

Customized Automobile Assembly Portal

Ruchita Patil¹, Shreeya Sawant², Komal Sawant³, Jyogita Thakur⁴

^{1,2,3,4}Student, Department of Information Technology, Atharva College of Engineering, Mumbai, India

Abstract: With the rapid development of Internet and Internet Penetration into automobile industry, more and more people search and browse automobile related parts and information on the Internet before making and purchase. We focus on the task of the analyzing, predicting and give a platform for a customer to purchase the automobile parts easily where the user has the intention to purchase particular parts. The main intention of this website is to help the customers in purchasing their automobile and satisfying them on the basis of their budget and as well as the comfort from the automobile. We have surveyed some websites (indiamart.com; boodmo.com; sparesub.com). The website also provides the automobile designs based on the budget entered by the customer and sorts all the designs from the admin's portal according to the selected automobiles parts by the users. This is an informative website created for the benefit of users that promotes personalization i.e. creating customized automobiles according to user's wish and desire which can also be used for racing purpose.

Keywords: Vehicle Identification Number (VIN), General Public License (GPL), Advanced Micro Devices (AMD).

1. Introduction

Customization of cars and motorcycles has always been an expression of their owners' personalities and sense of individualities. The word customization refers to modification or personalization, according to one's tastes, visual preferences, performance requirements, and so on. The origins of car customization date back to the pre-World war era in the history of the automobiles. The first forms of customization were carried out by European and North American farmers who would tinker with their pick-up trucks and old Model Ts, making functional modifications to their suspension and chassis, adding hooks, winches and farm tools and equipment in order to use their vehicles on the farm. Over the last decade the customization industry has seen many names rise from being passionate enthusiasts to professional car and/or motorcycle customization outfits. Some of them undertake individual projects and do one-off builds for exclusive clients – enthusiasts, celebrities, and others with a lot of money at their disposal with a need to stand out from among the crowd. In a very short period of time, the customization industry has picked up surprisingly and formed quite a chunk of the Indian automotive market. Anyone looking to customize and add a little zing to their car/motorcycle should no longer find it difficult to get what they're particularly looking for. So go on, love your cars and bikes that little bit extra, portray that streak of individuality and connect to your ride a little more.



Fig. 1. Automobile (bike) parts for customization

2. Motivation and background

Customization is a concept that is being followed from old times by many people in order to personalize their vehicles in automobile industry. More and more people are overwhelmed with this new era of automobile industry as in today's times there are many fields available such as gaming ,car racing , bike racing, exhibitions of customized cars, new innovations in the design of automobiles and many more where people get a chance to showcase their customization and win exciting prizes for it .Moreover it also helps to track the budget of customer as the customer can desire for the parts he wishes to add in his/her design model thereby reducing the manufacture cost.

3. Objective

The main objective that we want to achieve is to reduce the human interaction in the traditional commerce by providing the customers with online mode of purchasing different spare parts and also enquiring about it. We also look forward to reduce the manufacturing cost and the production time and to make customization easy for customers.

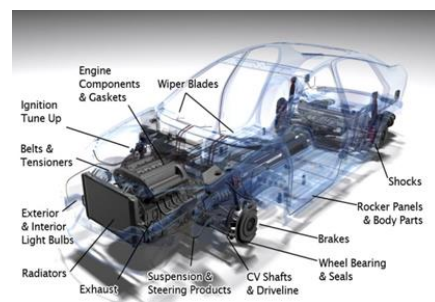


Fig. 2. Automobiles (car) spare parts

We aim to focus on the actual needs of customers and give

them their desired spare parts on the basis of the budget entered by them. Our goal is to analyze the customer customers with a platform where they can buy the products requirements and perform data mining on the data collected and also perform the sentimental analysis on the results. We want to provide the online and also use the data provided by our website to buy the products from other stores with good discounts available.

4. Problem statement

Nowadays, manual assembly systems are typically individual workbenches for each stage in the assembly process. The parts get passed manually from station to station singularly or in batches. However, there are many variations to manual assembly. For example, you could also use a singular assembly line with a manual transfer conveyor. In this case, workers stand at a specific station along the line and manually push the parts down the line as its being assembled. Hence, more human interaction is required also this process is time consuming

A. Problems in traditional commerce

Traditional commerce involves several stages in its manufacturing and purchasing processes. The first stage comprises manufactures, brand owners and exporters. The next stage is importers and wholesalers and further retailers and consumers. Thus the overall process is time consuming and costly sometimes.

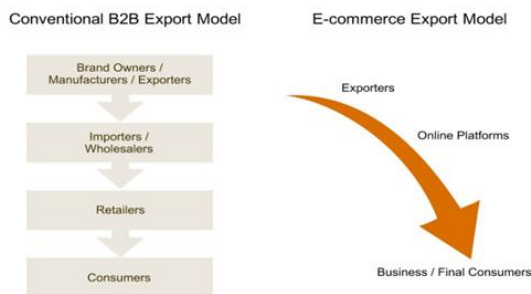


Fig. 3. Export model

B. Solutions to the problems

- There is no need to visit all the various locations, when you can find it all at one place.
- You can do the same by using our website which provides you with the best possible option available according to your budget and criteria.
- It will provide you the details and ranking of the

product by performing data mining.

- It will also provide the shop details for your further purchase.
- One can also get designs according to the budget entered by the customer.

5. Guidelines

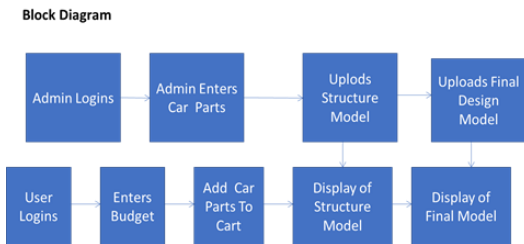


Fig. 4. System block diagram

6. Conclusion

The proposed system will provide user to choose the automobile parts under their budget of their choice. Hence user will get a customized model at the end. With the rapid development of Internet and Internet Penetration into automobile industry, more and more people search and browse automobile related parts and information on the Internet before making and purchase. We focus on the task of the analyzing, predicting and give a platform for a customer to purchase the automobile parts easily where the user has the intention to purchase a particular part. The main intention of this website is to help the customers in purchasing their automobile and satisfying them on the basis of their budget and as well as the comfort from the automobile. We have surveyed some websites (indiamart.com; boodmo.com; spareshub.com)

References

- [1] G. Liu, T. T. Nguyen, G. Zhao, W. Zha, J. Yang, J. Cao, M. WU, P. Zhao, and W. Chen, "Repeat buyer reduction for e-commerce," in Proceedings of the 22nd ACM SIGKDD International conference on knowledge discovery and data mining. ACM, 2016, pp. 155-164.
- [2] I.H. Witten, E. Frank, M.A. Hall, and C. J. Pal, "Data Mining: Practical Machine Learning tools and techniques. Morgan Kaufmann ,2016.
- [3] S. Wang, J. Fan, D. Zhao, S. Yang and Y. Fu, "Predicting consumer's intention to adopt hybrid electric vehicles: using an extended version of the theory of planned behaviour model," Transportation, vol.43, no.1, pp. 123-143, 2016.
- [4] Grossman, S. "Turning Technical Groups into High Performance Teams." Research Technology Management. March-April 1997.
- [5] Rao, H.A. and P. Gu. "Developing an Integrated Framework for the Design of Manufacturing Systems using the Genetic Recombination Technique," Society of Manufacturing Engineers Technical Papers. 1995.