



PROJECT REPORT
MONITORING OF AIR QUALITY USING A FUZZY
ALGORITHM

JEVON SANJAYA

17.K1.0002

Faculty of Computer Science
Soegijapranata Catholic University
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APPROVAL AND RATIFICATION PAGE



Title of Thesis: : Monitoring Of Air Quality Using A Fuzzy Algorithm
Submitted by : Jevon Sanjaya
NIM : 17.K1.0002
Approved Date : 09 July 2021
Approved by
Supervisor : Y.b. Dwi Setianto
Examiner 1 : Y.b. Dwi Setianto
Examiner 2 : Hironimus Leong S.Kom., M.Kom.
Examiner 3 : R. Setiawan Aji Nugroho S.T., MCompIT., Ph.D
Examiner 4 : Rosita Herawati S.T., M.I.T.
Examiner 5 : Yonathan Purbo Santosa S.Kom., M.Sc
Examiner 6 : Yulianto Tejo Putranto S.T., M.T.
Head of The Study Program : Rosita Herawati S.T., M.I.T.
Dean of Faculty : R. Setiawan Aji Nugroho S.T., MCompIT., Ph.D

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Name : Jevon Sanjaya

ID : 17.K1.0002

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First and foremost, I give thanks to God Jesus Christ for all of His blessing. So i can finish my final project succesfully. Then I thank my parents, who constantly pray for me, and I thank my supervisor, Y.b. Dwi Setianto, for always encouraging me and offering me advise so that I could finish on time.

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ABSTRACT

Air pollution is not a problem that can be underestimated, air pollution has many negative impacts on human life including health. The causes of air pollution are motor vehicle exhaust, industrial waste, and forest fire fumes. The gases contained in air pollution include carbon dioxide, nitrogenoxide, sulfuroxide, chlorofluorocarbons, hydrocarbons. The gas is very dangerous for human health, especially for respiration, humans can be poisoned if they inhale the gas. So this journal was created to detect the quality of the surrounding air whether it is good or dangerous for human health.

To solve this problem, a tool is needed to detect the presence of these dangerous gases. By using gas sensors MQ-135, MQ-2, MQ-7, Arduino ATmega 2560 microcontroller and Fuzzy Logic algorithm to determine the output of the 3 gas sensors.

The author uses 3 sensors as input (MQ-135, MQ-2, MQ-7) to detect pollutant gases in the surrounding air then the data is processed with fuzzy logic algorithms, as the output is 16x2 LCD, buzzer active, 3 LEDs (red, yellow, green). Tabel Indeks Standard Pencemaran Udara (ISPU) is used as a reference for the air quality threshold in ppm.

Keyword: Arduino ATmega 2560, MQ-135, MQ-7, MQ-2, LED, LCD, Buzzer active, Fuzzy Logic Algorithm

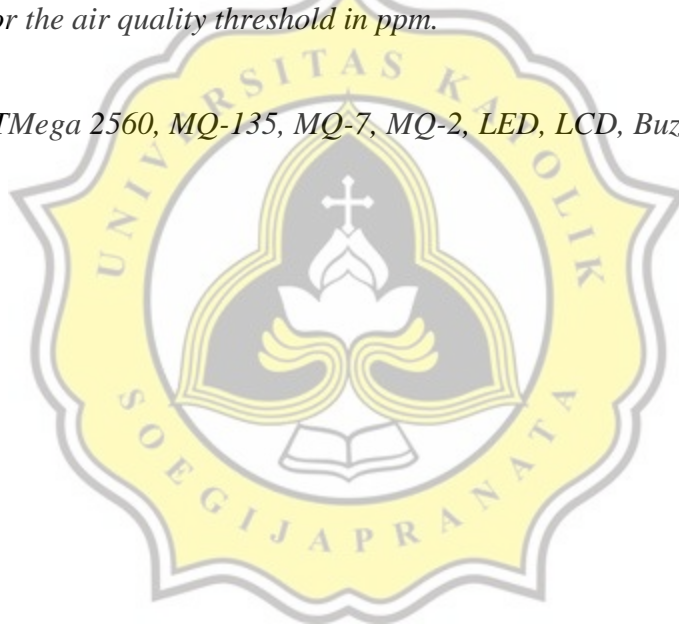


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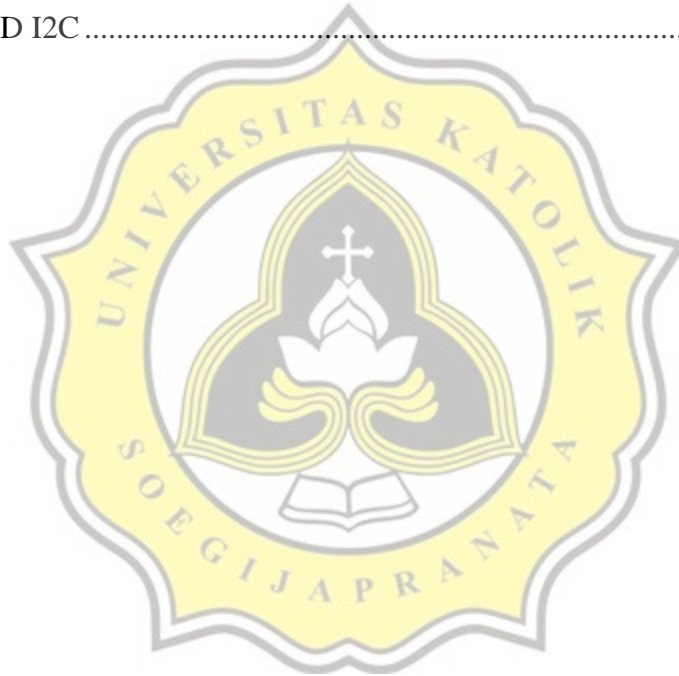
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