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A Recommendation Framework for
Ride Sharing Industry

A dissertation by

Sherantha M. Perera – 2013550

Supervised by

Nalaka R. Dissanayake

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Abstract

Ride sharing is a good concept used in the transportation industry, which enables a vehicle owner to shares his/her vehicle with others who are traveling in the same direction. This concept is similar to the taxi concept where it differs from that the vehicle owner is not obligated to drop the passengers at their own locations. The ride-sharing concept helps people to reduce the traveling distress and also the traffic congestion. However, people who are willing to share a ride may face a problem in identifying the nature of the others who share the ride in advance. Studies also show that the people who share rides have concerns about the personality of the others who share the ride, caring if their journey will be safe.

Even though there are reviews by individuals about their ride-sharing experiences with other individuals, there is no way to obtain an overall recommendation on an individual, which summarizes all the reviews. A solution is implemented, which can analyze the available reviews in natural language and provide a recommendation about an individual as a positive/negative percentage rate can address the aforementioned problem. With the use of this recommendation component, one who is willing to share a ride will be able to get a prior impression regarding the traveling companion, and we hope that this will increase the use of ridesharing hence, will help in reducing the traffic congestion.

Test results show that the recommendation system provides benefits when performing a booking prior when submitting a booking request. The test results were evaluated among another sentiment analyzing algorithm which showed a significant improvement in the factors of accuracy and performance. Several experts in the field of technology stated that the algorithm which is used to perform in this project contains an accurate measurement when performing sentiment analysis. They also stated to include multi-language processing and emoji analysis to the algorithm which I have included as future enhancements for the solution.

Keywords: Ride sharing, Traffic congestion, Recommendation, Natural language processing