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Study: Morning

Detection of Phishing Websites Using Machine Learning

A Graduate Project Submitted to the department of Information Security of the College of Information Technology, University of Babylon, in Partial Fulfillment of the Requirements for the Bachelor's degree in the Information Security of Information Technology.

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Abstract

The rise of phishing attacks, where websites impersonate legitimate ones, is a concerning issue that requires a robust detection method. This project aims to address this challenge by developing a machine-learning model that can identify phishing websites based on various features extracted from their URLs. These attacks are often carried out through social engineering and malware and can lead to the loss of user information, posing a significant threat to users' security. To demonstrate the deceptive nature of phishing, in this project, we showcase a fake Facebook login scenario. Our solution focuses on automatic detection by analyzing features within URLs. We utilized supervised machine learning with a decision tree algorithm to build a model that can accurately detect new phishing websites with a 90% accuracy rate. This high accuracy demonstrates the effectiveness of our methodology in combating this prevalent cybersecurity threat.