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Review

The rise of "malware": Bibliometric analysis of malware study

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ABSTRACT

Malicious software (malware) is a computer program designed to create harmful and undesirable effects. It considered as one of the many dangerous threats for Internet users. Rootkit, botnet, worm, spyware and Trojan horse are the most common types of malware. Most malware studies aim to investigate novel approaches of preventing, detecting and responding to malware threats. However, despite the many articles published to support the research activities, there is still no trace of any bibliometric report that demonstrates the research trends. This paper aims to fill in that gap by presenting a comprehensive evaluation of malware research practices. It begins by looking at a pool of over 4000 articles that are published between 2005 and 2015 in the ISI Web of Science database. Using bibliometric analysis, this paper discusses the research activities done in both North America, Asia and other continents. This paper performed a detailed analysis by looking at the number of articles published, citations, research area, keywords, institutions, terms, and authors. A summary of the research activities continues by listing the terms into a classification of malware detection system which underlines the important area of malware research. From the analysis, it was concluded that there are several significant impacts of research activities in Asia, in comparison to other continents. In particular, this paper discusses the number of papers published by Asian countries such as China, Korea, India, Singapore and Malaysia in relation to the Middle East and North America.

Contents

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