AI-Powered Detection of Phishing URLs

Enhancing Online Security Through Intelligent URL Analysis

AGENDA

- Introduction
- Problem Statement
- How It Works
- Advantages
- Disadvantages
- Challenges and Considerations
- Future Work and Trends
- Conclusion

KEY PRACTICES & STRATEGIES

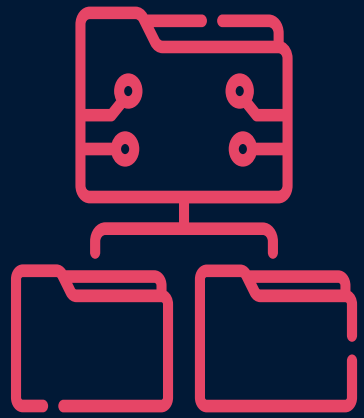
- Feature Analysis
- Machine Learning
- Continuous Updates
- Real-Time Detection

INTRODUCTION

- Phishing attacks are a significant cybersecurity threat.
- Deceptive URLs are commonly used in phishing.
- Traditional detection methods are often insufficient.
- Goal: Develop an AI-based model to identify phishing URLs.

INFORMATION AVAILABLE

- Phishing attacks deceive users into providing sensitive information.
- Evolving tactics make traditional methods less effective.
- Need for accurate identification of phishing URLs.
- Enhance online security and reduce exposure to malicious sites.



Working Modle

- AI model analyzes URL features.
- Features include domain length, presence of special characters, etc.
- Machine learning algorithms train on known phishing and legitimate URLs.
- Model predicts if a URL is likely phishing or not.


A PICTURE IS WORTH A THOUSAND WORDS

Advantages

- Increased detection accuracy compared to traditional methods.
- Rapid identification of new phishing tactics.
- Continuous improvement through machine learning.
- Enhances user security and trust online.

Disadvantages

- Initial model training requires a large dataset.
- False positives can inconvenience legitimate users.
- Constant need for updates to handle new phishing tactics.
- Requires computational resources for real-time analysis.

Challenges and Considerations

- Ensuring high-quality, diverse training data.
- Balancing detection accuracy with false positive rates.
- Adapting to new and sophisticated phishing techniques.
- Integrating the model into existing security infrastructure.

Conclusion

- Phishing attacks are a growing threat to online security.
- AI-based models offer a promising solution for detecting phishing URLs.
- Advantages include improved accuracy and adaptability.
- Ongoing work is needed to address challenges and enhance the model.

THANK YOU!