

## CS 511 AI 2 - Project 3

**Alias : Snitch**

### Search Based Agent

In this project, the search based agent is used. Here, a hypothetical forward search is done and based on the probability value at each state, the search is done.

I have modified the process function in the AgentFunction file. I have defined the actions to be done based on the situations.

The action table consists of the following,

```
actionTable[0] = Action.NO_OP;  
actionTable[1] = Action.GO_FORWARD;  
actionTable[2] = Action.GO_FORWARD;  
actionTable[3] = Action.GO_FORWARD;  
actionTable[4] = Action.TURN_RIGHT;  
actionTable[5] = Action.TURN_LEFT;  
actionTable[6] = Action.GRAB;  
actionTable[7] = Action.SHOOT;
```

Based on this, I am deciding the action to do.

I always check if the location has glitter, if so I am grabbing it. That's my initial condition.

Then, I am checking if there is no bump and no glitter and no breeze and no stench and no scream, I am moving forward

If there is stench, it means that the wumpus is near. So, there is two possibilities for this.. The agent can shoot or do no actions. If there is arrow, the agent shoots otherwise no actions are performed.

If there is scream and there is no breeze, it means that there is no one on the way and the agent can move forward. Else, there is no action taken.

### Sample Outputs:

I tried running the project and got the following results

**No. of trials : 10000**

Total Score: 367187

Average Score: 367.187

Total Score: 364081  
Average Score: 364.081

Total Score: 363443  
Average Score: 363.443