

# **AN ADAPTIVE TRAVEL TIME PREDICTION MODEL BASED ON PATTERN MATCHING**

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## **ABSTRACT**

This paper presents a travel time prediction technique based on pattern matching. The traffic patterns similar to the current traffic are searched among the historical patterns and closest matched patterns are used to extrapolate the present traffic condition. The model has a number of parameters such as size of traffic pattern, search window, weights and number of selected closest matched patterns. Adaptive parameters are used, which change with the change in traffic conditions. A genetic algorithm is developed to optimize the parameters of model. The resulting model is tested with an expressway detector dataset and is found to perform well.

## **INTRODUCTION**

This paper presents a travel time prediction model based on pattern matching technique. Travel time information is provided to the users of transport system to help them make better decisions regarding use of transport system, which not only help the users but also results in efficient utilization of transport network. The travel time information can be provided to the users as on-trip information through Variable Message Signs (VMS) or on-board car navigation systems providing real time information such as VICS, which helps the users to make better route choice. It can also be provided as pre-trip information, through web-based trip organizers or telephonic advisories, which helps in making better mode choice and























