**Malicious URL Detection**

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***Abstract:***

Phishing presents a significant challenge distinct from other security risks like intrusions and malware, which exploit technical vulnerabilities in network systems. The vulnerability of any network lies in its users. Phishing URLs primarily aim at individuals and organizations through social engineering tactics, exploiting human weaknesses in information security awareness. These URLs entice online users to visit fraudulent websites, where their confidential data, including debit/credit card details and other sensitive information, are harvested.

**1 *Introduction***

As information technology continues to advance rapidly, we find ourselves increasingly vulnerable to cybercrime. The Internet has evolved into a fundamental component of modern life and a crucial driver of technological progress, enabling efficiencies in time, effort, and costs.

This study centers on a social engineering-driven URL phishing attack aimed at individuals. It involves the creation of deceptive websites designed to trick victims into divulging sensitive information, such as email credentials, credit card details, and other confidential data, thereby potentially tarnishing the reputation of individuals or institutions.

Numerous recent studies have sought effective solutions for detecting phishing URLs, which can be categorized into four main classifications: predefined lists, signature-based methods, content-based approaches, and machine learning techniques.

This study will concentrate on the machine learning classification method. This approach relies heavily on learning the features of websites categorized as phishing, then applying predictive capabilities to differentiate between genuine and fake websites using various machine learning techniques such as prediction and classification.

**2 *Related Work***

**3 *Dataset Description***

**4 *Results***

**5 *Summary***

**6 *References***

1. URL Phishing Detection using Machine Learning Techniques based on URLs Lexical Analysis.
2. Phishing URL detection using machine learning methods.