Universiti Teknologi MARA

Analyzing The Dissemination of Rumors During Pandemic Through Twitter by Using Susceptible-Infected-Recovered Model

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STUDENT'S DECLARATION

I certify that this report and the research to which it refers are the product of my own work and that any ideas or quotation from the work of other people, published or otherwise are fully acknowledged in accordance with the standard referring practices of the discipline.

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ABSTRACT

Twitter is one of the most social media used in Malaysia for communication. However, some of the users use Twitter to spread rumors to other users using a tweet. The excessive spread of the tweet leads to the issue going viral. The main purpose of this study is to analyze the dissemination of rumors through Twitter in Malaysia. Specifically, this study is conducted to identify whether the number of followers affects the virality of a rumor, verify which type of Twitter account has a higher virality rate, and investigate the effect of the parameters for this study. The number of followers and following for Amit Malviya, Dahir Insaat fan club, AJ+ and Khadijah badi, the selected Twitter users for this study has been recorded. Two types of Twitter accounts that are verified and unverified for each account are also recorded. From the selected account, a tweet related to political and social interest topics had being selected where the number of comments, retweets and likes has been recorded every two hours for three days. Susceptible-Infected-Recovered *(SIR)* model has been used to achieve the goal for this study. This study found that Twitter users in Malaysia have a higher interest in rumors related to social interest topics compared to political topics. This study also found that the number of followers does affect the virality of a tweet. Other than that, the tweet made by a verified account user has a higher virality rate in spreading rumors compare to an unverified account of Twitter users. It is also proved that the increase in the number of comments, retweets and likes affects the parameters used in this study. For future work, this study recommended that a more complicated model such *SEIR* model can be used to obtain a better result.

Keywords: *SIR*, Twitter, Tweet, Topic, Virality

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