

## Towards a systematic description of the field using bibliometric analysis: malware evolution

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### ABSTRACT

Malware is a blanket term for Trojan, viruses, spyware, worms, and other files that are purposely created to harm computers, mobile devices, or computer networks. Malware commonly steals, encrypts, damages, and causes a mess in these devices. The growth of malware attacks has a consequence on the growth and attractiveness of mobile features in mobile devices. Most malware research aims to probe the different methods of preventing, analysing, and detecting malware attacks. This paper aims to demonstrate an exhaustive knowledge map of the Android malware by collecting a ten (10) year dataset from the Web of Science database. A bibliometric analysis was employed for analysing articles published between 2010 and 2019. Using the keyword "malware", 5622 articles were retrieved. After scrutinising with the keywords of "Android malware", 1278 articles were then collected. This study provides an overview of the articles, productivity, research area, the Web of Science categories, authors, high-cited articles, institutions, and impact journals examining malware. Research activities are continued by placing terms in the classification of malware detection systems that outline important areas in malware research. From the analysis, it can be concluded that the highest number of publications focusing on malware studies came from the continent of Asia. Additionally, this study discusses the challenges of malware studies in the recent research studies as well as the future direction.

**KEYWORDS:** Bibliometric, Android malware, Web of science, Intrusion detection system

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