

Prediction of bus arrival times at bus stop

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Abstrak

Bus arrival time is very important to passengers, not only at the origin terminal but also at every stop. If there is no predicted arrival time at a stop, the headway designed should match the bus frequency at the stop. The uncertainty in bus arrival time can hinder the headway from matching the bus frequency at the stops. Moreover, lack of information on the service route and actual arrival times at stops leads to difficulty for passengers in planning their trips. Observation surveys were conducted to collect data on the problems of bus arrival frequency and uncertain arrival times at a selected stop with multiple routes during off-peak hours in Putrajaya Malaysia. This paper proposes a method to estimate arrival times at bus stops using the adaptive neuro fuzzy inference system (ANFIS) and several models are proposed to predict arrival times using MATLAB Curve Fitting Tool. All the proposed models exhibited RMSE close to 0 and R2 close to 1.