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Abstract

These days, mobile devices have very sensitive and personal data that needs to be secured. Mobile devices use authentication techniques to protect data from unauthorized access. Consequently, many authentication mechanisms were proposed and many techniques were applied. One of these mechanisms is the analysis of the typing rhythm. It is also known as keystroke dynamics which enhances the password-based authentication by identifying the users based on their typing rhythms. This paper proposes a new authentication mechanism using keystroke dynamics. The dataset which is used in this research consists of 71 features for 42 users with 2142 records. The proposed method consists of two stages; firstly, applying some statistical methods on the 71 features in order to result with valuable new features, then the second stage is to use the existing features with the resulted features with the Random Forest machine learning algorithm. Experimental results showed an accuracy of 94.26%.