

4th International Werewolf Intelligence Convention

Team name :takoyaki

1 First

1.1 Environment

- AIWolf platform ver0.6.3
- Path:org.aiwolf.aiwolfgenerator.Takoyaki

1.2 Outline

Agents were created using the Werewolf Intelligence Project's Simplified Generation Generator. Agents were created based on the parameters of KP22, the winner of the 3rd International Werewolf Intelligence Competition. The best parameters were selected by preparing agents with slightly different parameters and playing them against each other in the same situation.

2 Create Agent

One strategy was modified for each position based on KP22 in the simplified generation parameters, and it was played in the following way.

2.1. How to play agent

1. prepare the changed agents and the original agents used as references
2. prepare the remaining agents from the 3rd International Werewolf Intelligence Convention
3. prepare a total of 5 agents or 15 agents.
4. play 5 sets of 1000 matches.
4. play 5 sets of 1000 matches (to avoid position bias). (To prevent bias in the positions) 5.
5. record the results of the Log, etc.
6. analyze and display the win rate for each position and the winning situation over the course of the matches.
7. compare with the original agent.
7. compare with the original agent, and if the winning rate is higher, adopt that parameter.
8. correlate the winning rate and strategy in the game, and change the parameters that are high in priority.
9. repeat 1~7.
9. repeat steps 1~7.

3 Strategy(5-person village)

3.1 Villager

Targeting werewolves, protecting Seer, actively speaking up about suspicious people, and actively learning the habits of your opponents.

3.2 Seer

Aim at werewolves, do not protect Seer, be proactive in saying who you suspect is a werewolf, tell who you think is a werewolf, tell who has the best chance of winning, be honest about report Seer results, and be proactive in learning your opponent's habits.

3.3 Werewolf

Voting is balanced, do not protect Seer, statements are balanced, attack targets are balanced, aim for those with a high win rate, Seer results reports with more black, and actively learn your opponent's habits.

3.4 Possessed

Voting is balanced, do not protect Seer, statements are balanced, Seer result reports with more white, and the opponent's habits are not learned very well (0.75).

4 Strategy(15-person village)

5 人村との変更点のみ

4.1 Werewolf

Cutting off one's own people in voting, When Seer reports the results, he or she should give more white space to the allied werewolves.

4.2 Possessed

If you are Seer, report the results to the werewolves to give them more white.

5 Strategy Details

Basically, in the villager's camp, I set myself to act aggressively, while in the werewolf camp, I tried to keep a balance when voting so that I would not look suspicious, and I gave out more whites when reporting the results of Seer. The reason for giving out more white is that in a 5-person village, if you are a traitor, the opponent will often be suspicious of you if you give out too much black because the black mark is only one-

fourth of the time. In addition, the learning rate of the traitor's habit is set to 0.75 to reduce the number of exceptions due to the influence of the opponent's habit.

6 Correlation

-----村人-----		
	勝敗	VI1WARIAI
投票1	0.754781	338/499
投票2	-0.555864	59/499
投票3	-0.639881	23/499
保護on	0.169997	471/499
保護off	-0.446510	53/499
発言1	0.469855	274/499
発言2	0.351010	216/499
発言3	-0.758179	257/499
勝敗	1.000000	499/499
-----占い師-----		
	勝敗	SEWARIAI
投票の方針(人狼狙い撃ち)	0.483768	336/499
投票の方針(他プレイヤーと合わせる)	0.319840	91/499
投票の方針(バランス)	-0.529243	9/499
投票における占い師保護(する)	NaN	499/499
投票における占い師保護(しない)	NaN	0/499
発言方針(怪しい人に)	-0.560104	22/499
発言方針(他プレイヤーと同調)	-0.199644	192/499
発言方針(バランス)	0.625939	487/499
占い先決定(人狼だと思ふ人に)	0.709261	463/499
占い先決定(怪しまれてる人に)	0.584193	234/499
勝率に対する占い(高い人に)	-0.011503	205/499
勝率に対する占い(低い人に)	0.415228	203/499
占い報告(素直に)	-0.536462	265/499
占い報告(怪しい人に)	0.078829	114/499
勝敗	1.000000	499/499
-----人狼-----		
	勝敗	WEWARIAI
投票の方針(人狼狙い撃ち)	NaN	0/301
投票の方針(他プレイヤーと合わせる)	-0.539139	26/301
投票の方針(バランス)	0.528862	17/301

Figure 1 Part of the correlation between win rate and strategy

Figure 1 shows some of the correlations between win rate and strategy; correlations were taken after every 5 sets of 1000 matches, and changes were prioritized with respect to those with high correlations. As for those with high correlations, the statement policy, the decision of the divination destination, and reporting were seen to be high, and all of them were seen to be highly likely to be honestly stated or reported. On the other hand, it can be seen that the presence or absence of protection of Seer does not affect the win rate very much.

