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| Project No: 121 | Name: Veeradimmu Madesh | Section: 4MCA02 |
| Project Title: Detection of Phishing website using Machine Learning | | |
| **ABSTRACT (250 Words)** | | |
| Phishing websites remain a persistent cybersecurity challenge, deceiving users into disclosing sensitive data like passwords and credit card details. Conventional detection techniques, such as blacklists and heuristic rules, often lag behind the dynamic tactics of modern phishing schemes. Machine learning (ML) emerges as a robust alternative, leveraging data-driven models to detect phishing websites with high precision and adaptability. This abstract examines how ML can enhance phishing detection by identifying distinguishing characteristics of malicious websites.  The approach involves gathering datasets comprising features from both legitimate and phishing websites, including URL patterns, domain age, HTML content, and external links. Algorithms like Random Forest, Support Vector Machines (SVM), Logistic Regression, and Convolutional Neural Networks are trained to classify websites based on these features. Effective feature selection—focusing on indicators like misspelled domains, excessive subdomains.  Performance is evaluated using metrics such as accuracy, precision, recall, and F1-score, with many ML models achieving detection rates exceeding 95%. These systems excel at identifying previously unseen phishing attempts by generalizing from training data, outperforming static methods. However, challenges persist, including the need for real-time analysis, managing skewed datasets where legitimate sites vastly outnumber phishing ones, and countering evasion tactics by attackers. | | |
| **Keywords:** Phishing websites, cybersecurity, machine learning (ML), detection, URL patterns, domain age, HTML content, Random Forest, Support Vector Machines (SVM), Logistic Regression, Convolutional Neural Networks, feature selection, accuracy, precision, recall, F1-score, real-time analysis, datasets, web data, resilience, matplotlib, pandas, scikit-learn**.** | | |

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| **Criteria** | **Rating (1 to 5)** |
| Clarity of the Problem Statement |  |
| Relevance of the Project |  |
| Objectives |  |
| Innovation and Originality |  |
| Suitability for Research Publication |  |

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| **Overall Assessment** | **Comments** |
| Strengths of the Abstract: |  |
| Weaknesses or Areas for Improvement: |  |
| Recommendations | Approve Revise Reject |
| Supervisor’s Signature with Name | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
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