

Phishing Link Scanner Report

Project Name: Phishing Link Scanner

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Objective:

The goal of this project is to analyze and determine whether a given URL is potentially a phishing link by checking multiple characteristics commonly found in phishing attempts.

Functionality Overview:

The scanner examines URLs for the following risk factors:

1. Suspicious Keywords:
 - Checks if the URL contains words like `login`, `verify`, `account`, etc.
2. URL Length:
 - Flags URLs longer than 75 characters.
3. IP Address in URL:
 - Phishing URLs often use raw IP addresses instead of domain names.
4. Symbol in URL:
 - Can be used to trick users with misleading prefixes.
5. Hyphenated Domains:
 - Domains with hyphens are often imitations of real brands.
6. Shortened URLs:
 - Detects if the link is from a URL shortener (e.g., bit.ly).
7. Domain Age:
 - Uses WHOIS data to fetch domain creation date. Very new domains can be suspicious.

Tools & Libraries Used:

- Python Standard Libraries
 - `re`, `urllib.parse`, `datetime`
- External Libraries
 - `requests` – for handling HTTP
 - `tldextract` – for extracting domain parts
 - `whois` – for domain WHOIS data
 - `colorama` – for colorful terminal output

Code Summary:

The core logic is handled in `scan_url(url)` which:

- Parses the URL
- Checks against risk factors
- Increments a `risk_score`
- Prints the result based on score:
 - LOW RISK: score < 2
 - MODERATE RISK: score 2-3
 - HIGH RISK: score ≥ 4

Improvements Made:

- Fixed hardcoded keyword print bug
- Corrected domain creation date output
- Added `colorama` for colorful results
- Modularized suspicious keyword logic

Potential Enhancements:

- Add GUI (Tkinter/PyQt)
- Save report as text or HTML
- Integrate VirusTotal or PhishTank API
- Auto-extract links from emails or webpages

How to Use:

1. Activate your virtual environment:

```
""  
.\venv\Scripts\activate  
""
```

2. Install dependencies:

```
""  
pip install -r requirements.txt  
""
```

3. Run the scanner:

```
""  
python phishing_link_scanner.py  
""
```

Conclusion:

This phishing link scanner provides a lightweight way to assess links for phishing traits based on common patterns and domain characteristics. It is a great starting point for cybersecurity learning and enhancement.