

Phishing Website Detection Using Machine Learning

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Abstract: *Phishing is a form of cyberattack where malicious actors create fake websites that closely resemble legitimate ones to trick users into disclosing confidential information such as login credentials, bank details, or personal data. Recent research emphasizes the effectiveness of machine learning (ML) in identifying phishing websites by analyzing attributes such as URL patterns, page content, and domain details. While these approaches offer high detection accuracy, they often lack practical real-time protection or integration within user-friendly tools. To address this, our project introduces a browser extension powered by a machine learning model capable of identifying phishing attempts as users browse the web. It works by extracting relevant features from web pages and passing them through a lightweight yet reliable ML classifier, which alerts users immediately if a threat is detected. The model is trained using a well-balanced dataset containing both genuine and phishing websites to ensure strong performance.*

Keywords: Machine learning, Phishing, Website detection

