

Abstracts released during the month

ABSTRACT

FlowTransformer is a software framework tailored for building Machine Learning based Network Intrusion Detection Systems (NIDSs) leveraging transformer architectures known for their effectiveness in both NLP and more broadly for handling sequences of data. FlowTransformer is a flexible pipeline composed of a definable dataset definition, efficient preprocessing, and a flexible model construction, supporting different input-encodings, transformer models and classification heads. Furthermore, users can extend the framework by defining their own components. FlowTransformer's contribution lies in its easy customisation, and ability to leverage transformers to enable enhanced long-term pattern detection, offering cybersecurity researchers and practitioners a valuable tool.

properly motivated and its performance was evaluated using detection accuracy, sensitivity, and specificity as metrics. The result of the evaluation showed 10% higher detection accuracy, 29% sensitivity, and 0.2% specificity than the existing model.

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