**Pac-Man-AI –Maintenance and Code enhancement**

**By**

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The remote origin repository to my updated code can be found at **https://github.com/dedayohull/Pac-Man-Assignment.git**

My changes will take effect on the RED ghost, the following changes included in the source code are :

**1 – Implementing the Moving Target Search algorithm**

I wrote the code to implement MTS algorithm in the ghost.cs file from **lines 330 -> 366**, this can be found in the PacmanGameLogic package, the name of the method is called MoveAsMts() which is a public method, in this method I am calculating the distance of the ghost from the Pacman for 4 different possible scenarios which include UP, DOWN, LEFT & RIGHT, then I use a Math.Min() function to check for the shortest calculated distance to the Pacman. To complete this method I am using else if statements to point my selected ghost towards the direction calculated as the shortest.

**2 – Incorporating MTS algorithm with RED ghost**

I made changes for the red ghost in the Red.cs file which can be found in the ghost folder inside the PacmanGameLogic package, To incorporate the MTS algorithm I had to replace the MoveAsRed() method with my MoveAsMts() method at **line 43** and pass in GameState.Pacman which would send the target location to my created method in the ghost.cs file.

**3 – Changing the red ghost’s chase speed and flee speed**

I made changes in the GameState.csfile at **lines 133** in the GameState Constructor method by changing the last two float values in the constructor method of the Red.cs class which passes the data to an instance of Red ghost on application start up.