Enhancing Security Through Biometrics: Advances and Challenges in Modern Identity Management

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Abstract*: Biometrics and identity management are increasingly pivotal in modern security systems, providing robust and reliable methods for verifying individual identities. This research paper explores the evolution, current applications, and future potential of biometric technologies in identity management. Through a detailed literature review and an extensive methodology section, this paper examines various biometric modalities, data collection techniques, and the integration of these technologies in diverse fields. The conclusions drawn highlight the efficacy, challenges, and future directions for biometrics in enhancing security and identity management systems*

Keywords: Biometrics, Identity Management, Security Systems, Biometric Modalities, Data Collection, Technological Integration