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In-process Cyber-Attack Detection Using Machine Learning

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Abstract:--

A cyber-attack detective system issues alerts when an intruder tries to perform unsafe activities on a software application. An application-sceptic cyber-attack detective system is created which responds to frequent software vulnerabilities that provide alerts.

This paper is about building a cyber-attack detective system and applying it to web-based applications by program transformation and machine learning techniques. It specifically determines whether it is possible to identify cyber-attacks with lightweight structures resulting from a call graph and call tree by machine learning techniques. These are trained with features taken out from a trace of application implementation. The detection system adapts efficiently and securely to prevent cyber-attacks which do not need application developers to own in-depth expertise in cyber security tactics, techniques, and procedures which can be done using machine learning.

Keywords:--

cyber security; machine learning; call graph; call tree;

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