

A systematic literature review for topic detection in chat conversation for cyber-crime investigation

ABSTRACT

Facebook, Twitter, Yahoo Messenger and Skype are the most popular social networking sites used for chatting. Normally, users use the chat conversation to communicate to another person, besides exchanging ideas and discussion. Recently, there are quite a number of cyber criminal committed crime using chat conversation, such as money fraud, sex harassment, cyber bully and murder. Therefore, this systematic literature review (SLR) is carried out to investigate the existing research in chat forensics area. SLR is a form of evidence based approach applied for a systematic review. This SLR study carried out in this article to investigate about the topic detection study in chat forensics area. The method used is based on SLR guidelines, which include defining the research question, search process, inclusion and exclusion criteria in the study, quality assessment, data collection, data analysis and deviations from protocol. The results show that the total number of publications found is 56 and the number of selected publication used for review is only nine. However, the number of publication which specifically done for chat forensics area is only three while for topic classification in chat message is six. Thus, the number of studies for topic detection in chat forensics are considered limited. The nine selected articles were used to investigate the quality factor for each articles, besides to find out the proposed techniques, the limitation and the future works that could be done from the existing studies.

Keyword: Systematic literature review; Topic detection; Chat forensics; Cyber-crime investigation; Chat message