TABLE OF CONTENTS

APPROVAL PAGE i
SELF DECLARATION AGAINST PLAGIARISM iii
ABSTRACT iv
ABSTRAK v
ACKNOWLEDGEMENTS vi
PREFACE vii
TABLE OF CONTENTS viii
LIST OF FIGURES x
LIST OF TABLES xii
LIST OF ABBREVIATIONS xiii
Chapter 1 INTRODUCTION 1
1.1 Background 1
1.2 Problem Statement and Research Question 2
1.3 Objective 5
1.4 Hypothesis 6
1.5 Research Methodology 7
1.6 Contribution 8
Chapter 2 LITERATURE STUDY 9
2.1 Hate Speech 9
2.2 Hate Speech Detection Methodology 11
2.2.1 Hate Speech Rule 11
2.2.2 Word Embedding Method 17
2.3 Evaluation Method 23
Chapter 3 DESIGN, ANALYSIS, AND IMPLEMENTATION 28
3.1 Hate Speech Rule 28
3.2 Dataset 31
3.3 Proposed System Design 33
3.3.1 Crawling Phase 34
3.3.2 Labeling Phase 37
3.3.3 Training Phase 39
3.3.4 Testing Phase 47
Chapter 4 EXPERIMENTS AND ANALYSIS 50

4.1 Testing the effect of window size and method for imbalanced dataset to the accuracy of the model 50
4.1.1 The experiment of the imbalanced dataset using modified TextCNN 51
4.1.2 The experiment of the imbalanced dataset using modified TextCNN and K-Fold Cross-validation 53
4.1.3 The experiment of the imbalanced dataset using modified TextCNN and Random Oversampling 55
4.1.4 The experiment of imbalance dataset using modified TextCNN and Random Undersampling 58
4.1.5 The experiment of imbalance dataset using modified TextCNN and Class Weight 60
4.2 Result comparison between the proposed model and baseline model 63
4.2.1 Comparison of the F1-score, Precision, and Recall between the proposed model and baseline model 63
4.2.2 Comparison of the F1-score, Precision, and Recall between proposed model, baseline model, and modified TextCNN using the baseline dataset 65
4.3 Experiment Result Summary 69
Chapter 5 CONCLUSION AND FUTURE WORK 73
5.1 Conclusion 73
5.2 Future Work 75
BIBLIOGRAPHY 76