



PROJECT REPORT
IMPLEMENTATION OF FUZZY LOGIC METHODS IN
NUTRIENT CONTROL IN HYDROPONIC PLANTS

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APPROVAL AND RATIFICATION PAGE



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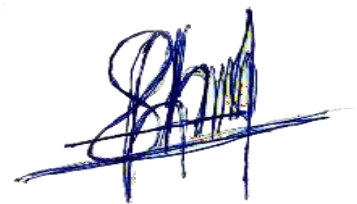
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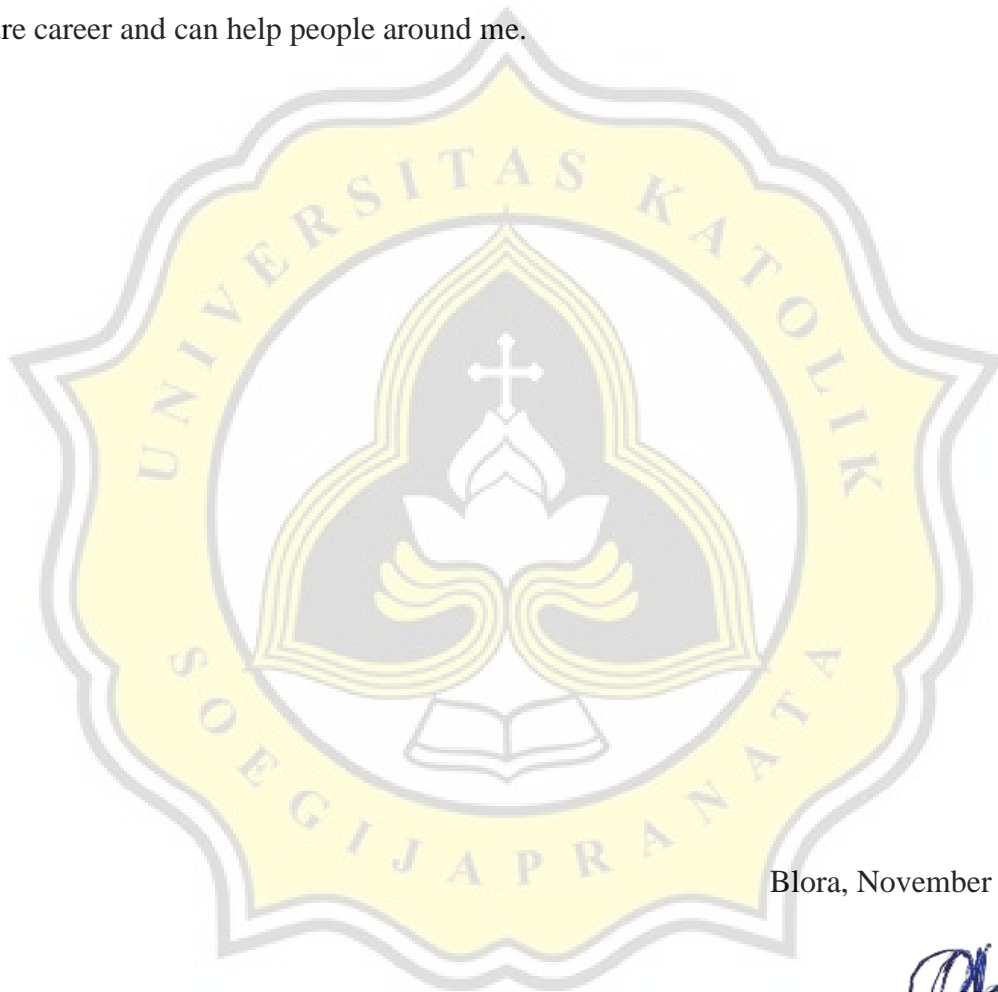
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I would like to dedicate my graduation to my parents, family, and friends. I hope that all the knowledge that I get while studying at UNIKA SOEGIJAPRANATA can be useful for my future career and can help people around me.



Blora, November 11, 2021

A handwritten signature in blue ink, appearing to read "Febri Anggoro Guretno", is written over a horizontal line.

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ABSTRACT

Hydroponics is a farming technique using water media that contains nutrients that plants need to grow and develop, therefore we must be careful in maintaining the nutrient content that is usually stored in a reservoir. This is the main problem if we cannot maintain optimal nutritional conditions in the reservoir, plants that lack nutrients will affect their growth, otherwise, plants with excess nutrients will quickly rot and turn yellow. Therefore, we need a tool that can control the levels of hydroponic nutrients in the reservoir.

We need a tool that can control the hydroponic nutrient reservoir based on a microcontroller in which fuzzy logic is embedded. Fuzzy logic itself consists of many rules that can regulate the output of the output pump which consists of a nutrition pump and a water pump, the output is in the form of a delay value which will be used to turn the relay on and off.

As we know hydroponic farming requires patience and accuracy in managing the nutrient reservoir, with this tool we no longer need to worry about nutrition for plants because everything is fully controlled by a microcontroller, for further it is hoped that this tool that already contains fuzzy logic can work continuously to control nutrient levels in the reservoir.

Keywords: hydroponics, fuzzy, nutrition, reservoir, Arduino Uno

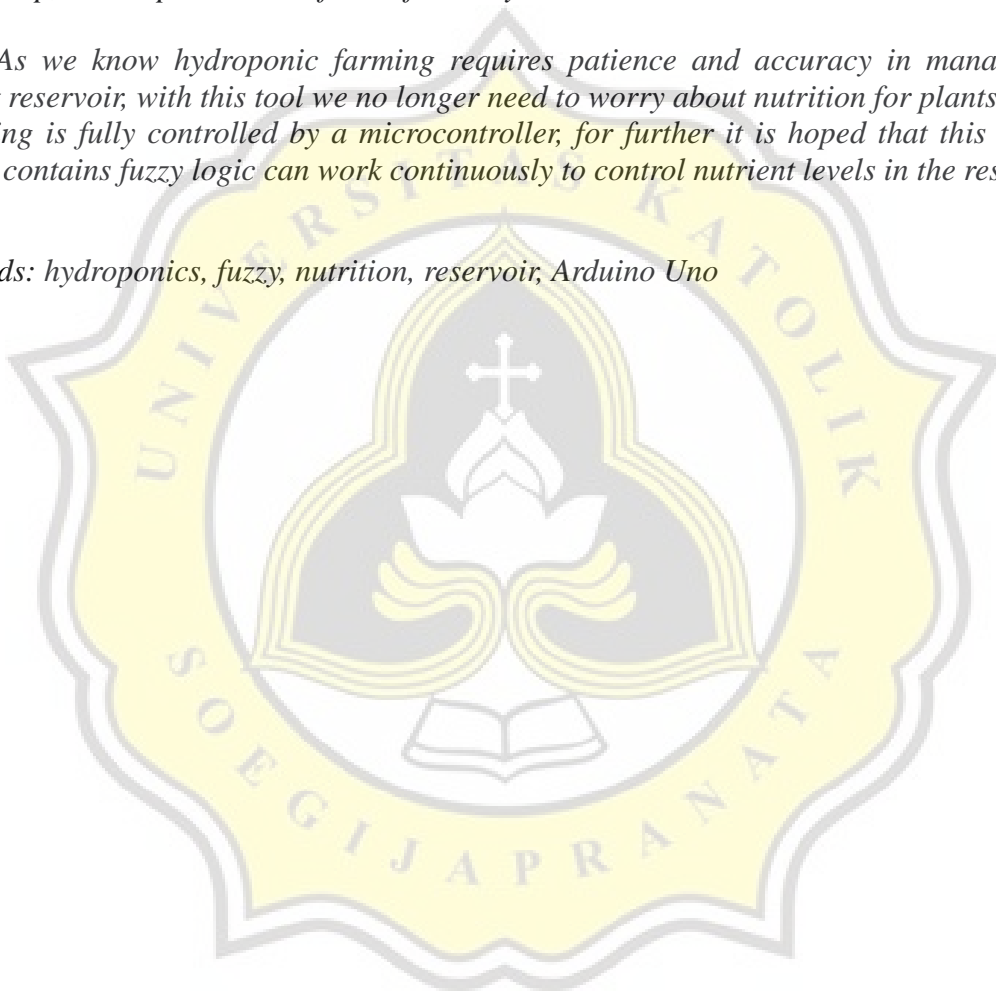


TABLE OF CONTENTS

COVER	i
APPROVAL AND RATIFICATION PAGE	ii
DECLARATION OF AUTHORSHIP	iii
APPROVAL PAGE FOR PUBLICATION OF.....	iv
SCIENTIFIC PAPERS FOR ACADEMIC INTEREST.....	iv
ACKNOWLEDGMENT.....	iv
ABSTRACT	v
LIST OF FIGURE.....	viii
LIST OF TABLE	ix
CHAPTER 1 INTRODUCTION	1
1.1. Background	1
1.2. Problem Formulation	1
1.3. Scope	1
1.4. Objective.....	2
CHAPTER 2 LITERATURE STUDY.....	3
CHAPTER 3 RESEARCH METHODOLOGY.....	6
3.1. Preparing The Device	6
3.2. Calibration	6
3.3. Collecting Data.....	6
3.4. Program Implementation.....	6
3.5. Testing.....	6
CHAPTER 4 ANALYSIS AND DESIGN	7
4.1. Hardware.....	7
4.2. Fuzzy Algorithm	10
4.2.1. Fuzzyfication	10
4.2.2. Rule Base	14
4.2.3. Defuzzyfication.....	15

CHAPTER 5 IMPLEMENTATION AND RESULTS	16
5.1. Implementation.....	16
5.2. Results.....	23
CHAPTER 6 CONCLUSION	25
REFERENCES.....	26
APPENDIX	27



LIST OF FIGURE

Picture 1: Arduino Uno	7
Picture 2: Ultrasonic sensor.....	8
Picture 3: Relay	8
Picture 4: Mini water pump.....	9
Picture 5: LCD 16x2	9
Picture 6: System design	10
Picture 7: Fuzzyfication membership water level	10
Picture 8: Fuzzyfication membership nutrition value	11
Picture 9: Fuzzyfication membership water pump duration	13
Picture 10: Fuzzyfication membership nutrition duration.....	13



LIST OF TABLE

Table 1: Rule Base table.....	14
Table 2: Table Testing.....	24
Table 3: Tabel Testing.....	25

