

ABSTRACT

Pancasila as an ideal base for the development in Indonesia where the supporting subject is human. Humans are the goal of development, so the goal are development are for human, not human for development. UNDP developed an indicator to describe human development that measureable and representative called the Human Development Index. The Human Development Index is a measure of human development achievements based on a number of basic components of quality of life. HDI data provision is intended as a planning tool and evaluation of government policies while the HDI indicators illustrate the success of the government's development targets. That is to say, the data HDI data into data that can be used in the policy making process by the government. However, according to Idris, Minister of Trade (Ministry of Trade), Thomas Trikasih Lembong call, the validity of the data is still the classic issues that hamper policy-making, a number of government agencies also have different data "that creates confusion among ministries in making policy.

Data mining is the process of discovering interesting patterns from large amounts of data. Data mining technique that is commonly used is the technique of classification, classification aims to establish a model with the data that already owned to then be applied to upcoming/newest data. Decision Tree classification methods and Artificial Neural Network is a technique that commonly used for classification and both techniques used when you want to create the model that have response.

Predictor variables in this study is the number of Internet users, Gross Domestic Product (GDP), Number of Employees, Number of Population in Poverty and Number of Population in 2010, and the response variable is the Human Development Index in 2010. The data mining technique used is the technique of classification by comparing the method of Decision Tree Classification (Decision Trees) and Artificial Neural Network (ANN).

The purpose of this study is to determine the model scenarios classification Human Development Index based on data Number of Internet Users, the GDP, Number of Workers, Poverty rates and Population in 2010 using decision tree and artificial neural network methods and to determine the level of accuracy of prediction of the Human Development Index using decision tree and artificial neural network methods.

According to the research, decision tree models are used as models of classification consists of 12 nodes and artificial neural network models are used as models of classification consists of five layers input, one hidden layer with 20 neurons and 4 output layers. Then the decision tree method accuracy rate is 13.13%, while for the accuracy of the methods of artificial neural network is 9.09%

Keywords: Artificial Neural Network; Back Propagation; CART; Data Mining; Decision Tree; HDI.