



**Bahria University**  
Discovering Knowledge

**FINAL YEAR PROJECT REPORT**  
**GAZE BASED INTERACTION WITH**  
**ELECTRICAL APPLIANCES**

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**2018**

## ACKNOWLEDGEMENTS

### GAZE BASED INTERACTION WITH ELECTRICAL APPLIANCES

We would like to thank everyone who had contributed to the successful completion of this project. We would like to express our gratitude to our research supervisor, **Mr. Azmat Khan** for his invaluable advice, guidance and his enormous patience throughout the development of the research. We also like to thank **Dr Bilal Hameed**, who acted as our co-supervisor and provided us with financial and teaching support required to fulfil our project needs.

In addition, we would also like to express our gratitude to our loving parents, who had helped and given us encouragement to complete this project in due time.

## GAZE BASED INTERACTION WITH ELECTRICAL APPLIANCES

DECLARATION	ABSTRACT	iv
APPROVAL FOR SUBMISSION		iii
ACKNOWLEDGEMENTS		xi

The objective of this research-based project is to develop Eye blink detection system which help us to interact with different appliances in our house, and also help people which are not physically stable, for example who does not able to move their hands and are not able to stand on their own feet. To accomplished this research we divided it to small parts, such as firstly we extract feature of images using computer vision and digital images processing concepts which include some major techniques such as template matching, edge detection techniques for example canny edge detector, Handle noise in image and try to smooth image in order to reduce noise with the help of different filters and many more techniques. After feature detection we will create our model with the help of machine learning with data set of eye images and integrating it into the hardware module. Finally, in the end we test and evaluate our results and improve system accuracy according to the results.

1.3	Aim and Objectives	16
1.4	Scope of Project	17
1.5	Project Organization	18
2	LITERATURE REVIEW	18
2.1	General Methods for Interacting with Appliances	18
2.2	Means of Interaction for Specially-Abled people	18
2.3	Interacting through Eye Tracking and Movement	19
2.4	Related Work	20
2.4.1	Eye Movement based Interaction	20
2.4.2	Eye based Human-computer Interaction	20
2.4.3	Eye blink-based interaction	21

	<b>DESIGN AND METHODOLOGY</b>	<b>23</b>
	3.1 Overall System Design	23
	3.1.1 Software Module	24
	<b>TABLE OF CONTENTS</b>	<b>28</b>
	3.2 Methodology	28
	3.2.1 Development Model	28
	3.2.2 Test cases	31
	3.2.3 Workflow	31
	<b>DECLARATION</b>	<b>ii</b>
	<b>APPROVAL FOR SUBMISSION</b>	<b>iii</b>
	<b>ACKNOWLEDGEMENTS</b>	<b>vi</b>
	<b>ABSTRACT</b>	<b>vii</b>
	<b>TABLE OF CONTENTS</b>	<b>viii</b>
	<b>LIST OF TABLES</b>	<b>xi</b>
	<b>LIST OF FIGURES</b>	<b>xii</b>
	<b>LIST OF SYMBOLS / ABBREVIATIONS</b>	<b>xiv</b>
	<b>CHAPTER</b>	
<b>1</b>	<b>INTRODUCTION</b>	<b>15</b>
	1.1 Background	15
	1.2 Problem Statements	16
	1.3 Aims and Objectives	16
	1.4 Scope of Project	17
<b>2</b>	<b>LITERATURE REVIEW</b>	<b>18</b>
	2.1 General Methods for Interacting with Appliances	18
	2.2 Means of Interaction for Specially-Abled people	18
	2.3 Interaction through Eye Tracking and Movement	19
	2.4 Related Work	20
	2.4.1 Eye Movement based Interaction	20
	2.4.2 Eye based Human computer Interaction	20
	2.4.3 Eye blink-based Interaction	21

<b>3</b>	<b>DESIGN AND METHODOLOGY</b>	<b>23</b>
3.1	Overall System Design	23
3.1.1	Software Module	24
3.1.2	Hardware Module	28
3.2	Methodology	30
3.2.1	Development Model	30
3.2.2	Test cases	31
3.3	Workflow	32
<b>4</b>	<b>IMPLEMENTATION</b>	<b>33</b>
4.1	Overview	33
4.2	Software Module	33
4.2.1	Computer Vision	33
4.2.2	Machine Learning	38
4.2.3	Machine Learning Process	39
4.2.4	Making the GUI Interface	44
4.2.5	Bluetooth Communication	45
4.3	Hardware Module	47
4.3.1	Hardware Used	47
4.3.2	Hardware Implementation	50
<b>5</b>	<b>RESULTS AND DISCUSSIONS</b>	<b>52</b>
5.1	Testing and Evaluating	52
5.2	Defining the Test Cases	52
5.3	Test Case Results	54
5.3.1	Test Case Results: CNN Model training accuracy	54
5.3.2	Test Case Results: Range Test for Blink Detection	55
5.3.3	Test Case Results: Blink detection in different light conditions.	55
5.3.4	Test Case Results: Navigation Test of User Interface	56
5.3.5	Test Case Results: Operating Test of User Interface	57

<b>6</b>	<b>CONCLUSION AND RECOMMENDATIONS</b>	<b>59</b>
6.1	Conclusion	59
6.2	Recommendation	60
6.3	Future Work	60

	<b>REFERENCES</b>	<b>62</b>
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	<b>APPENDICES</b>	<b>62</b>
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