

## ABSTRACT

Water is one of the most vital life supporters for all living things including humans. The need for clean water, especially drinking water for humans, is needed to maintain health, however, currently, clean water is a fairly rare commodity. As many as 33.4 million Indonesians lack clean water. According to data from the Central Statistics Agency (BPS), Indonesia currently has 72.58% adequate clean water. This figure is still below the target of 100% Sustainable Development Goals (SDGs). Knowing the quality of water so that it is always clean and free from bacteria is a focus that must be prioritized because it concerns the health of the body. Nowadays, many start-up companies work in the scope of drinking water filters, including TELAGA. The problem that must be faced is to monitor the water quality to ensure that the filter performance is still good.

In this Final Project, the author aims to be able to monitor drinking water quality using an *IoT*-based water filter through the *website*. This system can monitor and make decisions through a *website* that can be accessed anytime and anywhere and has a web-based data storage *server* connected to the internet. The author prepares *hosting* and *domains* so that the designed *website* can be accessed *online*.

From the results of the tests that the author has done, all the features on the *website* are functioning properly. In addition, Quality of Service testing was also carried out, in the delay parameter obtained an average of 38.94 ms, for packet loss a value of 0%, for the jitter value obtained an average of 29.52 ms then for the average value of the throughput parameter a value of 1.63 Kbps was obtained.

**Keywords:** *Web server, Drinking water, Internet of Things*