

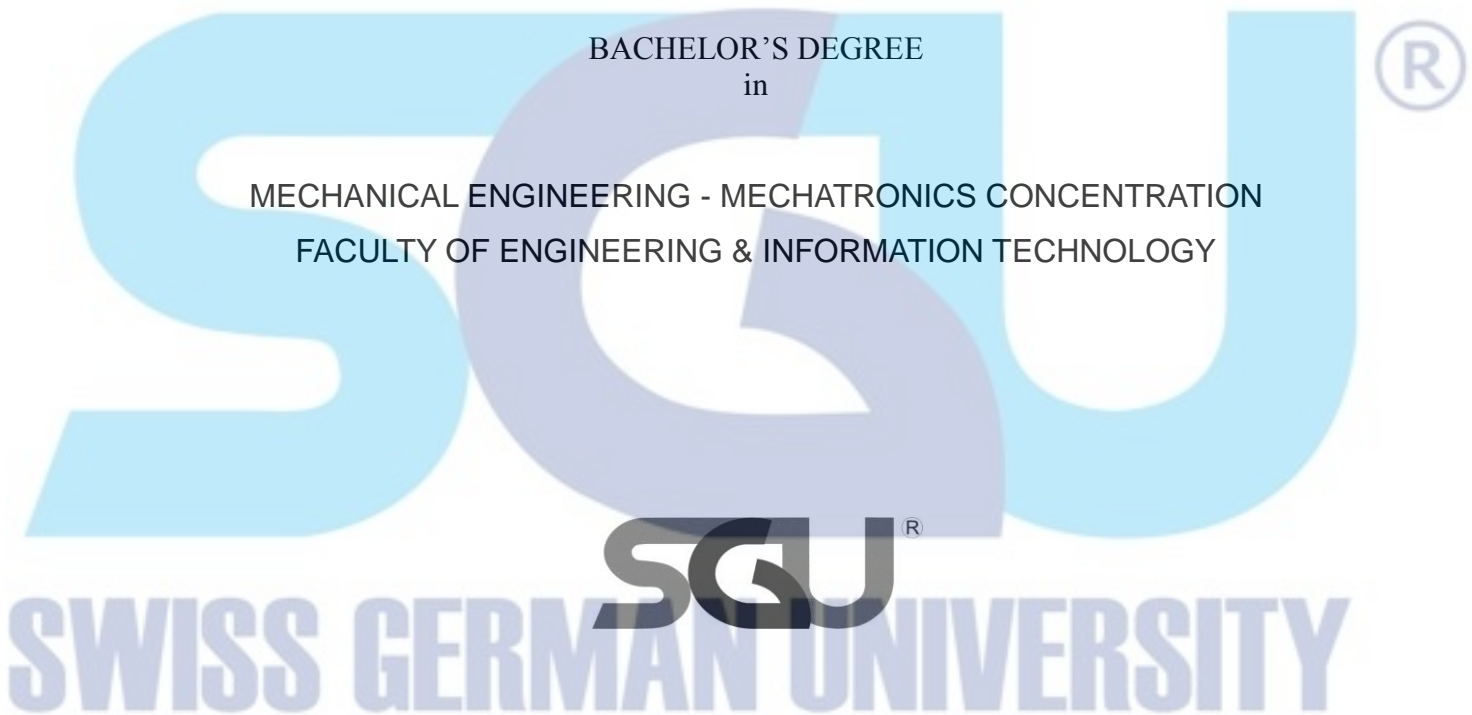
**THE DESIGN AND CONSTRUCTION OF AN ARDUINO BASED CO₂
CONTROLLER**

By

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BACHELOR'S DEGREE
in

MECHANICAL ENGINEERING - MECHATRONICS CONCENTRATION
FACULTY OF ENGINEERING & INFORMATION TECHNOLOGY



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STATEMENT BY THE AUTHOR

I hereby declare that this submission is my own work and to the best of my knowledge, it contains no material previously published or written by another person, or material which to a substantial extent has been accepted for the award of any other degree or Bachelor's at any educational institution, except where due acknowledgement is made in the thesis.

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ABSTRACT

THE DESIGN AND CONSTRUCTION OF AN ARDUINO BASED CO₂ CONTROLLER

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Dangerous gas detection devices such as gas CO, CO₂ and NO_x are usually found on the public roads, because there are many sources of air pollution such as smoke in motor vehicles can damage the health. But not only the public street alone, there were dangerous gases such as CO gas, CO₂ and NO_x. In the halls of the house or office, there are cases that would endanger the residents of the house or office workers.

Human when breathes will breathing the carbon gas and various microorganisms in the form of gas, germs or particle. The CO₂ gas will not cause health disorders until achieving high level in the room which contains many people and indicated that this room is polluted. To help getting a solution for excess CO₂ levels required a ventilation system as air circulation in the room. This research is the prototype of the automatic ventilation system which allocated a MG-811 gas sensor as CO₂ detector. This detector system integrated with LCD display as the levels of CO₂ and the fan as air ventilation. There are three levels of CO₂ are processed on this research. That is the level of 350 to 600 ppm in normal air, level 600 to 800ppm for bit dirty air, and a level above 800 ppm for dirty air. LCD will display the ppm level of CO₂ with remakes of air quality in the room. The LCD will display the levels of ppm of CO₂, along with a description of indoor air quality. If air quality, including dirty, then the fan will rotate for circulated the air in order to return to normal. This research is still in the system less stable, due to the sensor being used is not only affected by changes in the levels of CO₂, but is also affected by temperature changes.

Key words: carbon dioxide, LCD, fan, Sensor MG-811, Arduino Uno.



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DEDICATION

I dedicate this research for the future of ATMI Solo and ATMI Cikarang as my place
of study and work



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