



**Blockchain-Based Framework for Secure Transfer of Medical Data for Deep Learning
Models**

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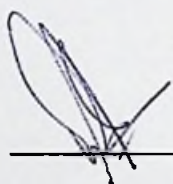
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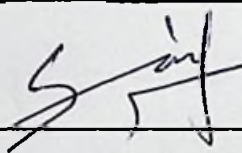
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We hereby declare that this project report is based on our original work except for citations and quotations which have been duly acknowledged. We also declare that it has not been previously and concurrently submitted for any other degree or award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

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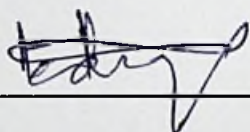
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APPROVAL FOR SUBMISSION

We certify that this project report entitled **“Blockchain-Based Framework For Secure Transfer of Medical Data For Deep Learning Models”** was prepared by **Sadia Urooj and Ayesha Shahzad** has met the required standard for submission in partial fulfilment of the requirements for the award of Bachelor of Science in Computer Science at Bahria University, Karachi.

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Specially dedicated to

My beloved grandmother, mother and father

Ayesha Shahzad

My beloved grandmother, mother and father

Sadia Urooj

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Blockchain-Based Framework for Secure Transfer of Medical Data for Deep Learning Models

ABSTRACT

The current healthcare system is primarily dependent on EHRs (Electronic Health Records). Due to the use of these systems an enormous amount of data is generated. Although, EHR systems give patients control over their medical data. The current technology is having a hard time ensuring the owner's data privacy and security. According to the Analysis of cybersecurity breaches in healthcare systems, the amount of healthcare attacks reached 45 million individuals in 2021. Additionally with the help of these records, especially the medical images. Accurate diagnoses of diseases like tumors and cancers are crucial for medical researchers. Since most research is conducted on ML models to enhance the accuracy of the diagnoses of disease, it is very important to have the right quality and quantity of data to improve the efficiency, classification, and prediction rates of the ML model. Data is currently stored in centralized systems which affects the quality and cost of data and research. A centralized system is also more likely to fail effecting the reliability of the system. This is why our research suggests blockchain implementation in medical imaging for the improvement of data security and interoperability. It gives us a distributed network that stores transaction information in each block or node, this improves the quality, quantity, and interoperability of data which helps in further ML research. Therefore, this research presents an effective deep learning model based on a Blockchain to secure the transfer network as well as to accurately diagnose brain tumors.

TABLE OF CONTENTS

DECLARATION	ii
APPROVAL FOR SUBMISSION	iii
ACKNOWLEDGEMENTS	vi
ABSTRACT	vii
TABLE OF CONTENTS	viii
LIST OF TABLES	xi
LIST OF FIGURES	xii
LIST OF APPENDICES	xiii

CHAPTER

1	INTRODUCTION	1
	1.1 Introduction	1
	1.2 Problem Statement	1
	1.3 Aims and Objectives	2
	1.4 Scope of Project	2
2	LITERATURE REVIEW	3
	2.1 Background	3
	2.2 Comparison With Existing Work	3
3	REQUIREMENT SPECIFICATIONS	8
	3.1 User	8
	3.2 Functional And Data Requirements	8
	3.3 Non-Functional Requirements	8
	3.4 Algorithms/ Modes	9
	3.4.1 VGG16-Net Model	9

		ix
	3.4.2 ResNet-50 Model	9
	3.4.3 Inception-Net Model	10
4	DESIGN AND METHODOLOGY	12
	4.1 Proposed Methodology	12
	4.2 Working	13
	4.2.1 Decentralized App:	13
	4.2.2 Classification	15
5	SYSTEM IMPLEMENTATION	17
	5.1 Module Development	17
	5.2 Software Tools Used	17
	5.2.1 Visual Studio Code	17
	5.2.2 Libraries Used	17
	5.2.3 Languages Used	18
	5.2.4 System Requirements Table	19
	5.3 System Interface	19
	5.3.1 Sign Up Page	19
	5.3.2 Login Page	20
	5.3.3 Landing Page	20
	5.3.4 Images Page	21
	5.3.5 Locally Trained ML Models Page	22
	5.3.6 Network Status Page	23
6	SYSTEM TESTING AND EVALUATION	24
	6.1 Unit Testing	24
	6.1.1 Test Case 1 (Metamask Sign Up)	24
	6.1.2 Test Case 2 (Metamask Sign In)	24
	6.1.3 Test Case 3 (Data storage in MongoDB)	24
	6.1.4 Test Case 4 (IPFS Hash generation)	25
	6.1.5 Test Case 5 (Accessing Files from IPFS Hashes)	25
	6.1.6 Test Case 6 (Downloading Files from IPFS Hashes)	