

Universiti Teknologi MARA

**The Determination of Factors That
Influence the Noise Pollution in Malaysia
Using Fuzzy Logic**

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STUDENT'S DECLARATION

I certify that this report and the research to which it refers are the product of my own work and that any ideas or quotation from the work of other people, published or otherwise are fully acknowledged in accordance with the standard referring practices of the discipline.



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ABSTRACT

The aim of this study is to determine the factor that influences noise pollution in Malaysia through the use of Fuzzy Logic. Nowadays, the economy of our country has increased, so the use of transport, whether on land or by air, has also increased. This will lead to noise pollution, which will have an impact on human health. Noise pollution was an unpleasant sound that could have a negative impact on human health, such as sleep disturbance, hearing loss, annoyance, and stress. There are many factors that can cause noise pollution. The determination of factors that affect noise pollution in Malaysia using the Fuzzy Logic approach includes the determination of input and output variables, Fuzzification, Fuzzy Rule-Based, Fuzzy Inference Method and Defuzzification. In Defuzzification which is the last stage for Fuzzy logic, Centroid method were being used since it can give a result with more accurate and flexible. This study used road traffic noise, aircraft noise, industrial and manufacturing noise and commercial construction as factors for noise pollution, as well as input variables in this study. This method was used to determine which factors have the most influence on noise pollution. The results of this study shows that road traffic noise and industrial and manufacturing noise were factors which had an impact on noise pollution with a maximum value of 82. This shows, therefore, that the aim of this study has been achieved.

Keywords: Noise Pollution, Fuzzy Logic, Centroid Method, Road Traffic Noise, Industrial and Manufacturing Noise, Commercial Construction, Aircraft Noise

TABLE OF CONTENTS

CONTENTS	PAGE
SUPERVISOR'S APPROVAL	ii
DECLARATION	iii
ACKNOWLEDGEMENT	iv
ABSTRACT	v
TABLE OF CONTENTS	vi
LIST OF FIGURES	ix
LIST OF TABLES	x

CHAPTER ONE: INTRODUCTION

1.1	Background of the Study	1
1.2	Problem Statement	2
1.3	Objective of the Study	3
1.4	Scope of the Study	3
1.5	Significance of the Study	4

CHAPTER TWO: LITERATURE REVIEW

2.1	Noise Pollution	5
2.2	Factors of Noise Pollution	6
2.2.1	Road Traffic Noise	6
2.2.2	Aircraft Noise	6
2.2.3	Commercial Construction	7
2.2.4	Industrial and Manufacturing Noise	8

2.3	Noise Pollution Effects on Human Being using Neuro-Fuzzy Model	9
2.4	The Application on Fuzzy Logic in Noise Pollution	10
2.5	Summary	10

CHAPTER THREE: RESEARCH METHODOLOGY

3.1	Method of Data Collection	11
3.2	Method of Data Analysis	11
3.3	Fuzzy Logic	11
	3.3.1 Fuzzification	12
	3.3.1.1 Fuzzification of Input and Output Variables	14
	3.3.2 Fuzzy Rule-Based	23
	3.3.3 Defuzzification	25
3.4	Summary	25

CHAPTER FOUR: RESULTS AND DISCUSSIONS

4.1	Fuzzy Logic Noise Pollution to Determine the Strongest Factor That Influence Noise Pollution	26
	4.1.1 Overall Evaluation Noise Pollution Factors Based on Noise Level	27
4.2	Summary	30

CHAPTER FIVE: CONCLUSIONS AND RECOMMENDATIONS

5.1	Conclusions	31
5.2	Recommendations	31