

Abstract

Water is a natural resource that is very important for health, but is often neglected, especially in densely populated environments such as boarding houses. This paper aims to develop an IoT-based water quality monitoring system integrated with fuzzy logic methods. This system is designed to measure and analyze water quality parameters such as pH, temperature. Fuzzy logic is an information processing approach that enables more complex and human-like decision making compared to traditional logic that only recognizes true or false (binary) values. The use of fuzzy logic methods in water quality analysis resolves ambiguity or uncertainty. This paper requires a system that will be used to help inform boarding house residents so that boarding house residents know the water quality. This study examined the water in boarding houses for 7 days and resulted in approximately 2.28% of water quality being categorized as good, 97.7% of water quality being categorized as moderate, and approximately 0.14% of water quality being categorized as poor. And using a system in the form of a telegram bot to provide information to boarding house residents.

Keywords: *IoT, fuzzy logic, water, telegram bot, water quality*