



**PROJECT REPORT**  
**DIAGNOSIS OF HUMAN DISEASE USING**  
**NAIVE BAYES ALGORITHM**

**LAURENTIUS KEVIN HENDRAWANTO**  
**14.K1.0034**

**Faculty of Computer Science**  
**Soegijapranata Catholic University**  
**2019**

## APPROVAL AND RATIFICATION PAGE

DIAGNOSIS OF HUMAN DISEASE USING NAIVE BAYES ALGORITHM

by

LAURENTIUS KEVIN HENDRAWANTO 14.K1.0034

This project report has been approved and ratified  
by the Faculty of Computer Science on July 19, 2019

With approval,

Supervisor,

Robertus Setiawan Aji Nugroho, ST, M.Compl.E., Ph.D  
NPP : 058.1.2004.264

Examiners,

1.)

Hironimus Feong, S.Kom., M.Kom  
NPP : 058.1.2007.273

2.)

YB. Dwi Sumanito, ST, M.Cs  
NPP : 058.7.2017.021

  
Dean of Faculty of Computer Science.  
Eddy Andyanto Nugroho, ST, MCI  
NPP : 058.1.2002.254

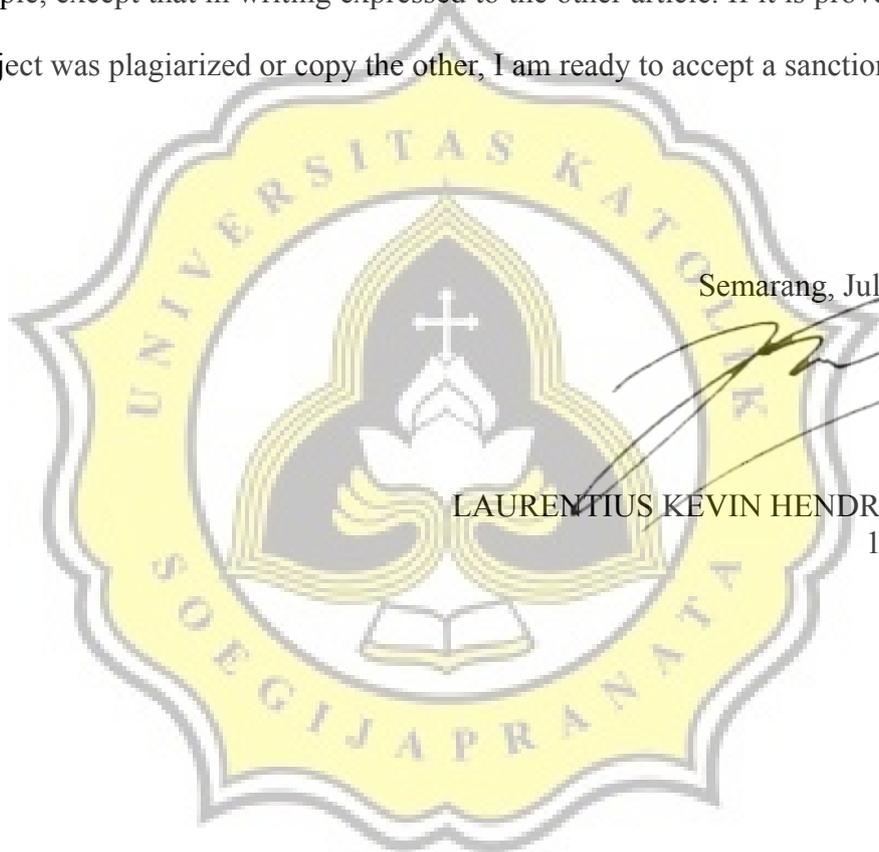
## STATEMENT OF ORIGINALITY

I, the undersigned:

Name : LAURENTIUS KEVIN HENDRAWANTO

ID : 14.K1.0034

Certify that this project was made by myself and not copy or plagiarize from other people, except that in writing expressed to the other article. If it is proven that this project was plagiarized or copy the other, I am ready to accept a sanction.



Semarang, July 19, 2019

LAURENTIUS KEVIN HENDRAWANTO  
14.K1.0034

## ABSTRACT

*Human Disease prediction is hard to do because there is a lot of Disease that has the same symptoms. For example, masuk angin, usus buntu, aids and batu ginjal have the same mual symptoms. This is just a small case. In real data, there is more than that. Some disease has its symptoms, some of that share several of their symptoms, and there is a disease that shares all of their symptoms with others. This random case is the problem why a simple query can not get the job done.*

*For making the disease prediction system. It needs an algorithm that can predict the disease using the available data. Naive Bayes is used in this case. Naive Bayes can calculate the inputted data, then make a classification based on the available data. The result is a score so then the system can give prediction to the user. In Naive Bayes, all the disease will be calculated, not just a disease that has inputted symptoms from the user. With that, we can sort the result from the highest to the lowest score.*

*A system that can predict patient disease is the goal of this research. User needs to enter every symptom that happens to their body and system will give a prediction maximum 3 start with the highest score to the lowest score of the 3 highest score. With that, the patient or doctor can decided on the correct one based on doctor experience. The system is used to make the diagnosis process faster than before.*

*Keyword: Naive Bayes classifier, diagnosis, Django framework*

## PREFACE

The first chapter of this project is the introduction chapter. There is information about the background of this project, what problem is trying to solve and the solution that suggested to solve the problem. The scope is what question is answered in this research. The last is the objective of this research or what tried to make it in this research.

The second chapter is a Literature study. In this chapter, it shows what other research is used to make this research done. There is 5 research that correspondent with each other. That is the base of this project research.

Chapter three is a literature study. The detailed step that done in this research is in this chapter. It is explaining how to get the dataset, analyze it to make the database design, web app route, until the step to make this report. Every step in this chapter is detailed so then the reader can make the same application.

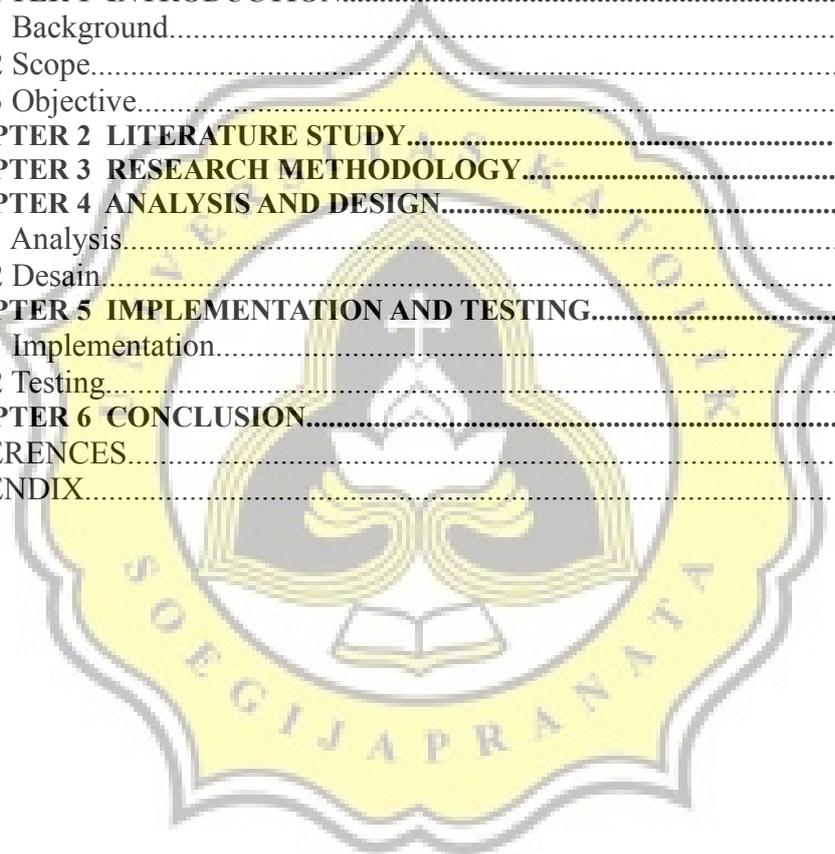
Analysis and Design is the fourth chapter in this report. This chapter shows the result of the manual calculation that becomes the analysis and the system design. This manual calculation includes calculating several keywords that appear in the disease and Naive Bayes calculation. Database design and dataflow are in the Design section.

The next chapter is Implementation and Testing. All the analysis and design are created in this section. Design is used to make the user flow or the frontend. The analysis is used for making the backend. That includes databases, views for receiving and calculating the data, and the algorithm.

The conclusion is in chapter 6. This is the last chapter that has the final result. This chapter includes scope answers and suggestions.

## TABLE OF CONTENTS

Cover.....	i
APPROVAL AND RATIFICATION PAGE.....	ii
STATEMENT OF ORIGINALITY.....	iii
ABSTRACT.....	iv
PREFACE.....	v
TABLE OF CONTENTS.....	vi
ILLUSTRATION INDEX.....	vii
INDEX OF TABLES.....	viii
<b>CHAPTER 1 INTRODUCTION.....</b>	<b>1</b>
1.1 Background.....	1
1.2 Scope.....	1
1.3 Objective.....	2
<b>CHAPTER 2 LITERATURE STUDY.....</b>	<b>3</b>
<b>CHAPTER 3 RESEARCH METHODOLOGY.....</b>	<b>5</b>
<b>CHAPTER 4 ANALYSIS AND DESIGN.....</b>	<b>10</b>
4.1 Analysis.....	10
4.2 Desain.....	11
<b>CHAPTER 5 IMPLEMENTATION AND TESTING.....</b>	<b>13</b>
5.1 Implementation.....	13
5.2 Testing.....	16
<b>CHAPTER 6 CONCLUSION.....</b>	<b>19</b>
REFERENCES.....	
APPENDIX.....	A



## ILLUSTRATION INDEX

Illustration 1: Naive Bayes Formula.....	9
Illustration 2: Flow chart.....	11
Illustration 3: symptoms Page.....	16
Illustration 4: Result diagnosis.....	17
Illustration 5: Trial data.....	17



## INDEX OF TABLES

Table 1: Disease that has these keywords.....	10
---	----

