

Competitive Analysis: PokerBot

As one can probably imagine there are a number of extremely high-performing poker AI's already available online. In fact, the University of Alberta has a whole research group dedicated to the study of computer poker! Thus, it is not my goal to write a competitive PokerBot. Instead, I wish to write an intelligent poker simulator that can be used by beginning poker players as "game footage," so to speak. Many of the poker games that one can watch online are in-person matches (World Series of Poker, etc.). Few services give you the readout of a poker game in an accelerated way. I plan to write an intelligent PokerBot, but also have a user interface such that reviewing the game later is not hard. With this UI, a user could write their own PokerBot and watch it play as well.

Many computer poker games are recorded by screen capture and uploaded to YouTube. Here is one example: https://www.youtube.com/watch?v=F1JBw_XhmaQ. These videos are instructional, but they do not allow modification of the poker bots or any other interactive features. My PokerBot engine would come with pre-written bots (for testing), but then also allow players to write their own and watch similar-looking 'game footage' after.

Despite the limited functionality of a screen-capture YouTube video, there are some features that I think are solid:

- distinguish players in a non-numerical manner (names)
- display stack size as a number (\$ value)
- Poker table color scheme (green background)
- Pop-up rectangle with text next to a player when they act
- The user should be able to specify features before the game starts. I will have to write a python wrapper script** that
 - generates a splash screen where the player can input
 - number of players
 - bot type for other players
 - bet sizes
 - writes to the config.txt file for the game engine
 - calls the bash script that runs the game engine
 - calls python script for the player's bot.

I will discuss the technical issues of ** in the project proposal

Features I think need to be added:

- One might as well **display the pocket cards for all players**.
 - The footage will not be live, anyways.
 - Even if it were, the user should not interfere with their bot during play.
 - This feature would allow the user to better see how their bot plays in the face of asymmetric information.
- Print out a text 'log' of the game
 - Conveniently, the poker engine I'm using already does this automatically.

The second key competitor worth examining is PokerStars. Before the Unlawful Internet Gambling Enforcement Act was passed in 2006, PokerStars was the biggest online platform for player poker with real money. As more people realized that one could write bots to play poker on many tables at once, the possibility of making money on PokerStars declined, and its real money service was shut down. PokerStars has many of the same features as those showcased in the video above.