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CSCI 164, AI

20 May 2016

Pokémon Battle

**Introduction**

I have no background in Artificial Intelligence, but I find it interesting. I am currently a Computer Science major, with a minor in Aerospace Studies. I am a senior in the Air Force ROTC on campus and plan on becoming an officer in the Air Force after college. My passions include space, history, and computing. When I was younger I would play Pokémon all the time on my Nintendo Gameboy and DS.

**Problem**

I’m interested in making an AI that can take a Pokémon battle, analyze it, and find the optimal moves and outcome for the battle. This means that the Ai will find the best way to get the player’s pokémon to win with the least amount of damage. Then to win, the adversary’s pokémon needs to be defeated. And finally, it should find this in the least amount of moves.

**Solution Approach**

The first thing I’m going to do is create a MiniMax tree filled with the possible moves of both the player’s pokémon (the max moves) and the opponent’s (the min moves). I would then add Alpha-Beta pruning to the MiniMax algorithm.

**Evaluation Ideas**

The ways to evaluate the program will be to see how many times it wins, how well it does with each battle (how much life is left in the player’s pokemon), and how long the battle lasts for. The optimal solutions will win often, have a lot of the player’s pokemon’s life remaining, and have the battle over very fast.