# ABSTRACT

Game titled Indonesian's Flag Defense 3D is a war strategy-genre game. This game will be remind us of the struggle of the Indonesian nation since colonial era back then because the objects of this game is specially designed to resemble war instruments of the Indonesian nation at that moment.

This game is designed by using basic probability algorithm and fuzzy logic algorithm specifically on tower. Fuzzy algorithm on this tower used as the reason to selecting the best shooting target so that the tower can choose which shooting target that more easily to  destroy so that the invaders who entered Indonesian territory less and less.  For fuzzy algorithm will be analyzed in the fuzzification, which is comparing the membership's functions by trying various kinds of curves, by trying various kinds of curves. Then basic probability algorithm on this tower used to determine the chances of double damage of each towers to each type of invaders.

In the end, after being analyzed and tested of this case which is studied that can be found that fuzzy algorithm is better to use a combination of triangular curve and trapezoidal curve on its fuzzification than only using trapezoidal membership curve itself. For basic probability algorithm, the bigger value of the probability that we set so the chance of double damage that occured on the tower will be bigger as well so that the enemy will be defeated faster than before.

Keyword : game, algorithm, basic probability, fuzzy logic, fuzzification