The accuracy of short-term passenger demand prediction for each individual area

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Short-term passenger demand prediction algorithms have attracted large attention recently, which can help the taxi call-center to organize taxi fleets and distribute them according to the predicted demand. Several algorithms have been proposed with high accuracy. However, these accuracies are for the whole urban area and the whole time interval instead of the individual area in each time interval. The unit region with low accuracy, which will tell more about inaccuracy, will be hidden. Two questions can be asked, 1) Why some individual areas have high prediction accuracy while others have low prediction accuracy? 2) How much information is needed to turn the low accuracy individual accuracy into a high accuracy one? To reply the two questions, several existing methods will be implemented by using the New York public taxi data. The accuracy of each individual area will be calculated and compared for each individual region. To explore the influence of different factors, then several normal driver factors will be considered to these methods to observe the improvement for the low accuracy area.

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