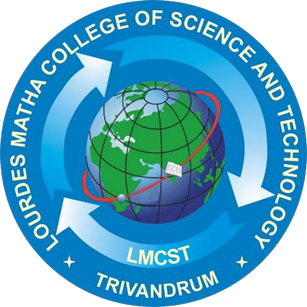
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**SEWAGE WORKERS SAFETY MONITORING SYSTEM**

A PROJECT REPORT

Submitted by:

**CHAITHANYA P**

**LMC17MCA002**

to

*The APJ Abdul Kalam Technological University*

*in partial fulfillment of the requirements for the award of the Degree*

*of*

*Master of Computer Applications*

**Department of Computer Applications**

LOURDES MATHA COLLEGE OF SCIENCE AND TECHNOLOGY

KUTTICHAL, THIRUVANANTHAPURAM 695574

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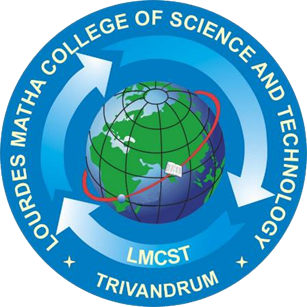
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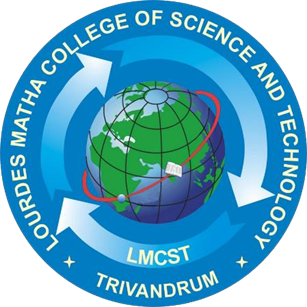
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MAY 2019

**DEPARTMENT OF COMPUTER APPLICATIONS LOURDES MATHA COLLEGE OF SCIENCE AND TECHNOLOGY KUTTICHAL, THIRUVANANTHAPURAM**

****

## CERTIFICATE

This is to certify that the report entitled **‘Sewage Workers Safety System’** submitted by **Chaithanya P** to the APJ Abdul Kalam Technological University in partial fulfilment of the requirements for the award of the Degree of Master of Computer Applications is a Bonafede record of the project work carried out by her under my guidance and supervision.

Prof. Bismi K charleys

(Internal Supervisor)

Prof. Justin G Russel Prof.Selma Joseph

(Project Co-ordinator) (Head of the Dept.)

## DECLARATION

I undersigned hereby declare that the project report ‘Sewage Worker Safety Monitoring System’, submitted for partial fulfilment of the requirements for the award of degree of Master of Computer Applications of the APJ Abdul Kalam Technological University, Kerala is a Bonafede work done by me under supervision of Prof. Bismi K Charleys. This submission represents my ideas in my own words and, I have adequately and accurately cited and referenced the original sources. I also declare that I have adhered to ethics of academic honesty and integrity and have not misrepresented or fabricated any data or idea or fact or source in my submission. I understand that any violation of the above will be a cause for disciplinary action by the institute and/or the University.

Place: Trivandrum Signature

Date: 18/05/2020Chaithanya P

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# **ACKNOWLEDGEMENT**

If words are considered as symbols of approval and tokens of acknowledgement, then let words play the heralding role of expressing my gratitude. First of all, I would like to thank God almighty for bestowing us with wisdom, courage and perseverance which had helped us to complete this project **Sewage Worker Safety Monitoring System**. This project has been a reality as a result of the help given by a large number of personalities. I am extremely thankful to **Rev.Dr. Tomy Joseph Padinjareveettil,** Director and **Prof. Mohanlal P,** Principal, Lourdes Matha College of Science and Technology Kuttichal for providing me with the best facilities and atmosphere which was necessary for the successful completion of this project. I would like to remember with gratitude **Prof. Selma Joseph**, Head of Department, Department of Computer Applications, Lourdes Matha College of Science and Technology Kuttichal, for the encouragement and guidance rendered. I express our profound and sincere gratitude to **Prof. Justin G Russel**, Department of Computer Applications, Lourdes Matha College of Science and Technology Kuttichal for the immense support and guidance provided. I express my sincere thanks to **Prof. Bismi K Charleys**, Department of Computer Applications, Lourdes Matha College of Science and Technology Kuttichal for his valuable guidance, support and advices that aided in the successful completion of my project. Finally, I wish to express my sincere gratitude to all our friends, who directly or indirectly contributed in this venture.

**ABSTRACT**

In India sewage cleaning from manholes and drains are a difficult and risky job for anyone. In 2013, Supreme Court of India gave a decision that all such jobs would be done by machines and wherever human intervention is required, proper safety equipment should be provided to the workers. However, the municipalities give contract to contractors who hire local people to clean the sewage.

A large number of sanitation workers die every year due to erratic and lack of facilities available, and harmful toxic gases released while cleaning the sewage. Real time health and safety monitoring system for such workers will prove helpful. In the existing system there are no efficient real time health and safety monitoring system. So many researchers proposed so many ideas, but they are not reliable.

The proposed system is an IoT based project. It will mainly be focusing on the safety of the sewage workers. Here the system will be using a helmet which consist of various sensors to detect hazardous gases inside the sewage. The readings from various sensors will send to the mobile of the person who stand outside the sewage through a mobile application. Through this we can save the life of the worker from the deadly poisoning gases inside a sewage. Also, the helmet has an emergency button which will help the worker to notify his helper when he feels suffocated or uncomfortable.