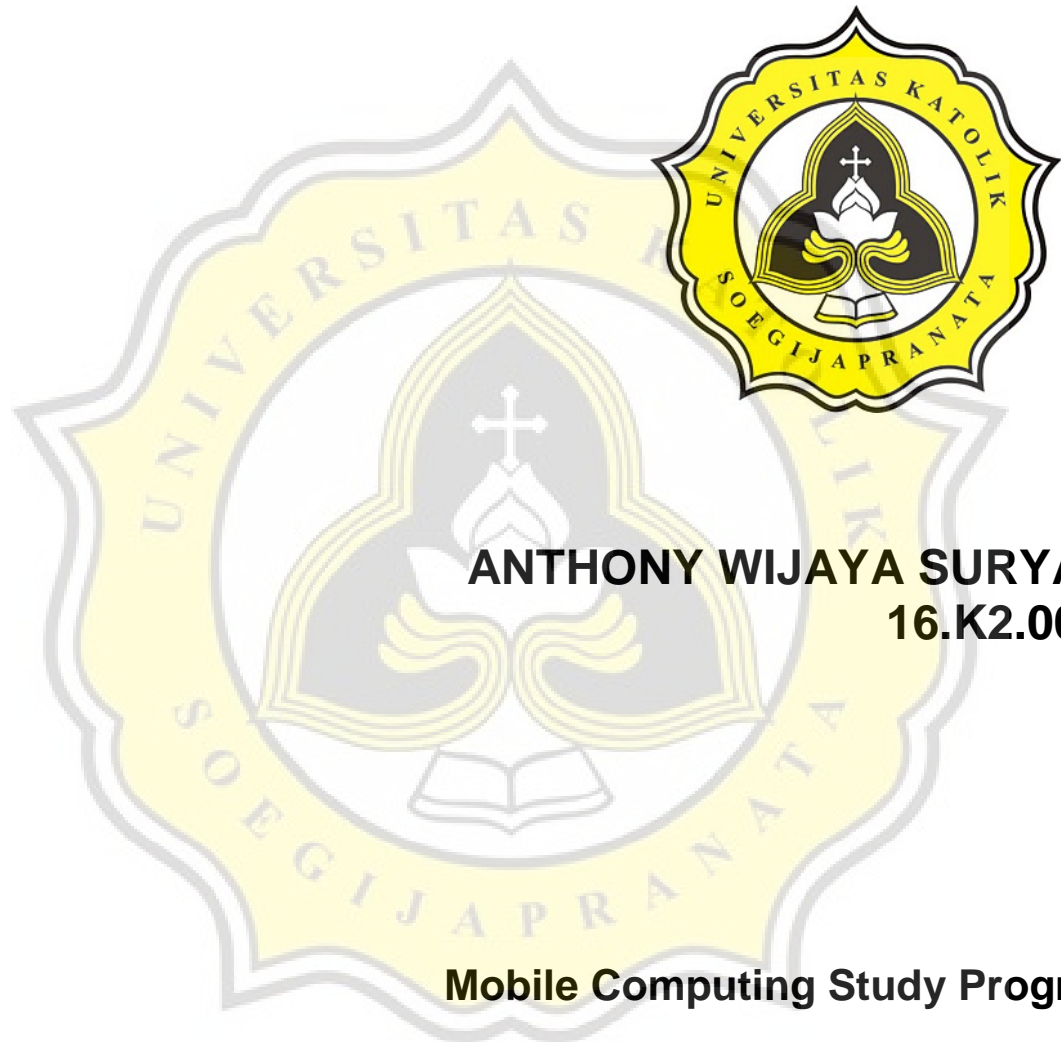


**PROJECT REPORT**  
**DESIGN OF AMMONIA GAS DETECTOR**  
**IN PUBLIC TOILET FOR DISEASE PREVENTION**



**ANTHONY WIJAYA SURYA C**  
**16.K2.0001**

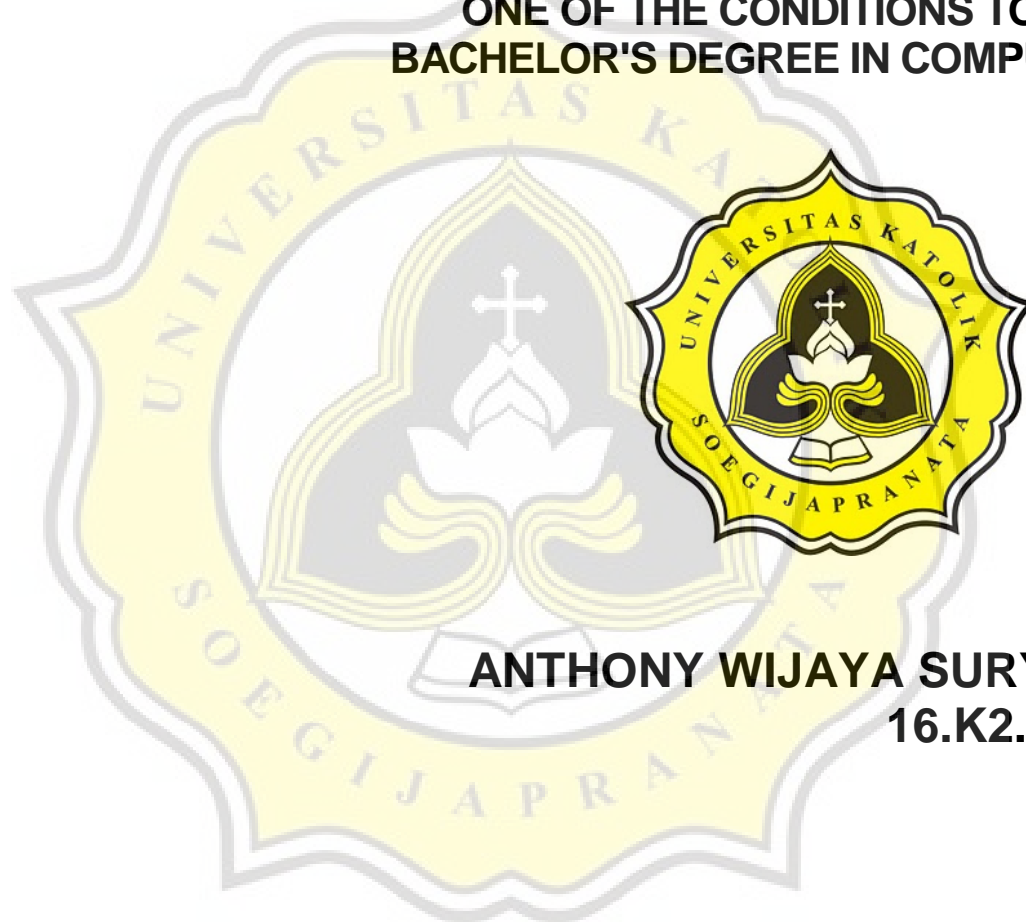
**Mobile Computing Study Program**  
**Faculty of Computer Science**  
**Soegijapranata Catholic University**

**2022**

# **PROJECT REPORT**

## **DESIGN OF AMMONIA GAS DETECTOR IN PUBLIC TOILET FOR DISEASE PREVENTION**

**SUBMITTED IN ORDER TO FULFILL  
ONE OF THE CONDITIONS TO GET  
BACHELOR'S DEGREE IN COMPUTER**



**ANTHONY WIJAYA SURYA C  
16.K2.0001**

**Mobile Computing Study Program  
Faculty of Computer Science  
Soegijapranata Catholic University  
2022**

## APPROVAL AND RATIFICATION PAGE (Heading plain)

(gunakan style “Approval”)

Design of Ammonia Gas Detector

In public toilets for disease prevention

by

ANTHONY WIJAYA SURYA C – 16.K2.0001

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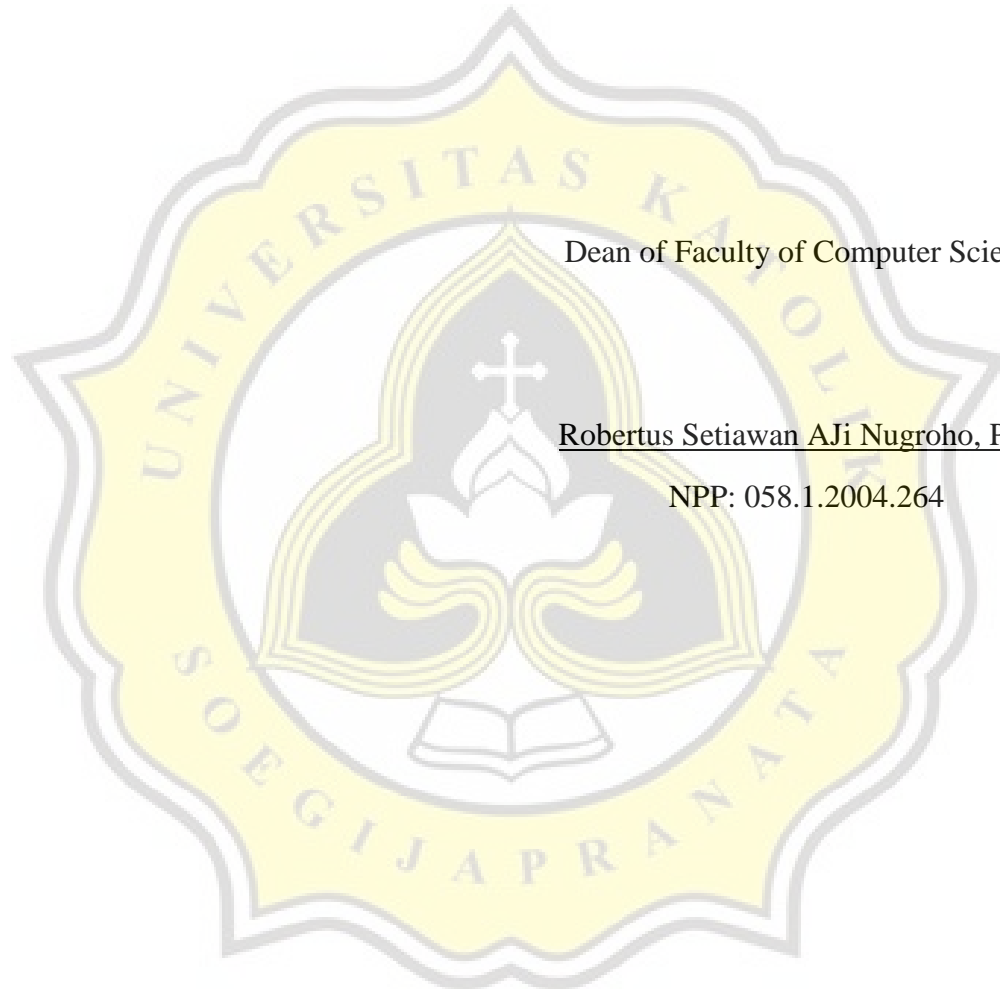
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IN PUBLIC TOILET FOR DISEASE PREVENTION

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Menyetujui untuk memberikan kepada Universitas Katolik Soegijapranata Semarang Hak Bebas Royalti Noneksklusif atas karya ilmiah yang berjudul “ DESIGN OF AMMONIA GAS DETECTOR IN PUBLIC TOILET FOR DISEASE PREVENTION ” beserta perangkat yang ada (jika diperlukan). Dengan Hak BebasRoyalti Noneksklusif ini Universitas Katolik Soegijapranata berhak menyimpan, mengalihkan media/formatkan, mengelola dalam bentuk pangkalan data (*database*), merawat, dan mempublikasikan tugas akhir ini selama tetap mencantumkan nama saya sebagai penulis / pencipta dan sebagai pemilik Hak Cipta.

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## DECLARATION OF AUTHORSHIP

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declare that this work, titled "Design of Ammonia Gas Detector in public toilets for disease prevention", and the work presented in it is my own. I confirm that:

1. This work was done wholly or mainly while in candidature for a research degree at Soegijapranata Catholic University
2. Where any part of this thesis has previously been submitted for a degree or any other qualification at this University or any other institution, this has been clearly stated.
3. Where I have consulted the published work of others, this is always clearly attributed.
4. Where I have quoted from the work of others, the source is always given.
5. Except for such quotations, this work is entirely my own work.
6. I have acknowledged all main sources of help.
7. Where the work is based on work done by myself jointly with others, I have made clear exactly what was done by others and what I have contributed myself.

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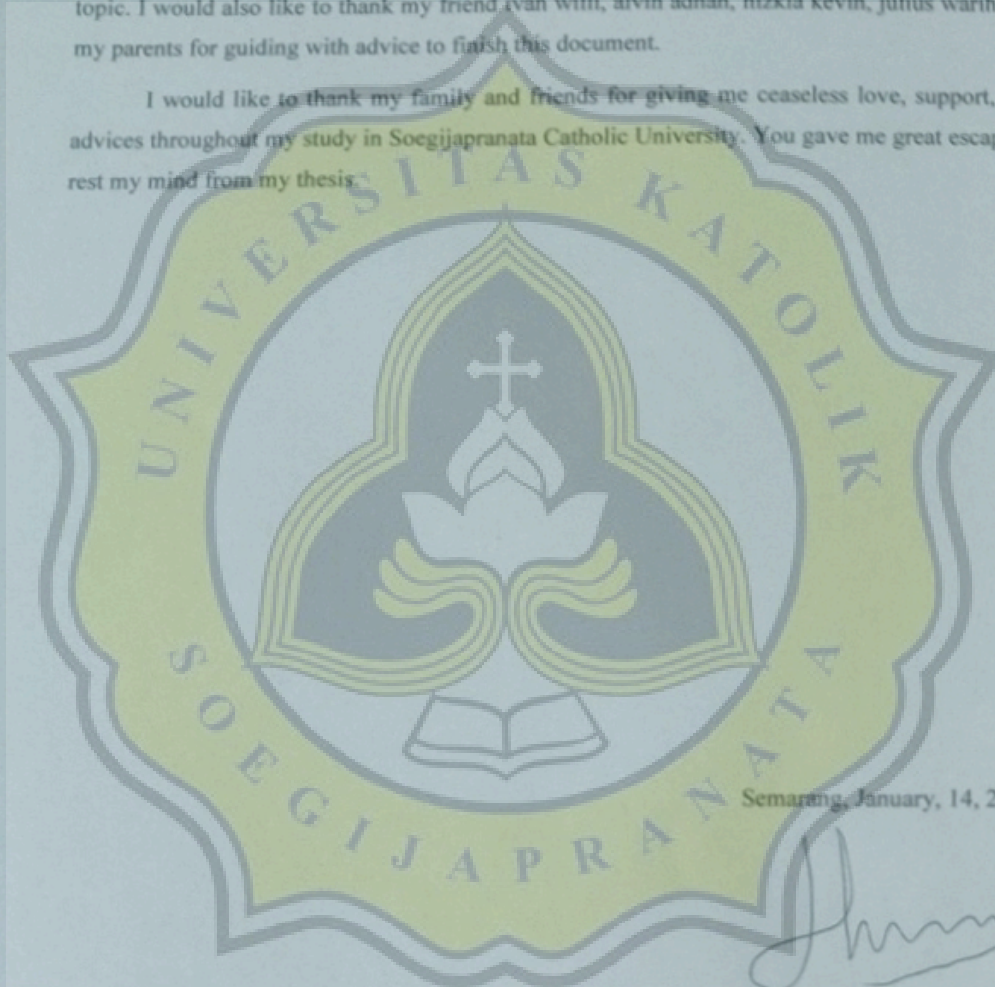


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Semarang, January, 14, 2022

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## ABSTRACT

*Environmental health is one of the most important and influential things for human life and health. A clean and healthy environment will make every individual around him comfortable and improve the quality of his life. Public toilets are part of the environment whose existence is very important. The poor quality of public toilets facilitates the transmission of bacteria and the development of germs.*

*Based on these problems, a tool is made that can be used to classify the quality of public toilets based on the threshold that has been determined by the government. In this study, the parameters used in monitoring the quality of public toilets are odor, humidity, and temperature in public toilets. Where for the odor parameter is ammonia gas. This gas is a gas that is often produced by human activities while in public toilets. The process of determining toilet quality through ammonia gas, humidity, and temperature is obtained from the readings of two sensors, namely the MQ135 sensor and the DHT11 sensor by the Arduino Uno microcontroller using the Threshold method. The use of the Threshold method was chosen as a decision-making technique for public toilet conditions because it has high accuracy, where the classification of the types of general toilet conditions has been known from the start.*

*From the results of several times testing the readings of two sensors using the Threshold method, MQ135 has a high correlation with environmental conditions, and DHT11 has a fairly high correlation with environmental conditions, with data retrieval 10 times. (After that at the very bottom, include keywords or keywords of 3-5 words.)*

*Keyword: public toilet, MQ135, DHT11, Threshold*

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