FORECASTING NUMBER OF NURSES TO INCREASE SERVICE QUALITY OF PATIENT IN EMERGENCY DEPARTMENT RSUD dr.SOETOMO SURABAYA USING VECTOR AUTOREGRESSION (VAR) MODEL

Name : DEVI KURNIAWATI  
NRP : 5206 100 021  
Departement : INFORMATION SYSTEM FTIF-ITS  
Supervisor : WIWIK ANGGRAENI, S.Si, M.Kom

Abstract

Rumah Sakit Umum dr.Soetomo is a public hospital located in eastern Indonesia. Patients from these hospitals come from the communities in East Java and eastern Indonesia society. As a public health-care facilities, this hospital has a lot of units. One of the essential unit of this hospital are emergency room. This unit serves many patients who need treatment quickly. Number of patients in this unit is not comparable with the number of existing human resources. One of them is the number of nurses. These circumstances create problems, like slow handling of the patient. To overcome these problems, the hospital needs to allocate the number of nurses in the emergency ward.

Forecasting techniques is one way that can be used to allocate the number of nurses in the emergency ward. Forecasting methods that will be used to resolve this problem is a model Vector Autoregression (VAR). VAR model was chosen because this model can be used to predict the amount of data with more than one variable.

VAR model has the order to determine the appropriate form of the model with data. In the VAR model building process there is a process that can be used untukmengetahui causal relationship between one variable with another variable. From

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the VAR model is formed then we will get a result of the prediction of the data used.

Results VAR forecasting model has an error evaluation value which stays at a certain interval. Evaluation interval is below 20% which means this model is good at predicting the data.

Keywords: Emergency, Forecasting, Medical Service, VAR models