Project Description

Proposed Topics:

- 1. Al for <u>Tiny Islands</u>, a turn-based grid-based strategy game that involves placing different terrain tiles and drawing islands to earn points. This project will involve two stages: The first is a state search algorithm to determine the best high score given a known seed; and the second would be to train a reinforcement learning model that can exceed at obtaining an effective high score without prior knowledge of the seed's configurations.
 - 1. Cost-opt search given a single state of board
 - 2. Reinforced learning for any possible configuration state.
- 2. A chess AI that has distinctive play styles and "personality/traits", not just "aggressive/sacrificial vs reserved/defensive". Traditional chess AIs have simple configurations based on move priority or depth count. Usually a lengthy literary description is included for user experience, but actual gameplay is lackluster.
- 3. An AI that can identify a certain type of object (probably will be pretty specific given our scope) from inputted images. For example, identifying bikes from other modes of transportation. (Possibly computer vision)
- 4. An AI to play minesweeper, implying that we create the minesweeper application. The AI will attempt to solve the Puzzle in the least amount of time utilizing multiple different strategies.

Term Project I: Group Selection

Group Members

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