

## APPLICATION SARIMA MODELS ON TIME SERIES TO FORECAST THE NUMBER OF DEATH IN HOSPITAL

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### ABSTRACT

*This paper aims to predict the number of deaths at Mansoura University Children's Hospital by using SARIMA models. It is necessary to use death data to determine the health requirement for hospital and measure medical efficiency within the hospital. We take the death data in hospital from Jan.2011 to Dec2017. We concluded that the model SARIMA (1,1,1) (0,1,1) is the best model which gives us the lowest value for each of RMSE and BIC, approximately lowest value for MAE and the largest value for R2.*

**KEYWORDS:** *Time Series, SARIMA Models, BIC, RMSE, MAE, MAPE, R2, ACF, PACF*

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