



FINAL YEAR PROJECT REPORT

**3-LAYER SECURITY BASED FACE
RECOGNITION SYSTEM APPLICATION USING
MULTIPLE FILTERS TO ENHANCE THE
PICTURE QUALITY**

**In fulfillment of the requirement
For degree of
BS (COMPUTER SCIENCES)**

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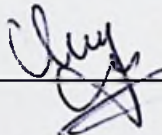
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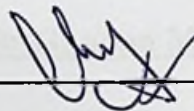
DECLARATION

We hereby declare that this project report is based on our original work except for citations and quotations which have been duly acknowledged. We also declare that it has not been previously and concurrently submitted for any other degree or award at Bahria University.

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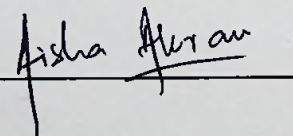
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ABSTRACT

ACKNOWLEDGEMENTS

This project is to develop application for recognizing gesture quality based on face recognition. This report explores different topics used for security to capture images. Different stages involving various phases, such as face detection, face alignment, face verification, and face lock.

We would like to thank everyone who had contributed to the successful completion of this project. We would like to express my gratitude to my research supervisor, Dr Ghulam Muhammad for his invaluable advice, guidance and his enormous patience throughout the development of the research.

In addition, we would also like to express my gratitude to our loving parent and friends who had helped and given me encouragement.

ABSTRACT

This project is to develop application for enhancing picture quality based on face recognition. This report explores different stages used for security to capture images. Different stages involving generate phone number with OTP (One Time Password), email verification and last face recognition of a user for Signup. The system first proceeds with the firebase that user already enrolled in the application or not and then registered it. The system would detect faces through a camera, process the faces and decide whether the face belongs to a registered user or not. If the person is not matched to the registered user then the person can't get the access to the application. Firebase used in this project for auto-detection of OTP and sign in method of email with thumb verification. Some of the features of the application are one tap Auto Enhance, Ability to Crop, rotate and straighten your photo as needed. Adjust brightness, contrast and saturation, adding effects like blur, snowy, emboss, engrave, etc. Finally the algorithm coded in java implemented in Android Studio.

TABLE OF CONTENTS

DECLARATION	ii
APPROVAL FOR SUBMISSION	iii
ACKNOWLEDGEMENTS	v
ABSTRACT	vi
TABLE OF CONTENTS	vii
LIST OF TABLES	xii
LIST OF FIGURES	xii
LIST OF SYMBOLS / ABBREVIATIONS	xix
LIST OF APPENDICES	xix
CHAPTER	
1. INTRODUCTION	
1.1 Background	15
1.2 Problem Statements	16
1.3 Aims and Objectives	16
1.4 Scope of Project	17
2. LITERATURE REVIEW	
2.1 Privacy Concerns When Using Augmented Reality Face Filters	18
2.2 Camera Canvas: Photo Editing and Sharing	18

2.3	Selfie-Taking and Social Media Use Increase Selfie-Editing Frequency Through Social Comparison	19
2.4	Why apply Filters in Photos and How It Impact Engagement	19
2.5	An Authentication of Carpooling Apps Using OTP and Fingerprint	20
2.6	Using Authentication in Firebase	21
2.7	Evaluating Login Challenges as a Defence Against Account Takeover	21
2.8	User Interface Design of Mobile Photo Editors	21
2.9	Biometric based Fingerprint Verification System for ATM machines	22
2.10	A Deep Facial Recognition System using Computational Intelligent Algorithms	23
2.11	Efficient Face Recognition System for Operating in Unconstrained Environments	23
3. DESIGN AND METHODOLOGY		
3.1	Hardware Component	25
3.1.1	Laptop	25
3.1.2	Android Devices	25
3.1.3	USB Cable	27
3.2	Software Components	27
3.2.1	Android Studio	27
3.2.2	Java	27
3.2.3	XML	27
3.2.4	Firebase	28

3.2.5	Microsoft Azure Face API	28
3.2.6	Augmented Reality SDK	28
3.2.7	Biometric	29
3.2.8	DS Photo Editor	29
3.2.9	CCP Library	29
3.2.10	Google Sign-in	29
3.2.11	Legacy-Support	29
3.3	Methodology Used	30
3.3.1	1st Security Layer	30
3.3.1.1	Signup	30
3.3.1.2	Phone no	31
3.3.1.3	Sign-in With Google	31
3.3.2	2nd Security Layer	32
3.3.3	3rd Security Layer	33
3.4	Face Filters	34
3.5	Photo Editor	34
4.	IMPLEMENTATION	35
4.1	Introduction	35
4.2	Flowchart	35
4.2.1	Graphical Representation	36
4.3	Firestore Authentication System	36
5.3.2.1	Crop	46
5.3.2.2	Frame	47
5.3.2.3	Sharpen	47
5.3.2.4	Contrast	48
5.3.2.5	Exposure	48
5.3.2.6	Stickers	49
5.3.2.7	Orientation	49
5.3.2.8	Text	50

4.4	A Use Case Diagram	37
4.5	Gantt Chart	39
5. RESULTS AND DISCUSSION		
5.1	Introduction	40
5.2	Security Achieve	40
5.3	Screenshots	41
5.3.1.	Face Filters	42
5.3.1.1	Cat Filter	42
5.3.1.2	Dog Filter	42
5.3.1.3	2nd Cat Filter	43
5.3.1.4	Hair Filter	43
5.3.1.5	Hat Filter	44
5.3.1.6	Jingle bell Hat	44
5.3.1.7	Glasses 1	44
5.3.1.8	Glasses 2	44
5.3.1.9	Glasses 3	45
5.3.1.10	Mask 1	45
5.3.1.11	Mask 2	45
5.3.1.12	Mask 3	45
5.3.1.13	Mask 4	46
5.3.2.	Photo Editor Features	46
5.3.2.1	Crop	46
5.3.2.2	Frame	47
5.3.2.3	Sharpen	47
5.3.2.4	Contrast	48
5.3.2.5	Exposure	48
5.3.2.6	Stickers	49
5.3.2.7	Orientation	49
5.3.2.8	Text	50