

## ABSTRAK

Pencemaran air adalah suatu perubahan keadaan di suatu tempat penampungan air seperti danau, sungai, lautan dan air tanah akibat aktivitas manusia.

Terutama masyarakat dan ekosistem yang berada di sekitar danau karena tingkat pencemaran air akibat adanya limbah akhir cukup tinggi. Selain itu keadaan air cenderung sulit dijangkau. Salah satu solusi alternatifnya yaitu dengan menggunakan robot

Robot air yang mampu melakukan monitoring terhadap pencemaran air di danau yang tercemar serta dapat mencapai lokasi yang sulit dijangkau oleh manusia. Sistem ini berfungsi untuk melakukan monitoring kualitas air yang dilengkapi dengan sensor pH, suhu, turbidity. Dengan memanfaatkan kendali wifi dari smartphone pengguna, robot dapat dikendalikan dengan mudah, dan data sensor langsung akan ditampilkan melalui platform ThingSpeak.

Dari hasil pengujian yang telah dilakukan, di dapat bahwa sistem prototipe robot air untuk monitoring kualitas air yang dilakukan pada pagi, siang dan sore hari. Ini terdapat Pengukuran sensor pada pagi hari memiliki rata-rata pH 3,56 pH, Turbidity 18,29 NTU, Suhu 29,43 °C, pengukuran sensor pada siang hari memiliki rata-rata pH 4,25 pH, Turbidity 31,09 NTU, Suhu 32,15 °C, pengukuran sensor pada sore hari memiliki rata-rata pH 4,99 pH, Turbidity 42,3 NTU, Suhu 28,65 °C dan pengukuran sensor pada air minum memiliki rata-rata pH 7,71 pH, Turbidity 35,36 NTU, Suhu 26,81°C.

***Keywords : Robot , Arduino Mega,pH,Turbidity,Suhu***

## ABSTRACT

Water pollution is a change in conditions in a water reservoir such as lakes, rivers, oceans and groundwater due to human activities.

Especially the people and ecosystems around the lake because the level of water pollution due to the presence of final waste is quite high. In addition, water conditions tend to be difficult to reach. One alternative solution is to use a robot

A water robot that is able to monitor water pollution in polluted lakes and can reach locations that are difficult to reach by humans. This system functions to monitor water quality which is equipped with pH, temperature, turbidity sensors. By utilizing the wifi control of the user's smartphone, the robot can be controlled easily, and the sensor data will be directly displayed via the ThingSpeak platform.

From the results of the tests that have been carried out, it can be seen that the prototype water robot system for monitoring water quality is carried out in the morning, afternoon and evening. There are sensor measurements in the morning have an average pH of 3.56 pH, Turbidity 18.29 NTU, Temperature 29.43 °C, sensor measurements during the day have an average pH of 4.25 pH, Turbidity 31.09 NTU , Temperature 32.15 °C, sensor measurements in the afternoon have an average pH of 4.99 pH, Turbidity 42.3 NTU, Temperature 28.65 °C and sensor measurements in drinking water have an average pH of 7.71 pH , Turbidity 35.36 NTU, Temperature 26.81°C.

***Keywords : Robot , Arduino Mega,pH,Turbidity,Temperature***