**Your agent:**

0: 0.99 0 2 0 2

1: 0.75 0 2 0 2

2: 0.5 1 4 1 4

3: 0.25 2 3 2 3

4: 0.0 3 3 3 3

**Explanation for your agent:**

Reasoning for agent:

1. Other students have had the highest exposure to the Tit for tat, Grim trigger, Always defect, and Punisher strategies, because of the book.
2. Other students have also had exposure to the game [The Evolution of Trust](https://ncase.me/trust/) because it was recommended in the book.
3. I assume that most students’ goal is to be on the top of the leaderboard, which would lead them to pick more aggressive strategies, since being in the middle of the leaderboard is not very rewarding.
4. Other students are unlikely to pick the “always defect” strategy because they want to be on the top of the leaderboard, and always defecting leaves a lot of money on the table, and is likely to have middle-of-the-pack or poor performance against many strategies.
5. Following the same thought process, I don’t think many students will pick a grim trigger strategy strategy, since when we are talking about 100 rounds, it could also leave a lot of money on the table, since many strategies will likely attempt a defect at least once.
6. The reason for thinking that most people will try to defect at least once is because always cooperating will likely lead to middle-of-the-pack performance when compared to more aggressive strategies.
7. With regards to a practical implementation of what state to choose, I must make sure that all states are reachable, because I would be wasting states and losing expressivity.
8. Since a game in the tournament has a 100 rounds, we can think of it as a game that has 1/100 change of ending at any given round, and thus the discount factor is 99/100.

While the

Because of noise, strategies that trigger a very high likelihood of defection, like the grim trigger, are likely to not win, since even if both players cooperate, the expected number of rounds until there is noise and the defection gets triggered is 20, which is considerably lower than the total 100 rounds. That means that the system needs to be forgiving but not too forgiving so as to let it be taken over by a greedy system.

That is why the automata works on a system of trust, biased towards in an attempt to be altruistic. The state 0, where it starts, is the most trustworthy, and defection coming from the other player lowers its trust while cooperation from the other player increases its trust. The reason for the bias towards trusting again is to avoid getting stuck in a defection loop. The automata cooperates while it is in a trustworthy state and defects otherwise.