Applications of Machine Learning Techniques to Detect Phishing Websites

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Abstract: *Phishing attacks are a common way for hackers to obtain sensitive and valuable information from unsuspecting users. These attacks often target critical data such as passwords and financial details. To combat this threat, cybersecurity professionals are constantly searching for reliable and effective techniques for detecting phishing websites. This project investigates the use of machine learning algorithms to identify phishing URLs by extracting and analyzing various features of both legitimate and phishing URLs. The goal is to create a blacklist of known phishing websites that can alert individuals when they browse or access a potentially dangerous site. The project will compare the performance of four machine learning algorithms such as Ensemble Adaboost Classifier, Multi-Layer Perceptron Classifier, Stochastic Gradient Descent classifier, and XGBoost - based on their accuracy, speed, and other factors.*

Keywords: Phishing, Ada boost, Multilayer perceptron, Stochastic gradient descent, Kernel approximation, Machine Learning, Accuracy, Comparison

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