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# CS 182 Final Project Status Update

Presentation preference: Poster

Problem we are working on:

After much deliberation, we have decided to work on developing an intelligent solution to the popular vintage video game, Tetris.

Progress we have made so far:

At this point, we have found a user interface for playing a regular game of Tetris that fits our needs well. The user interface is coded in Python and can be played using the pygames platform, which we have now installed and troubleshooted on our computers. We have familiarized ourselves with the UI and the code behind it, and we have begun to modify the code to include an intelligent game-playing agent.

So far, we have implemented functions to determine the ideal place of whatever stone is currently falling according to the current state of the board, as well as a function to actually move the stone to that position programatically. For each potential rotation and final resting position of the currently falling stone, ideal_place calls a heuristic function, which we have not yet written, to determine the utility of the stone falling into that resting place in that rotation. ideal_place then returns the rotation and final resting position that produces the board with the best utility.

The rotation and final resting position produced by ideal_place is passed into another function, place_brick, that programatically maneuvers the falling stone into the correct column of the board such that it will eventually end up in the ideal final resting position.

Problems we have run into so far:

The biggest issue we have had so far was settling on this problem as a final project idea, because we had significant difficulty finding a project of sufficient scope that thoroughly utilized the content we have learned in class and fit our interests well. Now that we have committed to a project idea, we have successfully overcome the learning curve of familiarizing ourselves with a new UI and code base, and have fairly efficiently eliminated the bugs in the code we have been writing.

As we continue the project and attempt to incorporate more complex algorithms and the heuristic, if we encounter problems, we will promptly be in contact with Jaemin for advice.