Partner 1 Angus Hsieh
Partner 2 James Huang

"Assignment 3 for CSE 415, Spring 2021, University of Washington"

Deterministic Simplified Backgammon Agent

Angus: Minimax search, Alpha Beta pruning, statesAndCutoffsCounts

James: staticEval, Minimax search, Alpha Beta pruning

staticEval:
we have two variables, red and white. For each red or white piece, we have value in unit of 1 as they get closer to the home base. White +1 and red -1 since the white player wants to maximize the score. And there's a unit of 100 for piece off. For the bar count, since white hit from bar has more priority than that of bearing off, the unit is set to be greater than 100, which we set it to 500. Red hit from bar has more priority than white hit from bar, so the unit is set to 700, which is greater than 500. And for white about to win, it has the greatest priority among what above mentioned, the unit is set to have 5000, which is obviously greater than 700. And lastly, the goal state has the biggest value because that's the objective of the game.

Alpha-Beta pruning:
Make sure to compare alpha or beta values to a provisional value regardless what the move is for the given state.

Other comments on the implementation:
make sure you know what to return and what value to update in which condition.

Stochastic Simplified Backgammon Agent
We both discussed and did it in a relatively fast manner compared to DSBG.

Partnership retrospective (required for the partnership bonus).
Issues: Time management for both partner to work together and some disagreements might come out.
Lessons you learned as a result of working in this
partnership -- Angus Hsieh: Having a partner helps me to be more comprehensive about the assignment because sometimes I might dig into a wrong direction without getting noticed.
Lessons you learned as a result of working in this
partnership -- James Huang: I've learned that by working together, it's easier to double check and so the bug fixing time is shorter.