SafeURL_AI_Extension: An Intelligent Browser Extension for Real-Time Detection of Malicious and Phishing Content

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Abstract: *Modern cyberattacks, including phishing, fake popups, malicious scripts, and harmful downloads, have become more sophisticated and cannot easily be detected. Most of the traditional browser protections are based on static blacklists that cannot recognize newly emerging threats. This paper introduces SafeURL_AI_Extension, an intelligent browser extension based on machine learning, threat intelligence, and behavior analysis to identify and block malicious or phishing content hosted on legitimate websites in real time. The proposed system examines URLs, Web forms, pop-ups, embedded scripts, and download behaviors through an AI classifier continuously improved through user feedback and global threat data. SafeURL_AI_Extension combines real-time scanning, adaptive learning, and privacy-preserving analysis for online safety without disrupting user experience.*

Keywords: Browser Extension, Cybersecurity, Phishing Detection, Machine Learning, Threat Intelligence, Real-Time Protection

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