



TABLE OF CONTENTS

SURAT KETERANGAN	iii
HALAMAN PENGESAHAN	iv
PLAGIARISM STATEMENT	v
TABLE OF CONTENTS	vi
ABSTRACT	viii
CHAPTER I INTRODUCTION	1
1.1 Research Background	1
1.2 Research Problem	3
1.3 Research Scope	3
1.4 Research Objective	4
1.5 Research Advantages	4
CHAPTER II LITERATURE REVIEW	5
2.1 Emotional detection	5
2.2 Sentiment Analysis	8
CHAPTER III THEORETICAL BASIS	13
3.1 Machine Learning Based Text Classification	13
3.1.1 Naive bayes	14
3.1.2 Support vector machine	14
3.1.3 Logistic regression	16
3.1.4 CNN+LSTM and Other Deep Learning Method	16
3.2 Vader Algorithm for Sentimental Analysis	17
3.3 Connection Between Emotions and Sentiments	18
3.4 Psychological theory	18
CHAPTER IV METHODOLOGIES	21
4.1 Technical Analysis	21
4.2 Features	22
4.3 Functional Requirement	23
4.4 Data set	23
4.5 Sentimental Analysis Experimentation	24
4.5.1 Why sentimental analysis?	24
4.5.2 Correlation between emotional detection and sentiment analysis	25



4.5.3 Picking the sentiment analysis tool	27
4.6 NLP Pre-Processing	27
4.7 Machine Learning Experimentation	32
CHAPTER V IMPLEMENTATION	36
5.1 How The Components Work Together in Emotional Detection	36
5.2 Creating the Bot.	38
5.3 Hosting the Bot	39
5.4 Coding the Bot	39
5.5 Web Server and UI	40
5.6 UI	41
5.7 Databases	42
5.8 General Emotional Review	43
5.9 Personal Emotional Review	47
5.10 Chatbot	47
5.11 Giving Motivation Quotes	49
5.12 Jokes	49
CHAPTER VI EVALUATION	52
6.1) User Based Evaluation	52
6.2) Data Based Evaluation	55
6.3) Technical evaluation	55
6.4) Discussion	58
CHAPTER VII CONCLUSIONS	60
7.1 Conclusion	60
7.2 Limitations	61
7.3 Innovations	61
7.4 Future Work	61
REFERENCES	62
APPENDIX	65