1st International Competition on Werewolf Game in ANAC, IJCAI @ Macao, 2019
Team : GO1DeNO

0. Introduction
    We knew that the AI Werewolf Game competition has become an international. We
    participated with interest.

1. Environment
    Development environment: Java
    Path: GO1.DeNO.yorudakara.Onaka.pekopekoPlayer

2. Model outline
    The basic algorithm is based on the code of the 4th convention participant "f6wbl6".
    The algorithm for estimating the role from the action and the speech probably judged
    that the accuracy was already obtained. Therefore, we prepared several behavior
    patterns so that others could not analyze the behavior. It is a model that aims to
    reproduce behavior that humans are playing.

3. Algorithm
    Behavior selection model
    We have prepared several behavior patterns to take humanly action. If it becomes one
    pattern, AI will learn it easily. From here on there is a statement that "Mood" is to
    select an action. "Mood" means random numbers. It is a good way to take unexpected
    action, as it doesn't make sense to let AI learn the rules of random numbers.

    Explanation of each role
    VILLAGER role
    ● Same as the behavior pattern of f6wbl6, the first day, I do not speak until the fortune
      teller speaks. I vote for people who are likely to be voted by everyone.
    ● On the second day, I change my behavior according to the survivors' coming out
      (CO).
      ・Pattern 1: Me (Villager) + No CO + Seer CO
      1) When Seer CO is a real seer
      Real seer knows that one is white and the other is black. I say myself the Werewolf
      role.
      2) Seer CO is a possessed

A possessed does not know which one is werewolf. I say the villager role. I expect the possessed to judge me a werewolf.

・Pattern 2: Me (villager) + No CO + No CO

This pattern is the beginning of psychological warfare. There is room for improvement.

SEER role

● Pattern: Me (Seer CO) + Seer CO + No CO

No CO is probably werewolf. Because the other seer CO is a possessed, the situation where the citizen side becomes a minority and loses. Here, I come out Werewolf. In the last year's winner cndl's model, a possessed would come out if werewolf on the last day, so I imitate it. This act is unclear if there is an effect or not. (I think it probably won't work)

I think in the village of 5 people that even if I want to be believed that I am a real seer, I can devise a point where I cannot make unnecessary remarks because I cannot get help.

POSSESSED role

● Basically, I pretend to act as a seer. On the final day, I usually coming out a werewolf role and I sometimes coming out a possessed role at random(Mood).

WEREWOLF role

● I do not know if it works, but I come out Seer role on the first day with my mood. After that, I take seer behavior similar to a possessed.

● Pattern: Me (Werewolf) + No CO + No CO

Two No CO are likely to be real villagers. I come out a possessed role. The purpose is that I come out of a possessed and make No CO think that the other No CO is a werewolf.

Unfortunately, if werewolf is divined by seer on the first day, werewolf will be defeated. I want to say that I am not black and the seer is black. Wouldn't it be nice if I could come out a villager role or a possessed role in this situation?

4. Summary

We think we should make many behaviors in one role of AI werewolf game to make it resemble a real game played by humans.

We look forward to future developments of AI Werewolf Game.