

UNIVERSITI TEKNOLOGI MARA

**ANALYSING THE DYNAMICS OF ONLINE
ADVERTISING VIA INSTAGRAM FEED 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

The Instagram Feed becomes a marketing platform that has been used extensively by many marketers to advertise their products. However, most of the marketers who have used the Instagram Feed cannot predict whether the products that they have posted will be viral or not. If the product goes viral, they do not have any knowledge about the time the product starts to viral and the duration of the virality. Furthermore, there are uncertainties of the number of followers, likes and comments which affect the virality of products. The main objective of this study is to analyse the dynamics of online advertising through Instagram Feed using the epidemiological model. The model consists of three state variables namely susceptible (S) which represents the Instagram users who receive the advertising information, infected (I) represents the number of Instagram followers and recovered (R) represents the number of Instagram users who follow advertising page but stop viewing or sharing the information. Hence, it is known as SIR model. Three Instagram accounts had been chosen, there were @theduckgroup, @wawacosmeticshq and @cakenis. All the information about the number of followers, likes, views and shares had been collected for each Instagram account. The result showed that the advertisement could be more viral if the value of parameter β which is the transmission rate between the Instagram users and Instagram followers is higher. Meanwhile, the result revealed that there were not many changes with the virality as parameter γ , the rate of people who received and viewed advertisement post then stop viewing and like the posts increases. The advertisement would be viral faster when the initial number of Instagram followers who received and shared the advertisement increased. This study found that the advertisement post of @theduckgroup is the most viral.

Keywords: Online advertising, Instagram Feed, Susceptible-Infected-Recovered Model

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