Scott Layton

Robbie Plankenhorn

Rob Webb

**Milestone 2**

**Project Description:**

Our project is to create an intelligent system (dubbed “The Poker Coach”) that will assist a human player in the card game of Texas Hold’em.

The main tasks include:

* Create a user interface that can be used while a human user is playing a hand of Texas Hold’em.
* Create statistical functions that can be used by the system to determine how the human user should play their hand.
* Keep a database of past hands as well as data on individual opponents that the user will encounter while playing and use this data to further increase the user’s chance of winning.

Domain:

A windows application to be used on a personal computer.

Users:

One human user.

The main goals for the “Poker Coach” are as follows:

* To provide the human user with worthwhile statistical advice about their two-card hand (standard in Texas Hold’em).
* To provide the user with updated statistics as each hand progresses from pre-flop, flop, turn, river, and showdown.
* To provide intelligent advice on how the user should play based on the users current chip count (unit of value) and the bets being made by opposing players.
* Keep data on opponents betting strategies and use this data to offer advice to the user.
* Win, the ultimate goal of this system is to win more poker hands.

**Existing Systems:**

Several poker software systems exist that perform essentially the same tasks that our system is designed to do. Some examples of existing software are Wilson Software’s “Turbo Texas Hold’em”, pokerinspector.com’s “Online Poker Inspector”, and texasholdemcompanion.com’s “Total Texas Hold’em Companion”. All three software releases vary in their design of ways to help users win. “Total Texas Hold’em Companion” is entirely statistics based while “Turbo Texas Hold’em” does claim to use an A.I. element. Our system would differ from all three of these software releases by merging statistics, A.I. elements, and the use of a database to increase the user’s chance of winning.

**Requirements:**

Functional:

* Provide users with advice on how to play their hands with the goal being to win more poker hands. This advice would be based on statistics, betting strategy, and data kept on previous hands and opponents.
* Provide said advice in a timely manner; in a way that would not slow down the general flow of a game of poker between up to 10 human players.

Optional:

* Add graphics that include card faces, etc.
* Allow for varying styles of play; aggressive, tight, etc.

**Evaluation Criteria:**

Simply, does following our programs advice make you win more hands of Texas Hold’em than you would on your own? A simple way of checking this would be to have a player play 5 games on their own, while keeping statistics on their play. The player would then play 5 games with our poker coach, following the poker coach’s advice on every play. If the poker coach increases the player winnings or places them higher in tournament play, after multiple experiments of this type, it can be judged a success.

**Schedule:**

Week 2:

* Compile statistics and information on Texas Hold’em. This can include betting strategies and how to get odds.
* Begin creation of user interface.
* Create skeleton of code, functions etc.

Week 3:

* Construct testable prototype that can present pre-flop odds based on users two-card hand
* Begin database development.

Week 4:

* Having an alpha prototype to test that can offer advice through one full hand of Texas Hold’em.

Week 6:

* Have beta prototype that keeps statistics on user hands and opponent hands. Prototype able to use data in determining how to play hand.
* Graphical interface completed.

Week 8:

* System completed.

Week 10:

* Final documentation completed
* Evaluation of other teams completed