**CONCLUSION**

In this article, the method for application layer attack detection based on machine learning was proposed. The model consists of patterns (in form of PCRE regular expressions) that are obtained using graph-based segmentation technique and dynamic programming. The regular expressions are used for modelling the genuine behaviour of the applications and detecting cyber attacks.

We also presented the results that prove the efficiency of the proposed algorithm that can be effectively used for application layer attack detection.

The experiments on CSIC’10 show that the proposed approach can achieve 94.46% of detection ratio while having <4.5% of false positives.