



PROJECT REPORT
ANALYSIS OF THE DOUBLE EXPONENTIAL
SMOOTHING HOLT ALGORITHM FOR
EARTHQUAKE PREDICTION ON THE ISLANDS
OF JAVA, SUMATERA, AND BALI

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APPROVAL AND RATIFICATION PAGE



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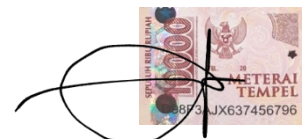
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ABSTRACT

Indonesia is an area that is often affected by earthquakes, because Indonesia is at the confluence of three tectonic plates of the earth. There are three provinces in Indonesia that frequently experience earthquakes, namely Sumatra Island, Java Island, and Bali Island. Forecasting techniques can be used as a strategy to deal with natural disasters.

One method that can be used for forecasting is Double Exponential Smoothing Holt. This method uses the value from the previous history to predict the next period. Double Exponential Smoothing Holt is very good for long term, medium term and short-term use. The data that will be used is the magnitude of the island of Sumatra, Java and Bali from 2016 to 2020, which is taken from repobmkg.go.id and grouped on a weekly basis.

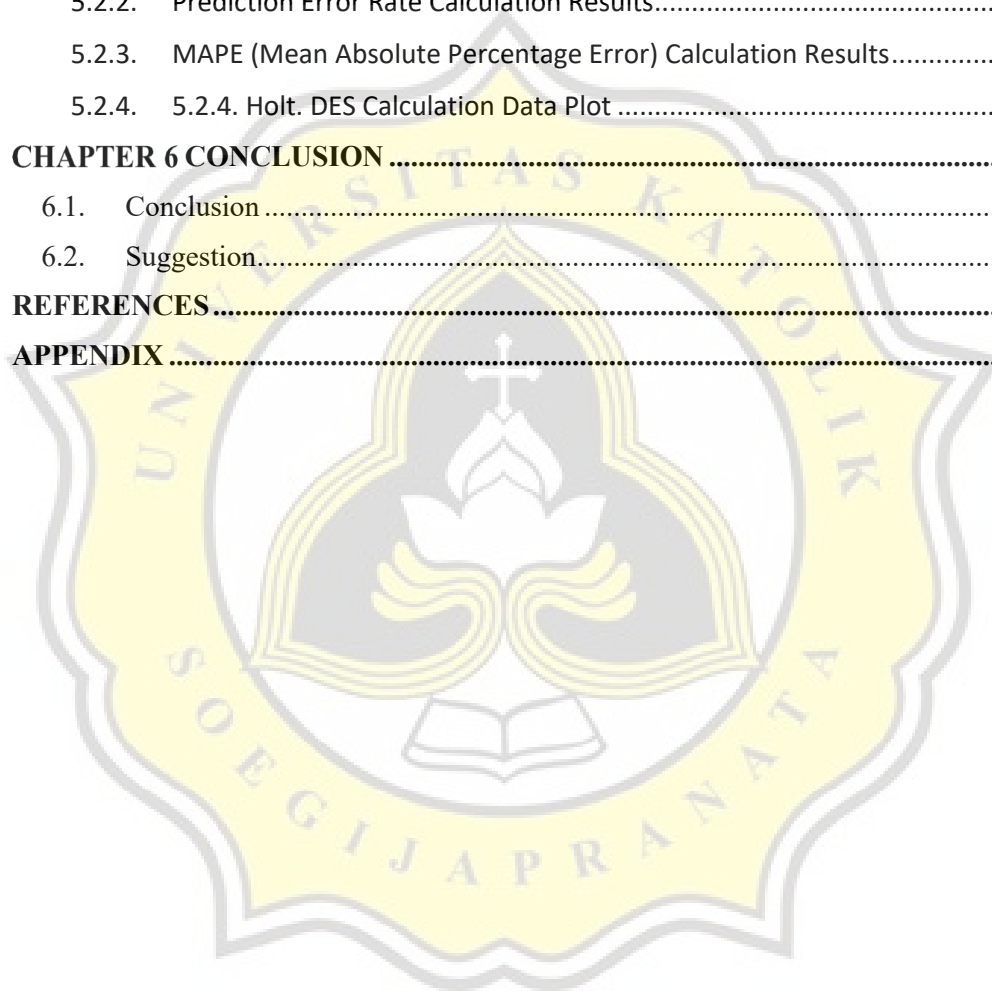
The results got from this study are the analysis of the Double Exponential Smoothing method to get earthquake prediction information and the level of accuracy based on MAPE to get the smallest error value.

Keyword: Forecasting, Magnitudo, Double Exponential Smoothing, MAPE

TABLE OF CONTENTS

APPROVAL AND RATIFICATION PAGE	ii
DECLARATION OF AUTHORSHIP	iii
HALAMAN PERNYATAAN PUBLIKASI KARYA ILMIAH UNTUK KEPENTINGAN AKADEMIS	iv
ACKNOWLEDGMENT	v
TABLE OF CONTENTS	vii
LIST OF FIGURE	ix
LIST OF TABLE	x
CHAPTER 1 INTRODUCTION	1
1.1. Background.....	1
1.2. Problem Formulation.....	2
1.3. Scope.....	2
1.4. Objective.....	2
CHAPTER 2 LITERATURE STUDY	3
CHAPTER 3 RESEARCH METHODOLOGY	5
3.1. Data Sources and Types.....	5
3.1.1. Data source	5
3.1.2. Data Type	5
3.2. Data analysis method.....	5
3.2.1. Literature review.....	5
3.2.2. Scalping Data.....	6
3.2.3. Data processing.....	6
3.2.4. Graphic Plots, Conclusion Withdrawal, Compilation of reports as Final Project 7	
3.3. Research Methodology	7
CHAPTER 4 ANALYSIS AND DESIGN	8
4.1. Analysis	8
4.2. Data Analysis Using Holt. Double Exponential Smoothing (DES) Method.....	10
4.2.1. Determining Alpha and Beta Randomly	10
4.2.2. Determining Level, Trend, and Forecast Using Holt's DES Method.....	10
4.2.3. Measuring Prediction Error by Calculating MAPE	20
4.2.4. Determination of the Best Alpha and Beta Based on the Smallest MAPE ..	22
4.3. Design	25

CHAPTER 5 IMPLEMENTATION AND RESULTS	26
5.1. Implementation	26
5.1.1. Double Exponential Smoothing Holt Algorithm	26
5.1.2. Finding Best Alpha, Best Beta, and Best MAPE	27
5.2. Results.....	29
5.2.1. Holts Double Exponential Smoothing Calculation Results	29
5.2.2. Prediction Error Rate Calculation Results.....	34
5.2.3. MAPE (Mean Absolute Percentage Error) Calculation Results.....	39
5.2.4. 5.2.4. Holt. DES Calculation Data Plot	41
CHAPTER 6 CONCLUSION	45
6.1. Conclusion	45
6.2. Suggestion.....	45
REFERENCES.....	46
APPENDIX	a



LIST OF FIGURE

Figure 3.1 Research Design Diagram	7
Figure 4.1 <i>Flowchart Program DES Holt</i>	25
Figure 5.1 <i>Graph of Actual and Predicted Value of Java Island in 2016</i>	41
Figure 5.2 Comparison Graph of Java Island Prediction Results in 2016 and Actual Value in 2017	41
Figure 5.3 Graph of the Actual and Predicted Value of Java Island in 2020.....	42
Figure 5.4 Graph of Actual and Predicted Value of Sumatra Island in 2018	42
Figure 5.5 Comparison Graph of Predicted Results of Sumatra Island in 2018 and Actual Value in 2019	43
Figure 5.6 Graph of the Actual and Predicted Value of Sumatra Island in 2020.	43
Figure 5.7 Graph of Bali Island Actual and Predicted Value in 2017	43
Figure 5.8 Comparison Graph of Bali Island Prediction Results in 2017 and Actual Value in 2018	44
Figure 5.9 Graph of Bali Island Actual and Predicted Value in 2020	44

LIST OF TABLE

Table 4.1. <i>Java Island Data Summary</i>	8
Table 4.2. <i>Sumatra Island Data Summary</i>	9
Table 4.3. <i>Bali Island Data Summary</i>	9
Table 4.4. <i>Java Island Weekly Data 2016-2018</i>	10
Table 4.5. <i>Java Island Weekly Data for 2019-2020</i>	11
Table 4.6. <i>Sumatra Island Weekly Data 2016-2018</i>	12
Table 4.7. <i>Sumatra Island Weekly Data for 2019-2020</i>	13
Table 4.8. <i>Bali Island Weekly Data for 2016-2018</i>	14
Table 4.9. <i>Bali Island Weekly Data for 2019-2020</i>	15
Table 4.10. <i>Calculation of DES Holt Java Island in 2016</i>	18
Table 4.11. <i>MAPE Value Range</i>	20
Table 4.12. <i>2016 Modeling Error Rate</i>	21
Table 4.13. <i>MAPE values based on Alpha and Beta</i>	22
Table 4.14. <i>Calculation of DES Holt Java Island January 2017 – June 2017</i>	22
Table 4.15. <i>Error Rate (Error) Modeling January 2017 – June 2017</i>	23
Table 5.1. <i>Calculation of DES Holt in Java in 2017-2018</i>	29
Table 5.2. <i>Calculation of DES Holt in Java for 2019-2020</i>	30
Table 5.3. <i>Calculation of DES Holt Sumatra Island 2016-2017</i>	30
Table 5.4. <i>Calculation of DES Holt, Sumatra Island in 2018-2019</i>	31
Table 5.5. <i>Calculation of DES Holt, Sumatra Island in 2020</i>	32
Table 5.6. <i>Calculation of DES Holt Bali Island 2016-2017</i>	32
Table 5.7. <i>Calculation of the Bali Island Holt DES 2018-2019</i>	33
Table 5.8. <i>Calculation of DES Holt, Bali Island in 2020</i>	34
Table 5.9. <i>Java Island Modeling Error Rate 2017-2018</i>	34
Table 5.10. <i>Java Island Modeling Error Rate 2019-2020</i>	35
Table 5.11. <i>Sumatra Island Modeling Error Rate 2016-2017</i>	35
Table 5.12. <i>Sumatra Island Modeling Error Rate 2018-2019</i>	36

Table 5.13. <i>Sumatra Island Modeling Error Rate, 2020</i>	37
Table 5.14. <i>Bali Island Modeling Error Rate 2016-2017</i>	37
Table 5.15. <i>Bali Island Modeling Error Rate 2018-2019</i>	38
Table 5.16. <i>Bali Island Modeling Error Rate, 2020</i>	38
Table 5.17. <i>MAPE Value based on Alpha and Beta of Java Island in 2017-2018</i> 39	
Table 5.18. <i>MAPE Value based on Alpha and Beta of Java Island in 2019-2020</i> 39	
Table 5.19. <i>MAPE Value based on Alpha and Beta of Sumatra Island in 2016-2018</i>	39
Table 5.20. <i>MAPE Value based on Alpha and Beta of Sumatra Island in 2019-2020</i>	40
Table 5.21. <i>MAPE value based on the Alpha and Beta of the island of Bali in 2016-2018</i>	40
Table 5.22. <i>MAPE values based on the Alpha and Beta of the island of Bali in 2019-2020</i>	40
Table 5.23. <i>Average MAPE Value 2016-2020</i>	40

