

## **ABSTRACT**

Autism is a developmental disorder of the nervous system in a person which is mostly caused by heredity factors. Based on data from the Center of Disease Control (CDC) estimates the prevalence (incidence) of children with Autism Disorder in 2018 is 1 in 59 children, an increase of 15% from 2014 which is 1 in 68 children.

Gamification emerged as a method of motivating individuals to perform an activity. The principle of gamification is to incorporate game elements such as rewards, points, levels into activities. At this writing, a final project research is made to create a device system with Augmented Reality technology that improves therapeutic activities for people with autism and implements the concept of gamification based on the Internet of Things.

In this study, the authors measure the Quality of Service for the parameters of delay and throughput. For delays in the morning around 09.00-10.00 WIB, for device 1 the average result is 3494 ms, for device 2 the average result is 1427 ms. For testing the delay process at night around 20.00-21.00 WIB, for device 1 it gets an average value of 2368 ms, for device 2 it gets an average value of 1460 ms. For Throughput in the morning around 09.00-10.00 WIB, for device 1 the average value is 0.288 kbps, for device 2 the average value is 2.806 kbps. For testing the Throughput process at night around 20.00-21.00 WIB, for device 1 it gets an average value of 0.402 kbps, for device 2 it gets an average value of 2.652 kbps.

**Key Words:** Autism, Gamification, Kinect, Ineternet of Things