

VISVESVARAYA TECHNOLOGICAL UNIVERSITY
JNANA SANGAMA, BELGAVI- 590018



“AIR POLLUTION MONITORING”
A Report on IOT mini-Project

Submitted in partial fulfillment for the award of degree
Master of Computer Applications

Submitted by
G VIVEK
1AM22MC025

Under Guidelines of
Prof. Dr.M. Charles Arockiaraj
Associate. professor



DEPARTMENT OF MASTER OF COMPUTER APPLICATIONS

AMC ENGINEERING COLLEGE

Approved by AICTE, affiliated to VTU, Belagavi, Accredited by NAAC A+
Bannerghatta Road, Bengaluru- 560 083

2023-24

AMC ENGINEERING COLLEGE
DEPARTMENT OF MASTER OF COMPUTER APPLICATIONS
Bannerghatta Road, Bengaluru- 560 083



CERTIFICATE OF PROJECT APPROVAL

This is to certify that the IOT mini-Project titled “**Air pollution monitoring**” is the approved record of work done by **G VIVEK 1AM22MC025** in partial fulfillment for the award of the Degree of Master of Computer Applications in the Visvesvaraya Technological University, Belagavi during the year 2022-24.

SIGNATURE OF GUIDE

Prof. Dr.M. Charles Arockiaraj

Associate. Professor

AMC Engineering College

HEAD OF THE DEPARTMENT

Dr M.S Shashidhara

Prof.& Head of Dept of MCA

AMC Engineering College

Submitted for the third semester MCA, Iot mini-Project(22MCAL37) examination held on.....

INTERNAL EXAMINER

EXTERNAL EXAMINER

ACKNOWLEDGEMENT

Firstly, I thank God for helping me throughout this project and strengthening me to complete this work successfully and at my best. I would like to dedicate this work to my parents for their constant support and encouragement during the course of this work,

The success of any task depends on many factors, with people being the most important. Several people have contributed directly and in-directly to the successful completion of this. I express my gratitude and respect to all those who helped to steer the Iot mini-project towards its completion and inspire me for the same.

I express my sincere thanks to Dr. K PARAMAHAMSA Chairman, AMC Engineering College, Bangalore, for providing all the resources required for the timely completion of this Iot mini-project report.

I thank Dr. Kumar Principal, AMCEC, for his support to provide the best faculty and his guidance.

I express my sincere thanks and deepest gratitude to Dr. M. S. Shashidhara, Professor & Head, Department of MCA, AMC Engineering College, for providing me with adequate faculties, ways and means by which I was able to complete this Iot mini-project report.

My deepest gratitude to my internal Technical Seminar guide Prof. Dr.M. Charles Arockiaraj Ass professor of Master of computer Application for her guidance and encouragement given to me in this Technical Seminar and Report.

I also take this opportunity to thank all faculty members of our MCA department and my friends for their co-operation and support they have given me for the completion of this IOT mini-project report.

G VIVEK
(1AM22MC025)

TABLE OF CONTENTS

Sl. No	Contents	Pg. No
	Abstract	
1.	Introduction	1
2.	Literature Review	2
3.	Existing and proposed systems	3
4.	Tools and technology Used	4-5
5.	Hardware and software Used	6
6.	System design	7-9
7.	Coding	10-12
8.	Snapshots	13-15
9.	Conclusion	16
10.	Bibliography	17

ABSTRACT

Air pollution is one of the biggest threats to the present-day environment. Everyone is being affected by air pollution day by day including humans, animals, crops, cities, forests and aquatic ecosystems. This project aims to design an IOT-based air pollution monitoring system using the internet from anywhere using a computer or mobile to monitor the air quality of the surroundings and environment. The IoT-based air pollution monitoring system would not only help us to monitor the air quality but also be able to send alert signals whenever the air quality deteriorates and goes down beyond a certain level.

In this system, **NodeMCU** plays the main controlling role. It has been programmed in a manner, such that, it senses the sensory signals from the sensors and shows the quality level via led indicators. Besides the harmful gases (such as CO₂, CO, smoke, etc.) temperature and humidity can be monitored through the temperature and humidity sensor by this system. Sensor responses are fed to the NodeMCU which displays the monitored data in the ThingSpeak cloud which can be utilized for analyzing the air quality of that area.

Keywords: Pollution, Air Pollution, IOT, Analysis, Sensors.