A Comparative Analysis of Logistic Regression, Support Vector Machines, and Random Forest for Phishing Website Identification

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Abstract:
The effectiveness of Logistic Regression (LR), Support Vector Machines (SVM), and Random Forest (RF) in identifying phishing websites is evaluated in this study using a carefully selected dataset that includes both legitimate and fraudulent classes. The importance of the dataset in detecting various phishing indicators is highlighted in the research.After comparing each method, the research find that LR is the most straightforward and easy to understand, SVM is great at dealing with complicated decision boundaries, and RF is the best at preventing overfitting. In light of the ever-changing nature of cybersecurity threats, this research should help practitioners make more informed decisions when choosing algorithms to identify phishing attempts.

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Figures

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