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Abstract

This paper presents a model for traffic volume prediction which can be effectively used for transportation planning, management and security assessment at any time. Fuzzy logic is applied in order to realize effective and efficient traffic prediction. In this paper, 'day' of a week and 'time' of a day are taken as inputs for proposed model and the output will be the predicted the traffic volume. The 'time' is divided into nine triangular membership functions. The second input 'day' is divided into five triangular membership functions and the output forecasted traffic volume has been divided into eight triangular membership functions. The predicted traffic volume when compared with actual traffic volume has MAPE within acceptable level of error. Prediction results show that the proposed fuzzy logic system produces more accurate and stable traffic volume predictions.

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Computer Science

Index Terms

Fuzzy Systems

Keywords

Defuzzification; Fuzzy logic; MAPE; Membership functions ; Traffic load forecasting