

## ABSTRACT

Game Whack The Head 3D is a game with hack and slash genre. This game has the player controls that resemble FPS or First Person Shooter armed with a baseball bat. This game is designed by using fuzzy logic algorithm with several methods to the NPC. Fuzzy algorithm is applied to the two NPCs, NPC's pursuer chasing the player and the NPC spawner that spawn object to be struck by the player. For fuzzy algorithms will be analyzed in the fuzzification, writer compares function - the function of his membership by trying various kinds of curves, by comparing the use of trapezoidal curve and triangle curve. Then that will be analyzed next is a method of Mamdani and Sugeno against the application of the NPC.

In the end, after analysis and testing of the cases studied can be found that the method of Sugeno algorithm can be processed faster than the Mamdani method which is faster by average 2,7 millisecond. In addition to pursuing players NPC with Sugeno method also faster as the game goes on.

Keywords : game , algorithm , Basic Probability , Fuzzy logic , fuzzification