**“Water filter using powered bicycle based on Arduino sensors”**



A Synopsis submitted to

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by

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1. **Introduction:**

Water plays an essential role in daily life. Health plays a vital role amidst COVID-19. The athletes who cycle find it most difficult to find water when on longer routes. The main objective of this project is to get purified potable water anywhere on the route.

In this project, we are developing an IoT-based system for water purification. The powered bicycle is built with a water pump having a UV lamp that purifies the water through the light.

1. **Objectives:**

* To get purified water from available water sources.
* To show that mechanical energy and electrical energy are used to obtain the purified water.
* To clear the sedimentation present in the water and balance the pH value of the water.
* To prove that low power consumption can be used in real-life problems.
* To implement a low-cost circuit and easy to use.

1. **Block diagram:**

5V power Supply

NOD MCu

UVC

LCD Display

Dynamo

1. **Expected outcome:**

* The purified water is obtained at the end of the project.
* The result of how mechanical energy is converted into electrical energy is proved.
* The pH value is maintained and water sedimentation is cleared.
* Low power consumption is achieved and efficiency of the circuit is obtained
* Low cost and easy to use circuit makes the water purifier more useable.