**A**

**Project Report**

**On**

**AUTOMATIC EXHAUST WITH DUST SENSOR**

*Submitted to*

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY ANANTAPUR, ANANTHAPURAMU**

*In Partial Fulfilment of the Requirements for the Award of the Degree of*

**BACHELOR OF TECHNOLOGY**

**In**

**ELECTRONICS & COMMUNICATION ENGINEERING**

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**(UGC – AUTONOMOUS)**

**(Affiliated to JNTUA, Ananthapuramu)**

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**2014-2018**



**DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING**

**BONAFIDE CERTIFICATE**

This is to certify that the project work entitled **“AUTOMATIC EXHAUST WITH DUST SENSOR”** is a bonafide work carried out by

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**DECLARATION**

We hereby declare that the results embodied in this project **“AUTOMATIC EXHAUST WITH DUST SENSOR”** by us under the guidance of **Dr. S. Usha Rani, Ph.D., Sr. Assistant Professor, Dept. of ECE** in partial fulfilment of the award of **Bachelor of Technology** in **Electronics and Communication Engineering, MITS, Madanapalle** from **Jawaharlal Nehru Technological University Anantapur, Ananthapuramu** and we have not submitted the same to any other University/institute for award of any other degree.

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**Date : Guide**

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**ABSTRACT**

In this project exhaust with dust sensor which will turn the fan automatically with the help of a microcontroller. It detects the dust particles even minute particles also. It performs two actions, first of all, it detects the dirt particles and thus instruct us if any dust particles are found around us. This project is very important in few places like semiconductor manufacturing engineering, medical researching labs, and some other electronics manufacturing industries. And the second action is it consumes less energy as the exhaust runs if it detects dirt particles only.

In this project, we are using dust sensor with LCD output, if any dirt contamination enters into sensor pit or hole then it's output if high (i.e. '1') or else the output is low (i.e. '0'). If output is high the microcontroller comes to know about it and then turns the exhaust fan with help of a motor driver. In this, we are using the components are a transformer (i.e. step down transformer), a rectifier which converts AC to DC, relay for providing required power, computer fan, dust sensor, an atmega328p microcontroller to perform all required operations for this project. The main applications of this project are an air purifier, air conditioner, air cleaner. In future GSM, a buzzer is used for alertness.

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