**IOT BASED AIR POLLUTION MONITORING SYSTEM**

**A** **Project** **Report**

Submitted in partial fulfilment of the Requirements of

The award of the Degree of

**BACHELOR OF SCIENCE**

**(INFORMATION TECHNOLOGY)**

**By**

Shubham Ramesh Sakpal

Roll No.159

**Under the esteemed guidance of**

**Mrs.** **Gayatree Karnik**

**Designation**

**Assistant Professor**



**DEPARTMENT OF INFORMATION TECHNOLOGY**

**Late Shri Vishnu Waman Thakur Charitable Trust’s**

**Bhaskar Waman Thakur College of Science,**

**Yashwant Keshav Patil College of Commerce,**

**Vidya Dayanand Patil College of Arts.**

***(Affiliated to University of Mumbai)***

**VIRAR, 401303**

**MAHARASHTRA**

**2018-2019**

**Late Shri Vishnu Waman Thakur Charitable Trust’s**

**Bhaskar Waman Thakur College of Science,**

**Yashwant Keshav Patil College of Commerce,**

**Vidya Dayanand Patil College of Arts.**

***(Affiliated to University of Mumbai)***

**Virar (W)-MAHARASHTRA-401303**

**DEPARTMENT OF INFORMATION TECHNOLOGY**



**CERTIFICATE**

Roll No. :- 159 Exam Seat No. \_\_\_\_\_\_\_\_\_\_\_\_\_

This is to certify that the project entitled, **"** **Air Pollution Monitoring System "**, is bonafied work of **Shubham Ramesh Sakpal** bearing Seat. No \_\_\_\_\_\_\_\_\_\_\_\_\_submitted in partial fulfilment of the requirements for the award of degree of BACHELOR OF SCIENCE in INFORMATION TECHNOLOGY from University of Mumbai.

**Internal Guide** **Head of Department**

**External Examiner**

**Date : College Seal**

**ABSTRACT**

In this project we are going to make an **IOT Based Air Pollution Monitoring System** in which we will **monitor the Air Quality over a webserver using internet** and will trigger a alarm when the air quality goes down beyond a certain level, means when there are sufficient amount of harmful gases are present in the air like CO2, smoke, alcohol, benzene and NH3. It will show the air quality in PPM on the LCD and as well as on webpage so that we can monitor it very easily.

**ACKNOWLEDGEMENT**

I am very grateful to our Principal for providing us with an environment to complete my project successfully.

I am deeply indebted to **Prof. Sampada Deshmukh Head of I.T Department, VIVA College** who modelled us both technically and morally for achieving greater success in life.

I express our sincere thanks to **all our lecturers**, for their constant encouragement and support throughout our course, especially for the useful suggestions given during the course of the project period. I am grateful to my internal guide **Prof. Mrs. Gayatri Karnik** Lecturer, for being instrumental in the completion of our project with her complete guidance.

We would like to thank our parent for providing us with all their support and encouragement right from the project’s budding stage to its current maturity.

Above all we would like to thank the almighty for giving us courage and energy to work day and night to make this project a grand success.

(Shubham Ramesh Sakpal)

**DECLARATION**

I hereby declare that the project entitled, “Air Pollution Monitoring System” done at **Viva College Virar West**, has not been in any case duplicated to submit to any other university for the award of any degree. To the best of my knowledge other than me, no one has submitted to any other university.

The project is done in partial fulfilment of the requirements for the award of degree of **BACHELOR OF SCIENCE (INFORMATION TECHNOLOGY)** to be submitted as final semester project as part of our curriculum.

**Shubham Ramesh sakpal**

**(Signature)**

**TABLE OF CONTENTS**

**Chapter 1: Introduction**

**1.1 Background** ...........................................................................................................1

**1.2 Objective** ................................................................................................................2

**1.3 Purpose, Scope and Applicability** ........................................................................3

1.3.1 Purpose ..............................................................................................................3

1.3.2 Scope..................................................................................................................3

1.3.3 Applicability.......................................................................................................3

**Chapter 2: Survey of Technology**..............................................................................4

**Chapter** **3: Requirement and Analysis** .....................................................................5

**3.1 Problem Definition** ...............................................................................................5

**3.2 Requirement Specification** ..................................................................................5

**3.3 Planning and Scheduling**......................................................................................6

**3.3.1 Gantt Chart**........................................................................................................6

**3.3.2 Pert Chart**.........................................................................................................7

**3.4 Software and Hardware Requirement**................................................................8

**3.5 Preliminary Product Description**........................................................................8

**3.6 Conceptual model** ................................................................................................9

3.6.1 Block Diagram...................................................................................................9

3.6.2 Data Flow Diagram...........................................................................................10

3.6.3 Circuit Diagram.................................................................................................11

3.6.4 Component Diagram .........................................................................................12

**Chapter 4: System Design**..........................................................................................16

**4.1 Basic Module**.......................................................................................................16

**4.2 Security Issues** .....................................................................................................16