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"A trajectory demand prediction system for taxies at special resolution with historical data"

A desertion by
Divya Premanantha (2013011)

Supervised By
Dr. Thilak Chaminda

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Abstract

Taxi industry in Sri Lanka has a rapid growth rate because of the increase in the need of transportation services. Many taxi companies are competing to meet this increased customer demand. Imbalanced display of taxies is considered to be one of the main concerns for unmet passenger demand, energy wastage and traffic congestion by the empty taxies on the streets. To organize the taxi fleet and minimize the waiting time for passengers and drivers a taxi demand prediction system is a vital solution.

The following thesis address a solution for this imbalanced supply of taxies by providing a future demand prediction system for a specified time, location and taxi type. It generates a hybrid algorithm for the prediction which is a combination of KNN, Random tree, Classification via Regression and ANN algorithms. This prediction mechanism produces an average of 80% of accuracy with very low weight loss.

Subject Descriptors: F.2 - Analysis Of Algorithms And Problem Complexity

Keywords: Hybrid algorithm, Demand prediction, Passenger demand pattern, Taxi demand