

INDUSTRIAL TRAINING REPORT
AT
TERENGGANU CONTINGENT POLICE HEADQUARTER
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REPORT
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“In the name of ALLAH the Most Gracious, the Most Merciful”

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ABSTRACT

The purpose of the study is to determine the most suitable technique to generate the forecast of number of burglary issued in Terengganu using the time series data from Department of Crime Investigation, Terengganu Contingent Police Headquarter. The models understudied are based on Univariate Modelling Techniques and Box-Jenkins Methodology. Five different types of Univariate Forecasting Model were developed on the same data set for the purpose of finding the best fit models. There are Naïve with Trend Model, Average Change Model, Double Exponential Smoothing, Holt's Method Model and Adaptive Response Rate Exponential Smoothing (ARRES) Model. While three types of Box-Jenkins Model ARIMA (3,1,1), ARIMA (2,1,1), and ARIMA (1,1,1) are used for the same purpose. The selection of the most suitable model was indicated by the smallest value of Mean Square Error (MSE) and Mean Absolute Percent Error (MAPE). In Univariate Modelling Technique, Holt's Method is the best model while in Box-Jenkins Methodology, ARIMA (1,1,1) is the best model. Based on the analysis and comparison between Univariate and Box-Jenkins, Holt's Method Model is the most suitable model for forecasting monthly number of burglary from January 2015 until December 2015. Since the best model had been evaluated, this organization is recommended to use this model to predict the number of burglary in future in order to make proper planning. A dedicated funding stream should be provided for an integrated research program that examines and maps burglary crime trends, forecasts future burglary crime rates and patterns, and estimates the impact of burglary crime (i.e., costs) for both the present and the future. Funding should be provided to focus scientific and technological attention towards burglary crime reduction.

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