*A Project report on*

# Air quality and gas monitor system

*Submitted in partial fulfilment of the requirements for the award of the degree of*

## BACHELOR OF TECHNOLOGY

*in*

## ELECTRONICS AND COMMUNICATION ENGINEERING

*by*


| | |
|---|---|
| **K.Deekshitha** | **(214G1A0418)** |
| **S.Mashuda Mouzzam** | **(214G1A0456)** |
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Under the Guidance of

**Mr. B. Varun Kumar, MTech., (Ph.D.)**

Assistant Professor



**ELECTRONICS AND COMMUNICATION ENGINEERING**

SRINIVASA RAMANUJAN INSTITUTE OF TECHNOLOGY

ANANTHAPURAMU

**(Affiliated to JNTUA, Approved by AICTE, New Delhi, accredited by NAAC with 'A' grade & accredited by NBA (B. TECH ECE, EEE&CSE))**

**2024-2025**

SRINIVASA RAMANUJAN INSTITUTE OF TECHNOLOGY

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# Certificate

This is to certify that the project report entitled Air quality and gas monitor system.is the bonafide work carried out by K.Deekshitha bearing Roll Number 214G1A0418, S.Mashuda Mouzzam bearing Roll Number 214G1A0456, P.Anandachari bearing Roll Number 214G1A0405 and BP.Dinesh raj varma bearing Roll Number 214G1A0422 in partial fulfilments of the requirements for the award of the degree of Bachelor of Technology in Electronics and Communication Engineering during the academic year 2024-2025.

**Project Guide**

Mr. B. Varun Kumar, MTech.,(Ph.D.)

Assistant Professor,

Dept. of ECE.

**Head of the Department**

Dr. M.L. Ravi Chandra, MTech., Ph.D.,

Professor & HOD

Dept. of ECE

Date:

Place: Ananthapuramu **EXTERNAL EXAMINER**

# DECLARATION

We, Ms. K.Deekshitha with reg no: 214g1a0418, Ms. S.Mashuda Mouzzam with reg no: 214g1a0456, Mr. P.Anandachari with reg no: 214g1a0405, Mr. P.Dinesh raj varma with reg no: 214g1a0422 students of SRINIVASA RAMANUJAN INSTITUTE OF TECHNOLOGY, Rotarypuram, hereby declares that the dissertion entitled "SMART BABY CRADLE SYSTEM USING IoT "embodies the report of our project work carried out by us during IV year Bachelor of Technology under the guidance of Mr. B. Varun Kumar, Department of ECE, SRINIVASA RAMANUJAN INSTITUTE OF TECHNOLOGY, and this work has been submitted for the partial fulfilment of the requirements for the award of the Bachelor of Technology Degree.

The results embodied in this project have not been submitted to any other University of Institute for the award of any Degree or Diploma.

Project Associates

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| K.Deekshitha | REG NO: 214G1A0418 |
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# VISION AND MISSION Vision

## and Mission of SRIT:

## Vision:

To become a premier Educational Institution in India offering the best teaching and learning environment for our students that will enable them to become complete individuals with professional competency, human touch, ethical values, service motto, and a strong sense of responsibility towards environment and society at large.

**Mission:**

**M1**: Continually enhance the quality of physical infrastructure and human resources to evolve into a center of excellence in engineering education.

**M2**: Provide comprehensive learning experiences that are conducive for the students to acquire professional competences, ethical values, life-long learning abilities and understanding of technology, environment and society.

**M3**: Strengthen industry institute interactions to enable the students work on realistic problems and acquire the ability to face the ever-changing requirements of the industry. **M4**: Continually enhance the quality of the relationship between students and faculty which is a key to the development of an exciting and rewarding learning environment in the college.

## Vision and Mission of the Department of ECE

**Vision:**

To become a department of excellence in Electronics and Communication and allied areas of engineering by empowering rural students with latest technological updates and human values.

**Mission:**

**DM1**: Continually improve the teaching learning and associated processes to prepare the students with problem solving skills.

**DM2**: Provide comprehensive learning experiences to imbibe industry based technical knowledge and encourage students to pursue higher studies with awareness on ethical values.

**DM3:** Nurture a strong research eco-system that facilitates quality research by faculty and students.


# ACKNOWLEDGEMENT

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*Project Associates*

# ABSTRACT

Air quality and gas monitoring systems are crucial in assessing and ensuring healthy environments by continuously tracking levels of pollutants and hazardous gases. These systems typically utilize a combination of sensors to detect substances such as carbon monoxide, nitrogen oxides, sulfur dioxide, volatile organic compounds, and particulate matter. The collected data can help monitor compliance with air quality standards, identify sources of pollution, and provide alerts to mitigate risks to human health and safety.

Modern air quality monitors often incorporate IoT (Internet of Things) technology, enabling real-time data acquisition, remote monitoring, and data analytics. By leveraging wireless communication, cloud platforms, and artificial intelligence, these systems offer predictive insights, generate alerts, and facilitate data-driven decisions to enhance environmental health management. The system's adaptability extends across various applications, including urban air monitoring, industrial safety, indoor air quality, and early detection of toxic gas leaks. By providing accurate, real-time air quality assessments, these systems play a key role in public health, environmental awareness, and climate change mitigation strategies.

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