

CAR RECOMMENDATION SYSTEM USING HTML,CSS,PHP,MYSQL

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Abstract

The automotive industry has witnessed a significant evolution, with a plethora of car models available in the market, each designed to cater to different preferences, needs, and budgets. In this era of information overload, consumers often find themselves overwhelmed by the abundance of options, making the car selection process daunting and time-consuming. To address this challenge, a user-friendly Car Recommendation System (CRS) is proposed.

The CRS simplifies the car selection process by offering personalized car recommendations to users based on their preferences, requirements, and constraints. Users can input their criteria through an intuitive interface, such as preferred car type, budget range, desired features, and lifestyle preferences. The website then utilizes a comprehensive database of car models to retrieve and recommend suitable options to the users.

Unlike traditional car recommendation systems that rely on machine learning algorithms and data analytics techniques, the CRS adopts a retrieval-based approach. It does not employ complex algorithms or require extensive data analysis. Instead, it focuses on retrieving relevant car models based on the user's input and presenting them in an organized and user-friendly manner.

The implementation of the CRS involves the integration of front-end user interfaces for input and output, a back-end engine for data retrieval and recommendation generation, and a database management system to efficiently store and retrieve car information.

1. INTRODUCTION

In these days a significant evolution, with abundant of car models available in the market, each designed to divided to different preferences, needs, and budgets. In this era of information overload, consumers often find themselves overwhelmed by the abundance of options, making the car selection process daunting and time-consuming. To address this challenge, an effective Car Recommendation System (CRS) is introduced.

CRS project provides a practical approach to building a recommendation system without the complexity of machine learning algorithms. By leveraging rule-based filtering and simple data analysis, the car recommendation system can still offer valuable assistance to users looking to buy a car.

The purpose of CRS is to simplify the car selection over different budgets and preferences. The CRS offer personalised car recommendations based on user requirements and constraints. The CRS don't rely on any machine learning algorithms nor data analytic techniques. The CRS ensure focus on retrieving relevant cars based on input and presenting them in an organised manner. CRS involves providing users to find their best car among a wide range of cars in the market. CRS has varieties of search inputs are provided such as Seatings, Budget, Type (Sedan, SUV and Hatchback), Transmission, Safety.

CRS provide brand new and trending cars according to car brands such as (TATA, HYUNDAI, TOYOTA, BMW etc.). CRS provide fast and simple assistance to user that recommend the best car. The car companies can get advantage by which it can advertise their car through CRS. CRS reduces the confusion of selecting the new cars.

2. LITERATURE SURVEY

1. Research paper of International Journal of Engineering & Technology (Leyo Babu Thomas, V. Vaidhehi) :

Paper is about the design of web based car recommendation system using the hybrid recommender algorithm. The proposed hybrid recommender algorithm is the combination of user-to-user and item-to-item collaborative filtering method to generate the car recommendations. The user model is designed using demographic features, click data and browsing history. Item profile is built using the various attributes of car, 40 brands of car including 224 car types are used in this work. The synthetic dataset of 300 users with 10000 sessions is used to build user model. The proposed algorithm is evaluated with 100 real time users and shows the 83% accuracy in generating recommendations.

2. Research paper of International Journal of Engineering & Technology (Saumya Singh, Soumyadepta Das, Ananya Sajwan, Ishanika Singh, Ashish Alok) :

In this research paper Car Recommendation based on specifications and details. Clients prefer to have a review-based recommendation from the people who have hands on experience with the particular product. Hence, they proposed solution is to provide a system for car recommendation based on customer reviews, using the power of Machine Learning, Natural Language Processing, Data Analytics, Data Visualization, Recommendation, Recommendation System.

3. Research paper of International Journal for Research in Applied Science & Engineering Technology (IJRASET) by (Supriya Panday, Ujjawal Raj, Sandeep Kumar, Shalini Kanwar):

Web based recommendation for any item is a hard and fast requirement in any E-commerce

website. This research paper explores the system which is employed to recommend car to the users based on the requirement provided by the user. This methodology narrow the sphere right down to some criteria that car buyer consider like looks , cost, safety, functionality, performance , fuel economy, technology etc. A hybrid recommendation system is a special variety of recommendation system which might be considered as the combination of the content and therefore the collaborative filtering method.

3 PROBLEM STATEMENT

The goal of this mini-project is to develop a car recommendation system designed to help users find the most suitable vehicle based on their personal preferences, needs, and budget. In today's market, where numerous car models and options are available, selecting the right car can be overwhelming. Users need a system that can efficiently filter and recommend vehicles that match their criteria.

The system should allow users to input their preferences such as car type, fuel type, brand, desired features, and budget. It should then utilize a comprehensive and upto-date database of car models, including details like make, model, price, and features, to generate tailored recommendations. The recommendation algorithm should filter and rank cars according to how well they meet user inputs. The interface should be userfriendly, enabling easy input of preferences and clear display of recommended options.

4 EXISTING SYSTEM

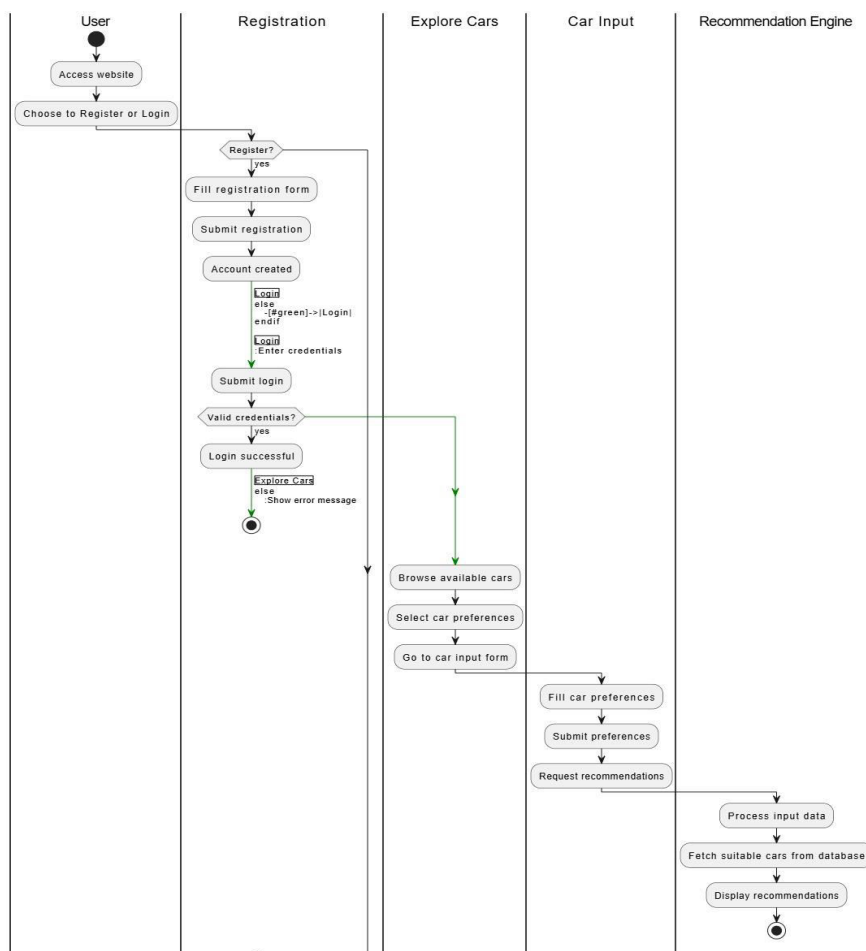
Currently, there are several online platforms and car dealership websites that allow users to search for cars in India. These websites often provide basic filtering options such as budget, brand, and car type (e.g., SUV, sedan, hatchback). However, these platforms typically only present a list of cars without offering personalized recommendations. Users need to manually compare features, prices, and reviews to make a decision, which can be time-consuming and overwhelming given the wide variety of options available. Most of the existing systems lack advanced recommendation features and rely heavily on static data, which may not always reflect the latest car models, offers, or user preferences. Users are also required to visit multiple sites or car dealerships to find the best options, making the decision-making process inefficient and difficult. Additionally, these systems don't always take into account the user's specific needs, such as safety features, fuel efficiency, or car usage (e.g., city driving, long trips, etc.).

5 PROPOSED SYSTEM

The Car Recommendation System is designed to improve the car-buying experience for users in India by offering personalized car recommendations based on their individual preferences. The system will analyze user inputs, such as budget, car type, fuel type, and additional features, and provide a list of the best cars available that meet their needs. This approach simplifies the decision-making process and saves time by offering relevant options directly. The system will use an intelligent algorithm to match users with the best cars based

on their preferences and current market data. The main advantage of this system is its ability to recommend cars that not only fit the user's budget but also meet other criteria such as safety, fuel efficiency, and performance. Users will be able to easily compare different cars, view detailed specifications, and read customer reviews to help them make an informed choice.

PROCESS DIAGRAM



ADVANTAGES

- **Personalized Recommendations:** The system provides tailored car options based on user inputs, making it easier for users to find the right car.
- **Time-Saving:** Users don't have to spend hours searching through multiple websites. The system provides a curated list of cars that meet their criteria.
- **Up-to-Date Information:** The system will ensure that all car listings and details are current, reflecting the latest models, offers, and specifications available in India.
- **Easy Comparison:** Users can easily compare various car models based on features, pricing, fuel efficiency, and user reviews, helping them make an informed decision quickly.

- User-Friendly Interface: The website will have a simple and intuitive interface, making it accessible to users of all technical backgrounds.

SCREENSHOTS

The screenshot displays the 'CAR RECOMMENDATION SYSTEM' interface. At the top, there is a navigation bar with links: Home, About Us, Contact Us, and Explore Cars. Below the navigation bar, the system prompts the user to enter requirements. The form includes the following fields:

- Seatings:** A dropdown menu set to '5 (five)'.
- Budget:** A text input field containing '1500000'.
- Safer:** A dropdown menu set to '4 Star'.
- Type:** Radio buttons for 'Sedan', 'SUV(Off road)', and 'Hatchback'.
- Transmission:** A dropdown menu set to 'Manual'.
- Fuel Type:** A dropdown menu set to 'Petrol'.
- Mileage:** A text input field containing '15'.

A 'Submit' button is located at the bottom right of the form.

Fig: Entering Requirements

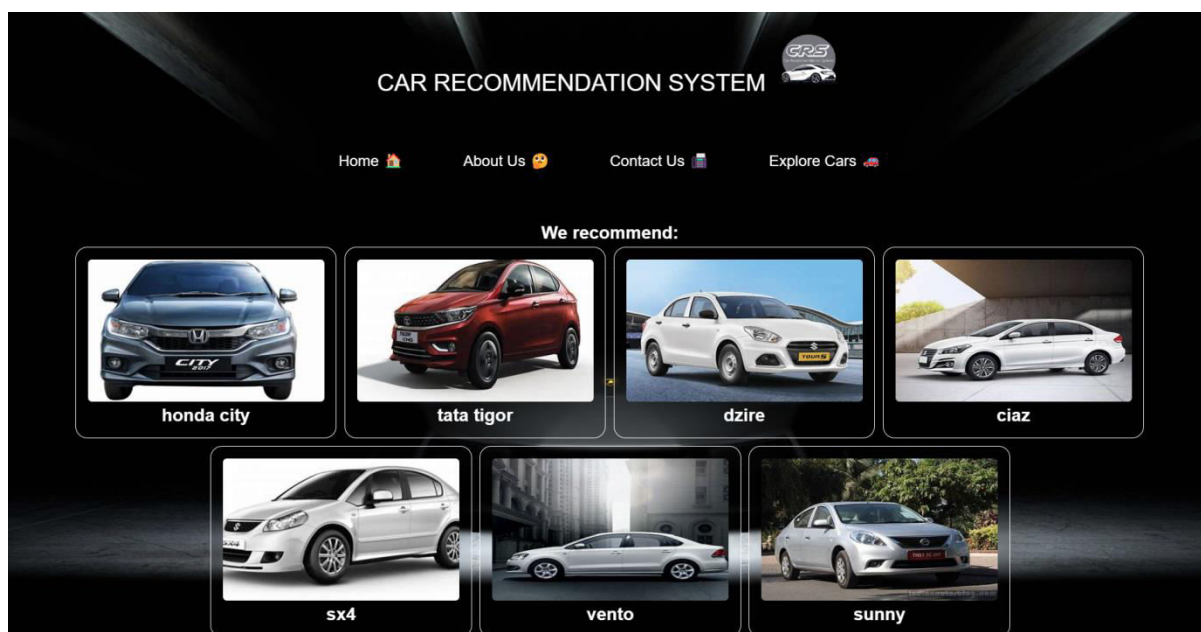


Fig: Recommendation Result

CONCLUSION

This project provides a hands-on experience in building a car recommendation system using basic programming concepts and data handling techniques. It's an excellent way to grasp the fundamentals of recommendation systems without delving into complex machine learning algorithms. By working on this project, you'll enhance your skills in data filtering, user

interface design, and logical problem-solving, all while creating a practical and useful application.

The project begins with collecting user preferences, such as budget, car type, fuel type, brand preference, and specific features. This input is then matched against a database of cars, which can be stored in a simple CSV file or a database like SQLite. The filtering logic, implemented using basic conditional statements and loops, narrows down the options to those that best meet the user's criteria.

The recommendation engine ranks the filtered results based on additional criteria, such as user ratings or popularity, and presents the top recommendations to the user. The user interface, whether a command-line interface or a basic web interface using HTML/CSS and JavaScript, allows users to easily input their preferences and view the recommended cars.

Throughout the project, you'll gain valuable experience in handling data, implementing filtering logic, and designing user interfaces. You'll also learn how to create a recommendation system that, while simple, effectively meets user needs without the complexity of machine learning algorithms.

By the end of this project, you'll have a deeper understanding of how recommendation systems work and the skills to build more advanced systems in the future. This project is not only educational but also provides a tangible product that can be further developed and refined. It's a great stepping stone for anyone interested in the field of recommendation systems and data-driven applications.

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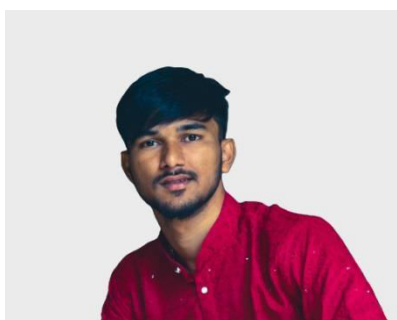
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