EEG-based Automatic Personal Identification: Cybersecurity Perspectives in IoT-Enabled Smart Cities

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Abstract

A smart city is an improved, managed, and secure way of living using information and communication technologies (ICT). The application domain of smart cities is vast, where security plays an important role, and biometrics is the intelligent solution for every security need. Different biometric traits can be used effectively to address various issues in smart cities. Recently, the EEG-based biometric system using additional machine learning and deep learning approaches proved its efficiency for authentication due to its inherited uniqueness and can not be stolen or copied. This article emphasizes security measures of personal identification for smart cities using EEG brain signal resources with proposed unimodal and multimodal models.

Keywords: Biometric, EEG, Security, IoT (Internet of Things), Cybersecurity