

**COMPARISON BETWEEN LOGISTIC AND GOMPERTZ  
MODEL TO ANALYSE COVID-19 CASES IN MALAYSIA**

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## **ABSTRACT**

COVID-19 is one of the pandemics that occurred in most countries in the world, including Malaysia. It is crucial that the mathematical model analysis will be made to analyse the trend of COVID-19 cases so that we can take necessary actions to prevent the excessive increasing trends of COVID-19 cases. In this study, two of the mathematical models that being used in this study is logistic growth model and Gompertz growth model. Past research also shows how they implemented these models in their analysis. The research step starting from data collection to result and discussion to and conclude the best model in this study. The data that being collected from official websites of Ministry of Health Malaysia about monthly cumulative total cases of COVID-19 cases in Malaysia starting from March 2020 to September 2023 will be analysed using these two models, logistic model and Gompertz model. After that, the results after calculation using logistic and Gompertz model presented in the graph to see its behaviour and we saw that the difference in total case trends between actual data and predicted Gompertz model are smaller compared to logistic model. Based on the graph and error analysis, we concluded that the best model that can be used for predicting COVID-19 cases in Malaysia is Gompertz model.

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