

CONTENTS

Chapter

Page no

Chapter-1	1	Introduction	1
	1.1	Context	1
	1.2	Motivation	1
	1.3	Objective and Contribution	3
Chapter-2	2	Literature Review	4
	2.1	Techniques for Image retrieval	4
	2.2	Visual Attention Model	4
Chapter-3	3	Features Description	8
	3.1	Image representation	8
	3.2	Saliency Map Detection	12
	3.3	Shape Features	10
	3.3.1	Zernike Moment	13
	3.4	Color Features	15
	3.5	Texture Features	17
Chapter-4	4	Image Retrieval and Classification	25
	4.1	Proposed Method	25
	4.2	Features Extraction	27
Chapter-5	5.1	Classifier	28
	5.1.1	Support Vector Mechine	28
	5.2	Similarity Measure	29
Chapter-6	6	Implimentation and Results	30
	6.1	Parameter Selection	30
	6.2	SVM Classification	30
	6.3	Datasets	30
	6.4	CBIR User Interface	34
Chapter-7	7	Conclusions and Future Work	39
		References	40

List of Figures

Figure	Description	Page No.
1	Comparisons between two images	3
2	A Model of Saliency-Based Visual Attention for Rapid Scene Analysis	6
3.1	A detailed depiction of Frequency-tuned Salient Region Detection Model	11
3.2	Square to Circular image transform using Zernike moment	14
3.3	Decomposition of input image using Discrete Wavelet Transform	20
3.4	An image decomposed into four subband image after going through one stage of decomposition process	20
3.5	Wavelet Family	22
3.6	Single – level decomposition using Wavelet Transform	23
3.7	A three-level Filter Bank using Wavelet Transform	24
4.1	Our Proposed Model	25
4.2	Features extraction from query image	26
6.1	CBIR graphical user interface	34
6.2	Image of similar class of query image using WANG dataset	35
6.3	Image of similar class of query image using WANG dataset	35
6.4	Image of similar class of query image using Outdoor Scene Categories dataset	36
6.5	Confusion matrix for image classification using SVM on WANG dataset	37
6.6	Confusion matrix for image classification using SVM on Outdoor Scene Categories dataset	38

List of Tables

Table	Description	Page No.
6.1	Color-Shape classification for WANG and Outdoor Scene Categories datasets	31
6.2	Texture-Shape classification for WANG and Outdoor Scene Categories datasets	32
6.3	Color-Texture-Shape classification for WANG and Outdoor Scene Categories datasets	33

