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FlyFarePredictor

Flight Fares Prediction and Recommendation Generation System

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Abstract

Flight fare fluctuation commonly depends on several facts and it happens frequently in the aviation industry. But the passengers and the agents don't have enough information to predict the flight fares in advance. As well, the airline officers also don't know the exact fares of other airlines since the pricing strategies of airline services are very confidential and unique. In some cases, when buyers go to reserve their tickets, they may not be able to decide to book those tickets even though the fares are in the normal range. Therefore, the author tried to develop a machine learning based mobile application to address the missing features in flight fare prediction systems. The proposed system worked with user-input flight data. After the user input flight details, the system provided the approximate ticket fare on the day the buyer wishes to buy the ticket, the lowest airfare and a recommendation on whether the buyer should reserve the ticket at that time or wait for a ticket reservation at that time. If a passenger was recommended to wait for a reservation, this application suggested other ideal dates when ticket prices are low.

For gathering requirements for the research, online questionnaire was used as the key elicitation technique. The questionnaire was distributed among the target audience including passengers, airline officers, travel agents and others who related aviation industry. Also, the literature review of past studies and the self-evaluation sessions were done for gathering requirements.

After analyzing the findings of the literature review, the author concluded that several systems have been built in the past for predicting fares and finding the lowest fares. Answering the questionnaire, most of the respondents said that they preferred a mobile-based solution for predicting flight fares. They responded that it seems okay if the features of finding the lowest fare, generating a recommendation and suggesting ideal dates for booking are included in the application. With the help of self-evaluation sessions, the author could identify that there are only a few mobile apps available for this approach and they have limited features.

Subject Descriptors: Machine Learning

Keywords: Flight Fare fluctuation, Prediction System, Generate Recommendation, Lowest Fare, Find Ideal Dates