

ABSTACT

In a industry or a corporation, it is very important to know the future. This process is used to do work evaluation in order to get a better future.

Prediction is an action to forecast value or condition in the future using data that already exist. This action is very important because there is some factor that need to be watched carefully in Business Plan. There are many prediction tools that have been developed and researched. From time to time, the complexity and ability are increased. This is caused by the change of number production's sell fluctuatively, so sell's prediction is needed. Many prediction with technical method are used in making decision that become representation of a value from certain condition, which later on become considerations on making decision, in order to get the best alternative decisions. This prediction will be done by time series. Time series is a prediction model to identify pattern of input from data by using data from previous time as a point of step, then those pattern of extrapolation based on time for those patterns. Time series data includes action to separate long period trend, changing of the cycle, changing because of the season and fluctuation that is not fixed in PT. X's sell, using time series's analyze, it is possible to isolate the trend and forecast the sell.

In this final task it will be build a prediction time series system using Fuzzy Inference System which optimized by Genetic Algorithm Method or the other name is Evolving Fuzzy, this combination is done in order to get linguistic value, membership function and foot position which have high precision. The system that will be build to learn the difference of increase and decrease of number of selling products everyday. By using the strength of these methods, it will be build a prediction time series system to forecast the number of selling products PT. X in the next period.

Keyword : Forecasting, Time Series, Fuzzy Inference System, Evolving Fuzzy, Genetic Algorithm