**Abstract**

Passwords are ubiquitous authentication methods and they represent the identity of an individual for a system. Users are consistently told that a strong password is essential these days to protect private data. Despite the existence of more secure methods of authenticating users, including smart cards and biometrics, password authentication continues to be the most common means in use. Thus it is important for organizations to recognize the vulnerabilities to which passwords are subjected, and develop strong policies governing the creation and use of passwords to ensure that those vulnerabilities are not exploited. This work proposes a framework to analyze the strength of the password proactively. To analyze the chosen password, filters and support vector machine are employed. This framework can be implemented as a submodule of the access control scheme.