

Project 1 Report

Theory of Computer Game

Name: Kai-Jie Lin
Student ID: 110652019
September 30, 2022

1 Method

My method for this game is greedy approach and corner strategy. The agent will priorly choose the biggest reward between sliding right and sliding down. Thus it can make the biggest tile stay in the right down corner. In the experiment section below, we can see that the performance between four corner approach won't vary too much. Since the placer is randomness, the best performance one do not mean the best approach, it is just lucky.

2 Experiment

I use different approach to see the difference of their performance. In the left column, Random means we randomly choose four action, Greedy is taking the action with max reward, and corner one is concentrate the tile in the corner and do greedy to take action with max reward. We can see that the a simple greedy approach and corner strategy can get well assessment under the given judger.

Table 1: Compare with different strategy

Approach	Assessment	Avg score
Random	65.8	287
Greedy	88.8	705
Up right corner	95.5	876
Down right corner	93.3	805
Down left corner	92.6	787
Up left corner	93.5	811