

Table of Contents

List of Figures.....	i
List of Tables.....	ii
Abstract.....	iii
Chapter 1: Introduction	
1.1 Background of the Study.....	1
1.2 Statement of the problem.....	2
1.3 Objective of the Study.....	3
1.3.1 General Objective.....	3
1.3.2 Specific Objective.....	3
1.4 Significance of the Study.....	3
1.5 Scope and Limitation of the Study.....	4
1.5.1 Scope of the Study.....	4
1.5.2 Limitation of the Study.....	4
Chapter 2: Review of Related Literature	
2.1 Artificial Neural Network.....	5
2.2 Image Processing.....	6
2.3 Image Compression.....	7
Chapter 3: Theoretical and Conceptual Framework	
3.1 Theoretical Framework.....	10
3.1.1 Advantage of Image Compression.....	10
3.1.2 Data Redundancies.....	10
3.1.3 The Rate-Distortion Theory.....	12
3.2 Conceptual Framework.....	13
3.2.1 Back Propagation Neural Network.....	13
3.2.2 Image Compression Technique.....	14
3.2.2.1 Lossless Compression.....	14
3.2.2.2 Lossy Compression.....	16
Chapter 4: Methodology	
4.1 Interfacing the Image Compression System.....	18
4.1.1 Creating the Graphical User Interface Window (with GUIDE).....	18

4.2 The Image Compression Process.....	20
4.2.1 Constructing a Network Architecture.....	21
4.2.2 Creating Input Values.....	22
4.2.3 Training Pairs Preparation.....	23
4.2.4 Network Training.....	24
4.2.5 Compression.....	25
4.2.6 Decompression.....	26
Chapter 5: Results, Discussion and Conclusion	
5.1 Results and Discussion.....	28
5.1.1 Subjective Fidelity Criteria.....	28
5.1.2 Objective Fidelity Criteria.....	30
5.2 Conclusion.....	32
Bibliography	
Appendices	