Secure Keystroke Authentication: Enhancing Password Security Using Behavioral Biometrics

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Abstract

This paper explores the use of keystroke dynamics as an additional security layer for passphrase authentication. By analyzing typing rhythm, we propose a machine-learning-based authentication system that distinguishes legitimate users from impostors. Experimental results demonstrate that our method achieves 96.3% accuracy while maintaining a low False Acceptance Rate (FAR) and False Rejection Rate (FRR).