Building predictors for the game mia

Anonymous ACL submission

Abstract

1 Credits

This document has been adapted from the instructions for earlier ACL and NAACL proceedings, including those for NAACL-2016 by Margaret Mitchell, ACL-2012 by Maggie Li and Michael White, those from ACL-2010 by Jing-Shing Chang and Philipp Koehn, those for ACL-2008 by Johanna D. Moore, Simone Teufel, James Allan, and Sadaoki Furui, those for ACL-2005 by Hwee Tou Ng and Kemal Oflazer, those for ACL-2002 by Eugene Charniak and Dekang Lin, and earlier ACL and EACL formats. Those versions were written by several people, including John Chen, Henry S. Thompson and Donald Walker. Additional elements were taken from the formatting instructions of the *International Joint Conference on Artificial Intelligence* and the *Conference on Computer Vision and Pattern Recognition*.

2 Introduction

3 The Game

Mia is a simple dice game that is played with two dices and a flat bottomed container (or a dice cup). At the beginning each player has a certain amount of lives (e.g. five). The first player rolls the dices but keeps their values hidden from the other players. He then can decide if he wants to tell the truth to the next player and announce a value that was was actually rolled. Alternatively he can lie and announce a greater or lesser value than the rolled one. But each player has to announce a greater value than the previous player.

The next player (who still has not seen the actual values) can now believe the passer, call the passer a liar and look on the dice or pass the dice to the next player (still without looking) announcing a higher value.

A player looses a life if he called the previous one a liar and looked on the values to find out that they are what the previous player has announced or even higher. Otherwise the previous player looses a life.

The higher value of the roll is multiplied by then and then added to the other die (a 4 and a 2 is 42). The **scoring** is from highest to lowest: 21 (Mia), 11, 22, 33, 44, 55, 66, 65, 64, 63, 62, 61, 54, 53, 52, 51, 43, 42, 41, 32, 31.

If a player announces mia the next player either believes him, give up (without looking at the dices) and looses one life. Or he may look at the dice. If it was actually mia then he looses two lifes if it was not, the previous player looses a life. (For further information see (mia, 2016).)

4 The Strategies

4.1 Statistic Approach

4.2 Approach with certain degree of randomness

4.3 A SVM learning approach

5 The predictor

Acknowledgments

The acknowledgments should go immediately before the references. Do not number the acknowledgments section. Do not include this section when submitting your paper for review.

References

[mia2016] 2016. Mia (game). `https://en.wikipedia.org/wiki/Mia_(game)`.

A Supplemental Material