



FINAL YEAR PROJECT REPORT

**HEALTHBANK
A DECENTRALIZED ELECTRONIC
MEDICAL RECORD**

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

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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 or other institutions.

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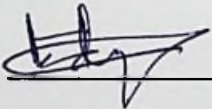
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APPROVAL FOR SUBMISSION

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Specially dedicated to

My beloved grandmother, mother and father

MUHAMMAD MURTAZA HASAN

My beloved grandmother, mother and father

HARIS BIN MUZAFFAR

My late grandparents, and beloved mother and father

SYED MUHAMMAD SHAHEER HASAN

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HEALTHBANK: A DECENTRALIZED ELECTRONIC MEDICAL RECORD

ABSTRACT

Health-Bank is a Proof of concept proposed to address the challenges faced by conventional medical record system. While digitalizing the records and having them available on the go, to securing them it got all covered by leveraging the IPFS (Inter-Planetary File System) and Ethereum technology. Health-Bank proposes a model that could be practically implemented with one-time and lesser initial cost, and being able to store data record and access them securely. Traditional EMR systems are prone to data tempering that could result in either loss or inconsistency in data, and limited patient control over their own records. It proposes to implement authentication using Ethereum ecosystem that shall ensure “data-immutability” leading to enhance security and privacy of one’s medical record, covering the guidelines proposed by HIPAA (Health Insurance Portability and Accountability Act). Proposing the use of smart contracts, boost the authenticity of transaction, leading auditable interactions. On the other hand, the IPFS technology facilitates decentralized storage, enhancing scalability and resilience. This proposed system extends to optimize patient privacy, patient control thus ensuring enabling and revoking access to other entities, and has potential for seamless interactions among healthcare entities.

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