SECURING FINGERPRINT DATA USING FUZZY VAULT

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Abstract

With the rising popularity of biometric authentication methods, Importance of securely storing biometric data has also risen. Due to volatile nature of biometric data, solution used in tradition password authentication systems, such as hashing cannot be applied to biometric authentication. Recognizing this issues research all around the world have started proposing various solution to the growing problem. Most of these solutions are centered around fuzzy logic. All types of biometric data be it a fingerprint image or scan of an iris are fuzzy. There is no certainty that two scans of the same biometric feature of the same person will be same. Fuzzy logic has been applied in various ways to handle these fuzzy data. Fuzzy extraction, Fuzzy vaults and secure sketches being few of them.

This project will be focused on improving already available Fuzzy Vault solutions and focusing them only on fingerprint data handling. The proposed solution will be able to integrate into already existing fingerprint authentication systems and increase the security of stored fingerprint data without worrying about handling encryption keys.