Automatic Detection of Age Related Macular Degeneration

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Dedication

We would like to dedicate this project to our loving parents who have been a constant support and shoulder to rely on. They have given us inspiration to tackle each and every task with enthusiasm and determination. Their love, affection and belief in us have made us push our limits and aim to aspire a lot more in life.

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Abstract

Age related macular degeneration (ARMD) is a medical condition which results in deterioration of human retina and in particularly macula. It is caused due to deposits of drusen on the retina and the disease may cause severe blindness. It is important to detect ARMD in its early stages to save patient's vision.

In this project, a new technique for drusen detection from fundus images by using Gabor kernel based filter bank is used. Spurious regions are eliminated which may be confused with drusen. The system consists of phases like preprocessing, bright region detection, optic disc detection, removal of optic disc and finally AMD detection using drusen regions.

The system is evaluated by testing it on STARE database using performance factor like accuracy. We have achieved 98% accuracy on this system. The results show the comparison and validity of our system with existing techniques.

Table of Contents

Certificate i

Dedication ii

Acknowledgements iii

Abstract iv

Table of Contents v

List of Figures viii

List of Tables x

1. Introduction 1

1.1 Motivation 2

1.2 Scope and Objectives 3

1.3 Challenges Faced 3

1.3.1 Detection of optic disc 3

1.4 Detection of drusen 4

1.5 Structure of Thesis 4

2. Age Related Macular Degeneration 5

2.1 Structure of eye 5

2.1.1 Structure of the retina 6

2.2 Retinal Diseases 7

2.2.1 Diabetic Retinopathy 7

2.2.2 Diabetic Macular Edema (DME) 7

2.2.3 Glaucoma 8

2.2.4 Anterior ischemic optic neuropathy (AION)

2.3 Age Related Macular Degeneration (ARMD) 9

2.3.1 Types of ARMD 9

2.3.2 Cause and symptoms 10

2.4 Drusen 10

2.4.1 Types of Drusens 10
2.5 Treatment of AMD 11

3. Literature Review 12

4. Implementation / Design 18
4.1 System overview 18
4.2 Image acquisition 19
4.3 Image enhancement and bright region detection 19
4.4 OD detection and Removal 22
4.5 AMD detection 23

5. System Testing and Evaluation 30
5.1 Dataset 30
5.1.1 STARE 30
5.2 OD Segmentation Results 31
5.3 Drusen Segmentation Results 32
5.4 Processing Time of Proposed System 34
6**. Conclusion** 35
8. References 36

List of Figures

Figure 1.1: Medical images 1
Figure 1.2: Vision with retina affected by AMD 2
Figure 2.1: Structure of eye 6
Figure 2.2: Structure of retina **7**
Figure 2.3.Dibetic retinopathy effected eye 7
Figure 2.4.DME affected eye 8
Figure 2.5.Eye having Glaucoma 8
Figure 2.6.AION affected eye 9
Figure2.7. AMD and types 10
Figure2.8. AMD and types 10
Figure 4.1: Proposed system flow chart 18
Figure 4.2: Flow diagram for detecting bright regions 20
Figure 4.3: a) Original Image, b) smoothed image, c) Green channel of smoothed image, d) Contrast Enhanced Image 20
Figure 4.: Gabor filter bank 3D 21
Figure 4.5: Gabor filter bank 3D changed scale and orientation 21
Figure 4.6: Image segmentation and bright region enhancement 22
Figure 4.7: Flow chart for OD Detection and Removal 23
Figure 4.8: Candidate Drusen Detection, a) Preprocessed image, b) Filter Bank Response d)Binarized image containing possible drusen regions after removal of OD pixels 24
Figure 4.9: Drusen Segmentation, a) Binary Image containing possible drusen, b) Drusen marked with green color on retinal image 24
Figure 4.10: Use Case of Image Acquisition 25
Figure 4.11: Use Case of Image Enhancement 26
Figure 4.12: Use case for Bright region detection 27
Figure 4.13: Use Case for Optic Disc detection 28
Figure 4.14: Use Case for AMD Detection 29
Fig5.1 Retinal Images from STARE database 31
Fig5.2 OD segmentation Results a) Input Retinal Images, b) OD Detected Images 32
Fig 5.3 AMD Detection Results: Column a) Original Images, Column b) Bright Region Detection c) OD removal and Column d)Drusen detection 33

List of Tables

Table 1: Performance comparison of Several Techniques 17
Table 2 Image Acquisition 25
Table 3: Image Enhancement 26
Table 4: bright region detection 27
Table 5: OD detection 28
Table 6: AMD detection 29
Table 7 – OD Segmentation Results 31
Table 8 – Performance Comparison of Drusen Segmentation 33
Table 9: Processing time of Each Phase 34