Abstract

Short term traffic flow prediction has become one of the important research fields in intelligent transportation system. The prediction of this traffic flow information quickly and accurately is important for traffic control and guidance to initiate the measuring steps well in advance. It makes the transport users better informed and makes the transport network smarter, safer and more coordinated. It plays a crucial role in individual dynamic route guidance, advance traffic information system (ATIS) and advance traffic management system (ATMS). This paper discusses the implementation of traffic flow prediction model using support vector machine. Rough set is used as a post processing tool to validate the prediction result. The objective is to improve traffic flow prediction performance. Data near Perungudi toll plaza in IT corridor in Chennai, India is used for the analysis. It is found that the use of rough set results in satisfactory performance improvement which is evaluated using mean square error as the performance measures.

References

Index Terms

Computer Science

Artificial Intelligence
Keywords

Intelligent Transportation Systems (ITS), Rough Set Theory (RST), Short term traffic Flow Prediction, Support Vector Machine (SVM).