Project Submission

Part 1: Coding and Analysis

1. Download the template code:
   https://github.com/udacity/AIND-Isolation
2. Implement the following functions in `game_agent.py`:

    - At least three custom heuristic functions (only one of which should be submitted, as `custom_score()`)
    - An iterative deepening adversarial search function: `CustomPlayer.get_move()`
    - A minimax adversarial search algorithm: `CustomPlayer.minimax()`
    - An alpha-beta pruning minimax search: `CustomPlayer.alphabeta()`

3. The `get_move()` method should call either minimax or alpha-beta depending on the method selected. Iterative deepening should be used if the iterative flag is set.
4. For each of your three custom heuristic functions, evaluate the performance of the heuristic using the included `tournament.py` script. Then write up a brief summary of your results, describing the performance of the agent using the different heuristic functions verbally and using appropriate visualizations.

Submit the code file: `game_agent.py`
Submit your analysis as: `heuristic_analysis.pdf`
Your analysis should conclude with a comparison of the different heuristics and your reasoning for choosing the heuristic you ultimately use in your submitted agent.

Part 2: Research Review

The field of Artificial IIntelligence is continually changing and advancing. To be an AI Engineer at the cutting edge of your field, you'll need to be able to read and communicate some of these advancements with your peers. In order to help you get comfortable with this, in the second part of this project you will read a seminal paper in the field of Game-Playing and write a simple one page summary on it. Here are your instructions:

1. Select a Game-Playing paper from the following list or another of your choosing:

    - **Game Tree Searching by Min / Max Approximation** by Ron Rivest, MIT (Fun fact, Ron Rivest is the R is in the RSA cryptographic protocol).
    - **Deep Blue** by the IBM Watson Team (Fun fact, Deep Blue beat Gary Kasparov in Chess in one of the most famous AI spectacles of the 20th century).
    - **AlphaGo** by the DeepMind Team.
    - Other paper on Game-Playing of your choosing.

2. Write a simple one page summary of the paper covering the following:

    - A brief summary of the paper's goals or techniques introduced (if any).

- A brief summary of the paper's results (if any).

Submit this as: `research_review.pdf`

Submission

Submit your work by uploading a .zip file containing all your work, which must include the following files:

- `game_agent.py`
- `heuristic_analysis.pdf`
- `research_review.pdf`

Evaluation

1. Make sure you pass all the tests in the repository.
2. You will be evaluated according to the project rubric **here**.