

Abstract

Keystroke dynamics - the analysis of typing rhythms to verify the identity of the person producing the keystrokes - offers many potential improvements to a password-based authentication system by introducing a biometric component that requires no extra hardware cost and provides non-intrusive verification. Many algorithms have been proposed in literature, as well as numerous public datasets attempting to build a body of training data to work off of. Despite the availability of public datasets, very few papers have looked at the performance of algorithms across datasets. Here, we introduce a new algorithm to this domain, a deep neural network and apply them across two keystroke dynamics datasets. Evaluations done with the DSL2009 benchmark dataset, we were able to achieve equivalent results to existing algorithms published in literature, while greatly reducing network size and training time. On the GREYC dataset, we were able to use the achieve an EER of 5.6% with the same approach, which is an 18% reduction over the best published methods.