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Intelligent Web Service for Detecting Malicious URLs

A Graduate Project Submitted to the department of Information Security of the College of Information Technology, University of Babylon, in Partial Fulfillment of the Requirements for the Bachelor's degree in the Information Security of Information Technology.

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Abstract

The chance of being exposed to malicious links that threaten security and privacy has increased as the Internet has grown. Cybercriminals disguise these links as legitimate sources to trick unsuspecting individuals into clicking on them. Once clicked on those links, they can lead to various malicious activities such as cyber fraud, malware installation, or identity theft. Traditional methods for identifying malicious links are time-consuming and less accurate, thus calling for an innovative solution.

To address this problem, we propose to create an artificial intelligence (AI)-based tool to detect malicious links. Where we can train a model to scan and classify URLs according to a set of factors, this AI technology will use machine learning algorithms to improve its accuracy over time and adapt to new threats.

Implementing this proposal includes collecting information about malicious links for training and using supervised learning to train an AI model to recognize attributes and patterns of malicious links.

The aforementioned problem was solved by developing an artificial intelligence (AI)-based tool to detect malicious links. The AI model is trained using machine learning techniques to analyze and rank links according to a range of factors, such as content analysis, title structure, and domain reputation.