



PROJECT REPORT
EARLY ANOMALY PREDICTION OF MACHINE
DAMAGE USING C4.5 ALGORITHM BASED ON IOT

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ABSTRACT (ABSTRACT TITLE)

Machine condition is a problem that is difficult to predict, prediction of machine condition is an important aspect in the application of maintenance because the occurrence of damage can result in a decrease in the productivity of a company. Measurement of vibration, temperature, and machine displacement is a fairly good method to determine the condition of the machine because it is an indicator of mechanical conditions and an early indicator of damage to the machine as a whole, Application of Algorithms in processing vibration, temperature and machine displacement data to improve the prognosis of damage.

In this project, predictions of machine condition will be carried out using the C4.5 algorithm. Data taken using sensors at a certain time will be used to predict the decline in the performance of a machine. This data will be used for training and testing data.

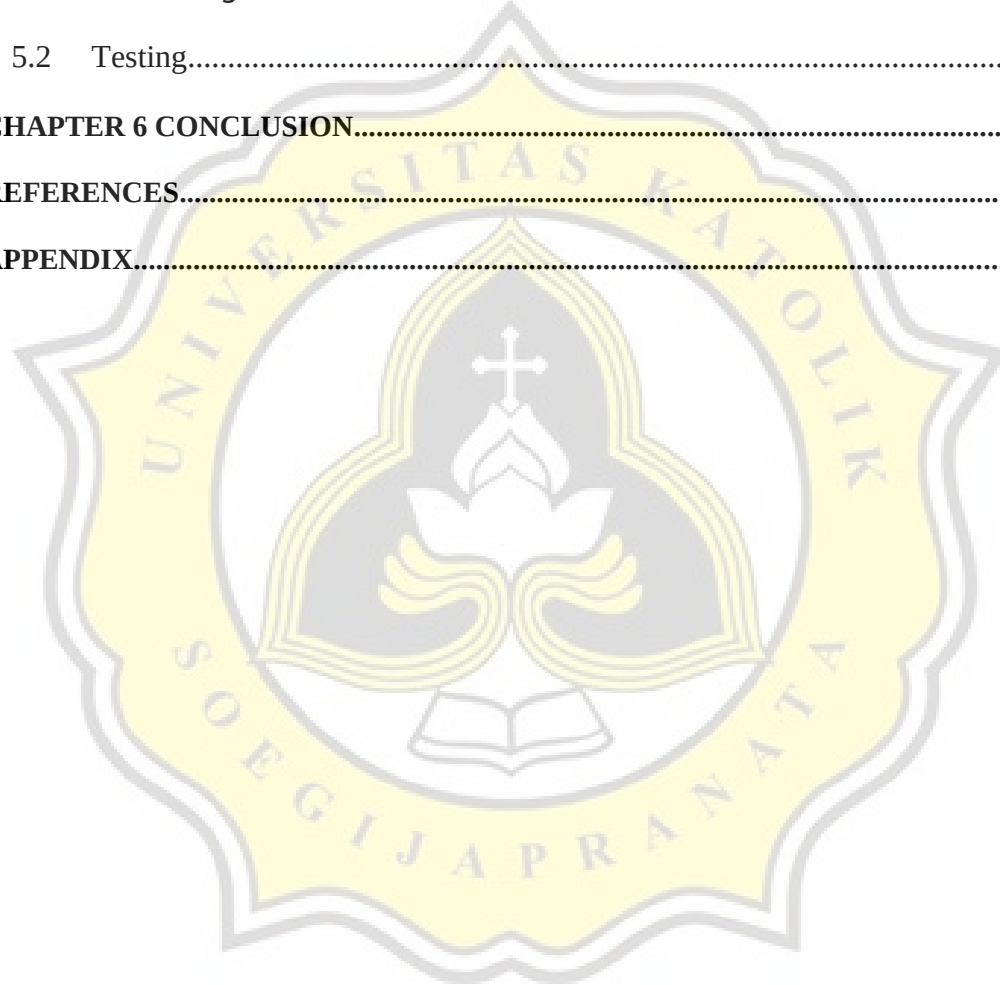
This project was concluded that the C4.5 algorithm obtained accuracy with the difference between Training data and Test data, 60.8% for Training data and 76.4% for Testing data. Proving that the C4.5 algorithm is effective for predicting the initial anomaly of damage to the machine. It is necessary to re-calibrate the sensor limits, and replace the sensors used because this project uses sensors for prototypes.

Keyword: Machine condition, Vibration, Temperature, Machine Displacement, C4.5

TABLE OF CONTENTS

COVER.....	i
APPROVAL AND RATIFICATION PAGE (Heading plain).....	ii
DECLARATION OF AUTHORSHIP.....	iii
ACKNOWLEDGMENT.....	iv
TABLE OF CONTENTS.....	vi
LIST OF FIGURE.....	viii
LIST OF TABLE.....	ix
CHAPTER 1 INTRODUCTION.....	1
1.1 Background.....	1
1.2 Problem Formulation.....	1
1.3 Scope.....	2
1.4 Objective.....	2
CHAPTER 2 LITERATURE STUDY.....	3
CHAPTER 3 RESEARCH METHODOLOGY.....	6
3.1 Literature Review.....	6
3.2 Data Retrieval.....	6
3.3 Data Transfer.....	6
3.4 Data Processing.....	6
3.5 Algorithm Process.....	6
CHAPTER 4 ANALYSIS AND DESIGN.....	7
4.1 Analysis.....	7
4.1.1 CollectingData.....	7
4.1.2 Algorithm C45.....	9

4.2	Prototype Schematic.....	10
CHAPTER 5 IMPLEMENTATION AND TESTING.....		12
5.1	Implementation.....	12
5.1.1	Arduino Code.....	12
5.1.2	NodeMCU Code.....	14
5.1.3	C45 Algorithm Code.....	16
5.2	Testing.....	18
CHAPTER 6 CONCLUSION.....		a
REFERENCES.....		b
APPENDIX.....		d



LIST OF FIGURE

Figure 1.1. Prototype Schematic.....10

Figure 1.2. Website View.....11



LIST OF TABLE

Table 1.1 : Motorcycle Data.....	7
Table 1.2 : New Fan Data.....	8
Table 1.3 : Old Fan Data.....	8
Table 1.4 : The results of the iteration process with 700 data.....	18
Table 1.5 : Condition training results after iteration process with 700 data.....	18
Table 1.6 : Condition training master data.....	18
Table 1.7 : Confusion matrix data with 700 dataset.....	19
Table 1.8 : Condition testing results after iteration process with 300 data.....	19
Table 1.9 : Condition testing master data.....	19
Table 2.0 : Confusion matrix data with 300 dataset.....	20

