

1st International Aiwolf Contest

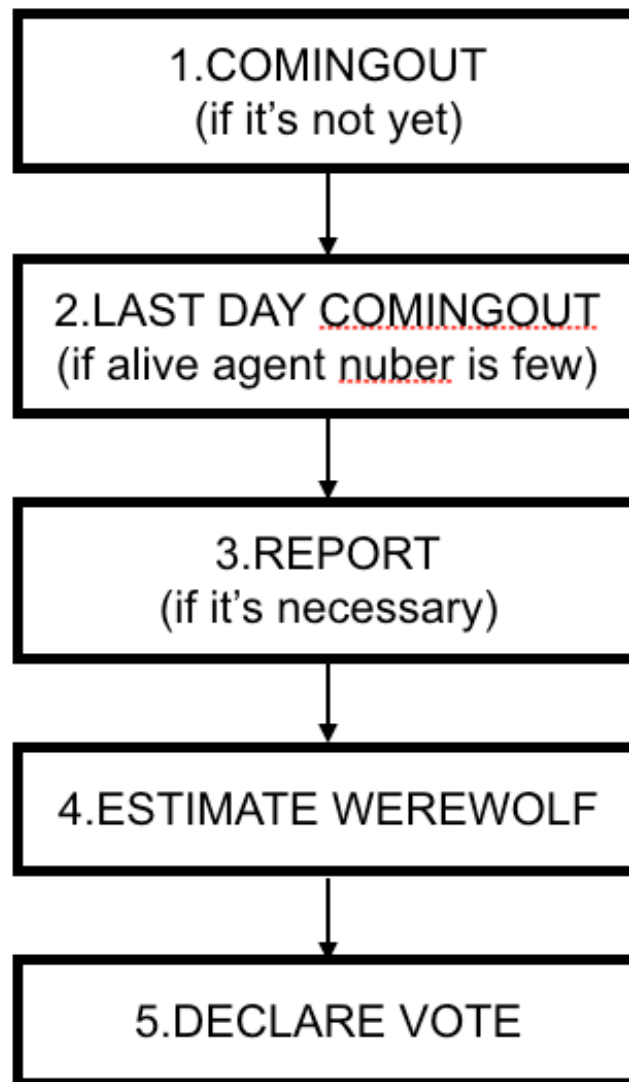
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1. abstract

This agent is based on my last year contest(fourth aiwolf contest in CEDEC2018). Werewolf estimation algorithm in cash repository[1] is used. And, Some strategy is added in my agent.

2. overall strategy

My overall strategy is agent behavior is as same as possible among the roles. This strategy is a measure for cndl role estimation algorithm called TalkFrequency. My agent daily behavior flow is the below figure.



3. role strategy

3.1 VILLAGER

- VILLAGER do comingout as a VILLAGER if comingout is not yet
- VILLAGER estimate that the agent having the highest WEREWOLF probability is WEREWOLF
- VILLAGER vote the agent having the highest WEREWOLF probability
- If agent number is 5 and alive agent number is less than 4, VILLAGER do comingout as a POSSESSED
 - Actually, I want to comingout as a WEREWOLF
 - This is a measure for power play
- If agent number is 15 and alive agent number is less than 6, VILLAGER do comingout as a POSSESSED

3.2 WEREWOLF

- If agent number is 5
 - WEREWOLF do comingout as a SEER if comingout is not yet
 - If any agents do comingout as a SEER, WEREWOLF report that agent is WEREWOLF
 - If any agents do not comingout as a SEER, WEREWOLF report that the agent having the highest WEREWOLF probability is HUMAN
 - WEREWOLF estimate that the agent having the highest SEER probability is WEREWOLF
 - WEREWOLF vote the agent having the highest SEER probability
 - If alive agent number is less than 4, WEREWOLF do comingout as a POSSESSED
 - WEREWOLF attack the agent having the lowest POSSESSED probability
- If agent number is 15
 - WEREWOLF do comingout as a MEDIUM if comingout is not yet
 - But, WEREWOLF doesn't report identified result
 - This is to align the behavior among other roles
 - WEREWOLF estimate that the agent having the highest VILLAGER probability is WEREWOLF
 - WEREWOLF vote the agent having the highest VILLAGER probability
 - If alive agent number is less than 6, WEREWOLF do comingout as a POSSESSED
 - WEREWOLF attack the agent having the highest VILLAGER probability

3.3 SEER

- SEER do comingout as a SEER if comingout is not yet
- If day is 0, SEER divine the agent that has the highest win rate in this match
- If day is not 0, SEER divine the agent that has the highest WEREWOLF probability
- If SEER divine WEREWOLF agent, SEER report that agent is WEREWOLF
- if SEER divine HUMAN agent and the agent divined WEREWOLF is alive, SEER report that agent is HUMAN
- If SEER divine HUMAN agent and the agent divined WEREWOLF is not alive, SEER report the agent having the highest WEREWOLF probability is WEREWOLF
 - This is fake divination
- If the agent divined WEREWOLF is alive, SEER vote that agent
- If the agent divined WEREWOLF is not alive, SEER vote the agent having the highest WEREWOLF probability
- Other behavior is same as a VILLAGER, but last day comingout doesn't do

3.4 MEDIUM

- MEDIUM do comingout as a MEDIUM if comingout is not yet
- MEDIUM report identified result
- Other behavior is same as a VILLAGER, but last day comingout doesn't do

3.5 BODYGUARD

- BODYGUARD guard the agent having the highest VILLAGER probability
- Other behavior is same as a VILLAGER

3.6 POSSESSED

- POSSESSED do comingout as a SEER if comingout is not yet
- If number of agents doing comingout as a SEER is 1, POSSESSED report that agent is WEREWOLF
- If number of agents doing comingout as a SEER is not 1, POSSESSED report that the agent having the highest WEREWOLF probability is HUMAN
- If the agent divined WEREWOLF is alive, POSSESSED vote that agent
- if the agent divined as HUMAN from SEER, POSSESSED vote that agent
- if the agent divined WEREWOLF is not alive, POSSESSED vote the agent having the highest VILLAGER probability
- If agent number is 5 and alive agent number is less than 4, POSSESSED do comingout as a WEREWOLF
- If agent number is 15 and alive agent number is less than 6, POSSESSED do comingout as a WEREWOLF

[1] <https://github.com/k-harada/AIWolfPy>