

CONTENTS

CHAPTER NO.	TITLES	PAGE NO.
1	INTRODUCTION	1
1.1	Stock Market	1
1.2	Indian Stock Exchange	5
1.3	Stock Prediction	7
1.4	Fundamental Analysis	7
1.5	Technical Analysis	8
1.6	Sentiment Analysis	13
1.7	Motivation For The Research	15
1.8	Problem Description	18
1.9	Objectives Of The Research	19
1.10	Research Framework	19
1.11	Dataset Description	21
1.12	Key Performance Indicators	22
1.13	Organization Of The Thesis	24
2	REVIEW OF LITERATURE	26
2.1	Introduction	26
2.2	Related Work On ELM Based Prediction Methods	26
2.3	Related Work On Prediction Models Using Sentiment Analysis	31
2.4	Summary	39
3	RESEARCH METHODOLOGY	41
3.1	Basics Of Time Series Analysis	41
3.2	Prediction Methods	42
3.3	Experimental Setup And Dataset Description	43
3.4	Consequence Of ANNs In Predictive Study	45
3.5	Research Framework	47
3.6	Summary	49

CHAPTER NO.	TITLES	PAGE NO.
4	OPTIMIZING EXTREME LEARNING MACHINE ALGORITHM WITH DETERMINISTIC WEIGHT MODIFICATION FOR PREDICTING STOCK PRICE USING HISTORICAL DATA	51
4.1	Introduction	51
4.2	Extreme Learning Machine (ELM)	52
4.3	Deterministic Weight Modification(DWM)	55
4.4	Compared Methods	59
4.4.1	Support Vector Machine	61
4.4.2	Back Propagation Neural Networks	61
4.5	Performance Measures	62
4.6	Experimental Results And Analysis	62
4.7	Summary	74
5	EXTREME LEARNING MACHINE WITH DETERMINISTIC WEIGHT MODIFICATION FOR STOCK PRICE PREDICTION USING TECHNICAL INDICATORS	75
5.1	Introduction	75
5.2	Technical Indicators	75
5.3	Experimental Results And Analysis	79
5.4	Summary	90
6	MODIFIED EXTREME LEARNING MACHINE ALGORITHM WITH DETERMINISTIC WEIGHT MODIFICATION FOR STOCK PRICE PREDICTION USING SENTIMENT ANALYSIS	91
6.1	Introduction	91
6.2	Sentiment Analysis	92
6.3	Convolutional Neural Networks	94
6.4	Word2vec	95
6.5	Enhanced ELM with Sentiment Analysis	96
6.5.1	Parameter Settings	101
6.5.2	Pre Processing	101

CHAPTER NO.	TITLES	PAGE NO.
6.5.3	Data Cleaning	102
6.5.4	Data Normalization	102
6.6	Comments Pre-Processing	103
6.7	Hyper Parameter Analysis	105
6.7.1	Hidden Neurons	107
6.7.2	Activation Function	107
6.7.3	Weight And Biases	107
6.8	Performance Measures	108
6.9	Experimental Results And Analysis	109
6.10	Computational Complexity	129
6.11	Compared Methods	130
6.12	Summary	132
7	CONCLUSION AND FUTURE WORK	133
	REFERENCES	136
	APPENDIX - I	143
	PUBLICATIONS RELATED TO RESEARCH WORK	161
	PLAGIARISM REPORT	