ABSTRACT

A Cyber-Physical System consists of computing devices that communicate with each other by interacting with the physical world, assisted by sensors and actuators with an iterative response. The Intelligent Transportation System aims to apply information and communication technology to every transportation area. When implementing the intelligent transportation system in vehicles, especially in terms of fuel consumption, vehicles must begin to analyze the use of fuel used to provide users so that users can be more effective. Regarding the analysis of fuel consumption, several researchers have done this with several existing methods such as ANN, SVM, and the like. The Multivariate time series method is used to solve the forecast analysis of vehicle fuel consumption. In this study, data from vehicles obtained from OBD-II will be processed using the multivariate time series method with output in the form of analysis and visual data from the forecast with parameters related to RPM, TPS, and fuel consumption. So the expected result is the relationship between RPM, TPS, and fuel consumption, as well as the creation of a system model to get sample data about RPM, TPS, and fuel consumption.

Keywords: RPM, TPS, *fuel consumption*, OBD-II, *forecast*