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(57) Abstract :

The present disclosure generally relates to a homomorphic encryption techniques to enhance security and privacy of patient medical data in telemedicine system (100). By leveraging homomorphic encryption techniques, the telemedicine system (100) ensures that patient data remains encrypted throughout transmission, storage, and computation, preventing unauthorized access and data breaches. The system (100) consists of a network (108), a server (106), and a client device (110). The server (106) for a healthcare provider that is set up to receive encrypted medical data and perform computations on the medical data without need for decryption receives login requests from the client device (110). The client device (110) for the patient is set up to encrypt medical data using homomorphic encryption, and a display for showing the results of the computations on the client device (110).

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