



# International Journal of Innovative Research in Computer and Communication Engineering

(An ISO 3297: 2007 Certified Organization)

Vol. 2, Issue 12, December 2014

## A Study on Vehicle Ranking and Comparing System

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**ABSTRACT:** With the emergence of the deep web, searching web databases in domains such as Vehicles, Real estate, etc has become a routine task. One of the problems in this context is ranking the results of a user query. The mainstay of this project is to provide an automated ranking system for automobiles based on user feedback. The current sorting-based mechanisms used by Web databases do not perform such ranking. They do not perform automated ranking instead user has to manually identify based on the ratings.

### I. INTRODUCTION

The emergence of the deep Web has led to the proliferation of a large number of Web databases for a variety of applications (e.g., airline reservations, vehicle search, real estate scouting). These databases are typically searched by formulating query conditions on their schema attributes. When the number of results returned is large, it is time-consuming to browse and choose the most useful answer(s) for further investigation. Currently, Web databases

simplify this task by displaying query results sorted on the values of a single attribute (e.g., Price, Mileage, etc.). However, most Web users would prefer an ordering derived using multiple attribute values, which would be closer to their expectation. Consider Google Base's Vehicle database that comprises of a table with attributes Make, Price, Mileage, Location, Color, etc. where each tuple represents a vehicle for sale. We use the following two scenarios as our running examples.

The main objective of the project is to provide ranking for the vehicles based on the user's feedbacks. Although there was no notion of ranking in traditional databases, it has existed in the context of information retrieval for quite some time. With the advent of the Web, ranking gained prominence due to the volume of information being searched / browsed. Currently, ranking has become ubiquitous and is used in document retrieval systems, recommender systems, Web search/browsing, and traditional databases as well. Below, we relate our effort to earlier work in these areas.

### II. EXISTING SYSTEM

The current sorting-based mechanisms used by Web databases do not perform such ranking. This approach was cumbersome for most of the web users.

In this work we concentrate on using dense\_rank function for ranking. A dense\_rank function is similar to Rank function except for a difference that it does not skip sequential ranking numbers [1]. If two values are the same and have same rank for ex. 3, then in dense\_rank function the next non duplicate value will be ranked 4. In normal Rank function, the next non duplicate value would have been ranked 5. In order to increase the complexity, the comparing system and virtual gallery is adopted.

#### Disadvantages of existing system

The disadvantages of the existing system are

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- They do not perform automated ranking instead user has to manually identify the best vehicles based on the ratings
- They do not provide comparing system for the vehicles
- All the details of the vehicles can be seen in the site but in order to view the complete model of the vehicle, the users have to visit showroom

### III. PROPOSED SYSTEM

Most research into vehicle safety has focused on vehicle crashworthiness, measured by the risk of injury to a *subject* vehicle driver that was involved in a crash with the *other* vehicle in a two-car collision.

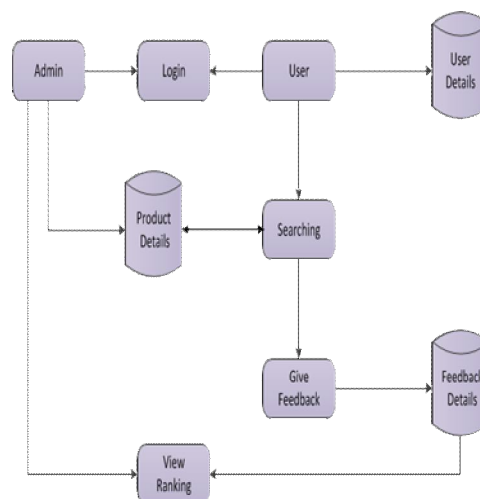
This focus has lead to the development of several vehicle crashworthiness rating systems promoting vehicle designs that potentially overlook the protection of occupants in the *other* car in a car-to-car collision [2]. This project introduces a novel method by presenting a ranking model, based on two complementary notions of user and query similarity to derive ranking function for a given user query. This function is acquired from a sparse workload comprising of several such rankings derived for various user query pairs.

#### Advantages

- This project proposes a user- and query-similarity approach for ranking query results of Web databases
- The Automated ranking of database results is studied in the context of relational databases techniques
- Provides better comparison between vehicles
- Allows user to view vehicles in a 360° view which displays different position of the vehicle.

### IV. THE STRUCTURE AND IMPLEMENTATION

The architecture design for the Vehicle ranking and comparing system includes admin login, searching (user and query similarity), ranking process, compare performance. This detail gives the crossover probability and optimal no of classes [3].



#### Architecture of Vehicle ranking and comparing system

This Vehicle ranking and comparing system is divided into six modules.

- Admin login
- Query Similarity
- User Similarity
- Ranking Process

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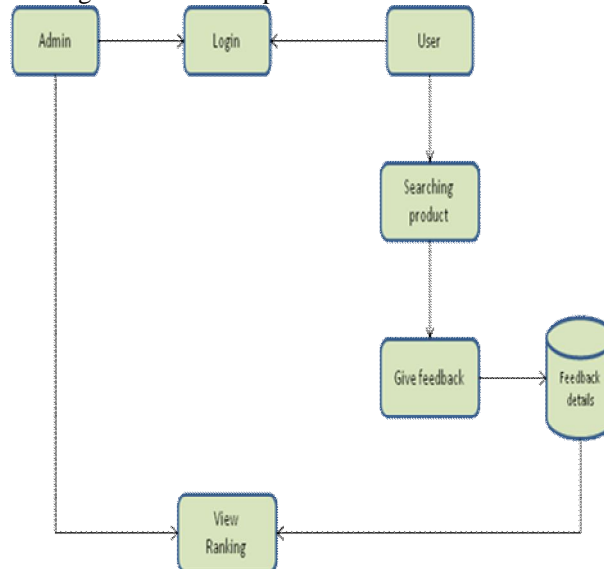
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- Compare performance
  - Virtual Gallery
- The process of the ranking (product registration) shown here



Process of registering products

The process of searching providing feedback takes place as shown here



### Process of viewing ranking based on feedback

The implementation stage involves careful planning, investigation of the existing system and its constraints on implementation, designing of methods to achieve changeover and evaluation of changeover methods [4].

The level of comparison of the results of the crashworthiness rating systems, when applied to a common real crash database, varies according to the expectations of the consumers of these systems [5].

These expectations may include:

1. The ratings will produce the correct rank order of the crashworthiness of the car models[3]
2. The ratings will provide a reliable estimate of a measure of crashworthiness for each car model
3. The ratings will provide scientifically-defensible evidence (ie. not explainable by chance) that nominated car models have inferior crashworthiness and that other nominated car models have superior crashworthiness [1].

### III. THE PROGRAMMING ISSUES

In Admin Module, Admin maintains various models of Bike Details with several databases that have Bike cost, Performance of bike details like gear, Engine, etc., and also has Enhancement details like alloys, electric start, etc [8].

In user similarity module, the user can view more details for various models. The user can view all the details and then give feedback for the selected model [6]. Based on the feedbacks posted by all users the ranking list for the model will be generated automatically.



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In query similarity module, customer logins and search the brand with bike model. Then bike details are displayed to the user. Basic, Performance and Enhancement details are displayed from different types of databases, using join query. User then gives feedback to that product [7].

The compare module allows user to compare the vehicle and display their performance like speed, tank capacity and fuel economy.

The virtual gallery module brings the 360° view of the selected model so as user can view the complete dimension of the model.

## V. CONCLUSION

We formally defined the similarity models and presented experimental results over Web database to corroborate our analysis. We demonstrated the practicality of our implementation for real-life databases. We have also implemented additional features to determine the quality of the vehicles. Determining techniques for inferring ranking functions over Web databases is an interesting challenge as well. Applicability of this model for other domains and applications also needs to be explored.

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