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Research Topic

Detecting and educating user about Phishing

Research Problem

How can computer science aid in automated detection of phishing websites and email campaigns?

Problem Statement

Given a website, construct a set of tools that will detect if it is a phishing website.

A phishing website is a website impersonating a legitimate website with the intent to collect confidential information.

Problem Description

Fraud is rampant everywhere on the internet; one of its embodiments is Phishing. A lot of effort has been put into training people to detect this type of scam that has a substantial economical impact on financial institutions. The success of this effort hasn't been totally satisfactory. Computer science is brought into the scene to in aiding to flag website or warn about suspicious websites before they continue netting more "customers". The researcher approach is to help in the education process by outlining and exposing the common practices of the fraudulent sites and creating tools that automatically detect this types of sites and emails.

Computer Science Perspective

Computer Science is seen as a complement to an ongoing effort to educate people against fraud as the education process sometimes fails to adapt quickly to new phishing techniques. In this case the researchers are leveling off existing technology like social network sites or commercial sites like Google to uncover possible online scams.

Disciplines actively involved

- Statistics

Description of Disciplines Involved

Statisticians are involved to characterize the behavior of the phishing sites and to find correlation between the multiple variables like activity period, number of users, frequency, etc

Stakeholders

Credit Card Companies: Capturing credit card information seems to be the most sought out information collected by scammers. Credit card companies have clear interest on preventing and unmasking fraudulent sites.

Government agencies: Since using credit card in a fraudulent manner is a crime. Government agencies can get aid from this tools in detecting and subsequent prosecution of this scammer.

Commercial Websites:: By getting constant updates of new techniques used by scammers company can quickly adapt to prevent phishing scams.

References

Presenter web page:

<http://www.cs.cmu.edu/~jasonh/>

Education effort for antiphishing

<http://www.cs.cmu.edu/~jasonh/publications/soups2007-anti-phishing-phil-final.pdf>

Tool implemented to detect phishing

<http://www.cs.cmu.edu/~jasonh/publications/www2007-cantina-final.pdf>

Explanation of some the computer science concept employed

<http://www.cs.cmu.edu/~jasonh/presentations/cylab-anti-phishing-Aug2007.ppt>

By: Guillermo Marinero

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