Project?)

__This project is of particular interest to learn not only how to develop and optimize adversarial AI, but to do so in a resource-limited environment. These two factors combine to pose an interesting and real-world applicable problem that will necessarily expose us to many different algorithms, as we will need to identify which performs best. In addition, we may be able to explore the use of neural networks to develop a 'trained' bot. _____

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Potential Implementation Problems: (What do you think will give you the most trouble?)

___Being able to identify algorithms that will run to completion before the allotted time or will only utilize the allotted memory while giving the bot a 'solution' for the next move will be challenging. For a similar reason, I am not sure if we will have enough resources to implement a sophisticated enough neural network to be effective. _____

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