Code Description of wasabi

wasabi: Toshiki Mizukoshi*

1. INTRODUCTION

Wasabi publish 'Do Android Dream of Werewolves?' which is a game of 'Are You a Werewolf?' on Google Play**. This app is designed to play 'Are You a Werewolf?' alone. Wasabi aim to develop an algorithm which can be configured a lot. Wasabi customized the algorithm for AIWolf Contest. In this paper, the author presents the algorithm for AIWolf Contest.

2. BASIC STRATEGY

When seer or medium is assigned to the agent, it declares its role. When bodyguard or werewolf is assigned to the agent, it doesn't declare its role. When possessed is assigned to the agent, it fakes a seer.

The agent has confidence level for other agents. Confidence level is calculated by two factors. One is objective factor as divined and identified results The other is subjective factor as utterance and vote results. These factors are expressed from 0 to 1. The agent decides action depending on confidence level.

TALK: The agent talks to estimate someone had higher confidence level to be villager or had lower confidence level to be werewolf.

VOTE: The agent votes for someone had lower confidence level.

DIVINE: The agent divines someone's role had closer confidence level to a half.

GUARD: The agent guards someone had higher confidence level.

ATTACK: The agent attacks someone had higher confidence level.

DIVINE(POSSESSED) The agent talks to divine someone's role had higher confidence level to be villager or had lower confidence level to be werewolf.

3. GROUPING

If you decide that the agent attacks someone had highest confidence level always, attacked agent will be guarded easily. On the other hand, If you decide that the agent attacks someone randomly, attacked agent will be not appropriate for werewolf. In order to solve this problem, the agent make some groups with close confidence level. When the agent chooses a group, it selects a group and selects one in the group randomly. It has an advantage that the agent doesn't have to change the selecting algorithm when the player number was changed. The number of group was decided by the winning percentage of play against computers.

4. PARAMETER

If the agent only take a fixed action, its action is easily guessed. In order to solve this problem, the agent was configured five parameters like big five.

OPENNESS TO EXPERIENCE: Importance of past data

CONSCIENTIOUSNESS: Importance of objective factor

EXTROVERSION: Frequency of talk

AGREEABLENESS: Frequency of estimate to be villager

NEUROTICISM: complexity of action

These parameters were decided when the agent was created.

_____
∗ ma15082@shibaura-it.ac.jp
∗∗https://play.google.com/store/apps/details?
id=com.wasabi.dadw