CONTENTS

CHAPTER		TITLE	
NO.		Page no	
	ACKN	II	
	ABSTI	III VI	
	LIST OF FIGURES		
1	INTRODUCTION		1
	1.1	Overview	1
	1.2	Causes Of Skin Cancer	1
	1.3	Types Of Skin Cancer	2
2	LITER	RATURE REVIEW	7
	MELA	NOMA DETECTION USING IMAGE	
3	PROCESSING		9
	3.1	Image Acquisition	10
	3.2	Image Processing	12
	3.3	Segmentation Technique	12
		3.3.1 Threshold Based Technique	12
		3.3.2 Clustering Technique	12
		3.3.3 Edge Detection	12
	3.4	Feature Extraction	13
		3.4.1 Asymmetric Index	13
		3.4.2 Border Irregularity	14
		3.4.3 Color Index	14
		3.4.4 Diameter	15
	3.5	TDS Calculations	15
	3.6	Introduction Of DIP	16
	3.7	Digital Image Processing	17
	3.8	What Is DIP?	17
	3.9	What Is Image?	19
		3.9.1 Gray Scale Image	19
		3.9.2 Color Image	19
		3.9.3 Coordinates Convection	19
		3.9.4 Image Matrices	20
		3.9.5 Reading Images	21
		3.9.6 Data Classes	22
4	ARTIFICIAL NEURAL NETWORKS		24
	4.1	Methodology	24
	4.2	Image Processing	25
		4.2.1 Image Scaling	26
		4.2.2 RGB To GRAY Scaling	26
	4.3	Segmentation	27
		4.3.1 Backward Subtraction	27
		4.3.2 Edge Detection	27
		4.3.3 Masking	28
	4.4	Feature Extraction	28
	4.5	Classification	29

	4.6	Artificial Neural Networks	30	
	4.7	Hebbian Learning	31	
	4.8	Perceptron Learning Rule	32	
	4.9	Back Propagation Rule	32	
5	MATLAB		34	
	5.1	Introduction Of MATLAB	34	
	5.2	MATLAB	35	
		5.2.1 Develop Environment	35	
		5.2.2 MATLAB Maths Functions	35	
		5.2.3 MATLAB Language	35	
		5.2.4 Graphics	36	
		5.2.5 MATLAB Application Program		
		Interface	36	
	5.3	MATLAB Work Environment	36	
		5.3.1 MATLAB Desktop	36	
		5.3.2 Using MATLAB Editor M-File	36	
		5.3.3 Getting Help	36	
6	RESULTS		40	
	CONCLUSIONS REFERENCES		46 47	
	APPEN	APPENDIX		

LIST OF FIGURES

FIGURE NO.	TITLE	PAGE NO.
Figure 1.1	Classifications By The Skin Cancer Foundation	03
Figure 3.1	Flow Chart	11
Figure 3.2	Original Image	12
Figure 3.3	Enhanced Image	13
Figure 3.4	Segmented Image	14
Figure 3.5	Edge Detected Image	15
Figure 3.6	TDS Value For An Example Image	18
Figure 3.7	Digital Image	22
Figure 4.1	The Simplified Work Flow Of Computer	28
	Aided Melanoma Detection Using ANN Classifier.	
Figure 4.2	Resized Image	29
Figure 4.3	Gray Scale Image	29
Figure 4.4	Background Subtraction	30
Figure 4.5	Edge Detection	30
Figure 6.1	Original Image	44
Figure 6.2	Enhanced Image	44
Figure 6.3	Gray Scale Image	45
Figure 6.4	Edge Detection	45
Figure 6.5	Final Masked Image	46
Figure 6.6	Training in ANN	46
Figure 6.7	Dialog Box	47
Figure 6.8	Accuracy in ANN	47
Figure 6.9	Profile Summary of Image Processing	48
Figure 6.10	Profile Summary of Image Trained In ANN	49