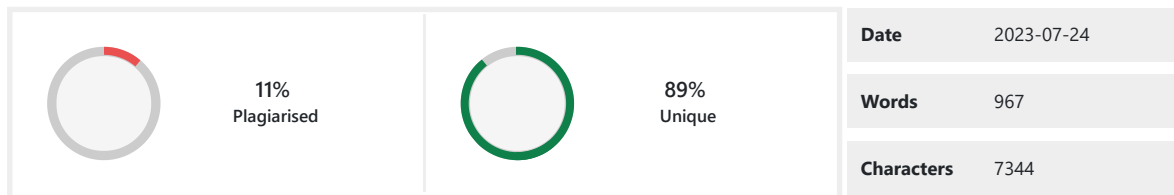


## PLAGIARISM SCAN REPORT



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A Mini Project Report on  
MODERN FISH FARMING AQUA RESOURCE  
MANAGEMENT USING IoT

**Submitted in the partial fulfillment for the**

Award of Degree in

BACHELOR OF TECHNOLOGY IN

COMPUTER SCIENCE AND ENGINEERING

TO

**Rajiv Gandhi University of Knowledge Technologies - SKLM**

Submitted by

3

rd Year B. Tech 2nd Semester

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Under The Esteemed Guidance of

**Mr. S. Sateesh Kumar Assistant Professor -Department of CSE**

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2018-2024

CERTIFICATE

This is to certify that the mini project work titled "Modern Fish Farming Aqua Resource Management Using IoT" was successfully completed by V.Durga poojitha(s180373), J.Rama(s180036), R.Karuna Kumari(s180880), in partial fulfillments of the requirements for the mini project in Computer Science and Engineering of Rajiv Gandhi University of Knowledge Technologies under the guidance and output of the work carried out is satisfactory.

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Assistant professor Assistant professor

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DECLARATION

I declared that this thesis work titled "Modern Fish Farming Aqua Resource

**Management System" is carried out by us during the year 2022-23 inpartial fulfillment of** the requirements for the Mini Project in Computer Science and Engineering.

I further declare that this dissertation has not beensubmitted elsewhere for any Degree. The matter embodied in thisdissertation report has not been submitted elsewhere for any otherdegree.The work contained in the project report is original and has been done by ourselves under the guide. Furthermore, the technical details furnished in various chapters of this thesis are purely relevant to the above project andthere is no deviation from the theoretical point of view for design,development and implementation.

V.Durga Poojitha S180373

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## ACKNOWLEDGEMENT

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We wish to extend my sincere thanks to N. Sesha Kumar, Head of the Computer Science and Engineering Department, for his constant encouragement throughout the project.

We thank one and all who have rendered help to me directly or indirectly in the completion of my thesis work. We are also grateful to other members of the department without their support my work would have been carried out so successfully.

Project Associate

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## ABSTRACT

“Modern Fish Farming Aqua Resource Management Using IoT”

Andhra Pradesh is in 1st rank in the production of fish in india which is rich source of vitamins, minerals, protein, nutrients and micronutrients. Farmers found it difficult to manage aqua farms and achieve good yields since we were unable to foresee the water conditions. As a result, an IoT-based solution has been presented that will provide farmers with the real-time, accurate information they need to monitor and maximize their production level. Utilizing water flow control sensors, the architecture of a contemporary aquaculture management system examines water quality and modifies water parameters in real-time. This system comprises of many sensors that gauge temperature, turbidity, pH, and other aspects of the water quality. A microcontroller processes the measured sensor readings and displays changes in Arduino Cloud.

Key Words:

IoT(Internet of Things)

pH(Potential of Hydrogen)

Microprocessors

Turbidity

Dissolved oxygen

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## 1. INTRODUCTION

### 1.1. Introduction:

The fisheries industry plays a significant role in the Indian economy by creating income, exports and ensuring nutritional and food security. **Fish farming, sometimes referred to as aquaculture,** is a growingly significant sector of the economy that involves breeding fish in managed environments. Fish are delicate creatures, though, and poor water quality can cause stress, illness, and even death. Low amounts of oxygen, high levels of ammonia or nitrite, and high levels of turbidity are common problems with water quality in fish farming. Furthermore, the discharge of nutrients and garbage into nearby waters can result in pollution and eutrophication, which can have detrimental effects on the ecosystem and general well-being.

Modern technology, including IoT and sensors, can be used to enhance fish farming practices to overcome these difficulties. In order to maintain the best circumstances for fish health and growth, these technologies can help monitor and regulate water quality parameters like oxygen levels, pH, temperature, and turbidity levels in real-time. Additionally, by proactively identifying and addressing water quality issues, fish producers might potentially lower the likelihood of disease outbreaks and death.

### 1.2 Statement of the problem

The problem statement of the aqua resource management include challenges such as increase in turbidity level of water, fluctuations in pH level, decrease of dissolved oxygen level, fluctuations in temperature and lack of real-time information of the above parameters to the aqua farmers. Addressing these problems require different bio sensors to detect water quality parameters, microprocessors to process the data collected from sensors and an IoT cloud platform to store the data from sensors.

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