

EZ Forecast 2.0: A System of Univariate Models

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Abstract—The process of analysis that is performed using past and present data is known as forecasting. It involves the analysis of trends for future predictions. Forecasting helps an organization to cope with future uncertainties. However, forecasting techniques involve complex tasks. In EZ FORECAST 2.0, data forecasting is made easy as the system is developed to be user friendly where the user only needs to key in the data set and the analysis will be done automatically by the system. An upgraded version of EZ FORECAST 1.0, a system of univariate modelling techniques is introduced to forecast and evaluate the best techniques identified by the time series model. This new system is proposed to recommend the best model of the data. This system assists the decision-maker in forecasting the time series data accurately and systematically. The objectives of this system are: (1) to monitor the performance of the time series data set using a univariate model, (2) to forecast the time series data set one step ahead, and (3) to propose the best model based on minimum error measures. There are five methods used in this system which are Naïve Forecast, Naïve with Trend Forecast, Single Exponential Smoothing, Double Exponential Smoothing, and Holt's Method. Real-life data from a Food and Beverages (F&B) company is used to demonstrate the effectiveness of the system. The findings show that the system is able to recommend the best model with forecasting values which has minimum error measures. This system benefits an organization by providing valuable information that helps the top management to make decisions on the future direction of the company.

Keywords—*forecasting, time series, univariate model*