

Detecting Data Leaks via SQL Injection”

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Abstract: *The number of internet users is increasing day by day. Demand for web services and mobile web applications or desktop web applications is also increasing. The possibility of systems being attacked by hackers is also increasing. All web applications store data in a backend file and store results from there. Since the web application can be accessed from anywhere in the world, it should be available to all web users. SQL injection is one of the biggest threats to web security today. Attackers can steal confidential information using SQL injection. This article describes methods to prevent SQL injection by removing SQL query parameter values and providing results. According to the documentation, the SQL injection system cannot detect this attack. In this study, we propose a machine learning-based heuristic to prevent SQL injection attacks. We train and test 23 different machine learning algorithms on a dataset of more than 20,000 SQL statements. We selected the five best classifiers based on the accuracy analysis and used these five classifiers to create a graphical user interface (GUI) application. We tested the proposed system and the results showed that it can detect SQL injection with high accuracy (93.8)..*

Keywords: Support Vector Machine (SVM), SQL injection, Cybersecurity

