

ABSTRACT

Archery requires wide and varied places to do the sport. However, due to the limitation of the land and place, the diversity of the training ground is minimal. The lack of archery arenas makes archery less popular among people. Things like the weather became one of the reasons people are lazy to go out to do sports like archery. This research is intended to develop an archery simulation application by providing a virtual and randomly created environment with certain rules.

Fuzzy is a method in a game development for making things such as speed, rule, time, and point game levels. With the use of fuzzification, every thing in the game is formed by a program whose function is to shape other things such as time and game points. Fuzzy usually uses a number and value to determine the level of speed of the game, and the player's performance in terms of game points and time. Implementation of game development supported by Unity3D. Unity3D is a cross-platform based game engine and is an integrated tool for making games, building architecture and simulations mainly used to develop 2D and 3D video games.

In this Final Project, the author create a Virtual Reality Game environment with a real-world location that is the front road of a tennis court with a distance of 80 meters. With the results of the arrow speed is 48 to improve the player's performance and each target 100% appears according to the specified Spawning range.

Keywords: *Fuzzy, Game, Game Engine, Unity, Virtual Reality.*