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CSCI 447-A Game Development

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Project 2, part 2, beta AI implementation

I first made a copy of the logic for the alpha AI, to use as a baseline. I then set the delta value for the beta AI to use the muddle function mentioned in class. This did not work, so I made the AI have a chance to bluff and bet the max amount when otherwise it wouldn’t. this was set to happen 20% of the time. This tricks the opponent into assuming the AI has a better hand than they might actually have, and play incorrectly as a result.

I was originally not certain what I wanted to do to improve the AI, and implemented the muddle function, which had mixed results, and generally made the AI worse. Then I implemented bluffing. This worked much better.

* Testing & implementation
  + - If an alpha player faces a beta player, 100 matches are run consecutively, and the final score is checked to see which performed better in that timeframe. This is repeated a number of times and the number of times the beta wins are tallied.
      * + Sample of some game results & final tally

Game Finished. Alpha Player had: 758 chips and Beta player had 1242 chips.

Game Finished. Alpha Player had: 1002 chips and Beta player had 998 chips.

Game Finished. Alpha Player had: 972 chips and Beta player had 1028 chips.

Game Finished. Alpha Player had: 699 chips and Beta player had 1301 chips.

Game Finished. Alpha Player had: 520 chips and Beta player had 1480 chips.

Game Finished. Alpha Player had: 932 chips and Beta player had 1068 chips.

Game Finished. Alpha Player had: 550 chips and Beta player had 1450 chips.

Game Finished. Alpha Player had: 542 chips and Beta player had 1458 chips.

Game Finished. Alpha Player had: 432 chips and Beta player had 1568 chips.

Game Finished. Alpha Player had: 579 chips and Beta player had 1421 chips.

The Beta AI won 95 games out of 100