

Interação Pessoa-Máquina

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Engine4u

Stage 2: Task and User Analysis



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Problem description

The main problem the group found, is the amount of time wasted when seeking valuable information about cars and the difficulty in comparing specifications between models. This search for information is especially important to someone who is looking forward to acquiring one but does not possess enough knowledge to understand what's the best option that will suit their needs and want to stay on budget. Besides the referred amount of time wasted by key information being dispersed and organized in a confusing way across the internet, misinformation or misunderstanding of the data can also be an issue. Concerning the enthusiasts, whenever a new model comes along, it can become difficult to keep up with its new specifications and improvements from previous generations of that same model.

User Analysis

	<i>Engine4u</i> user characteristics, by group of age.		
User characteristics	<i>Young adults</i>	<i>Young adults to middle age</i>	<i>Middle age to senior citizens.</i>
<i>Age</i>	18 to 25	25 to 50	50 to 75.
<i>Physical limitations</i>	May be fully able-bodied or, in case of some physical limitations, daltonism or difficulty in seeing small text.	May be fully able-bodied, or, in case of physical limitations, may have some difficulty in seeing small text and/or distinguish colors.	May be limited physically by poor sight and be incapable of moving the body.
<i>Educational background</i>	May be able to read and write.	May have regular, minimal or no qualifications, especially in reading and writing.	May have minimal qualifications or none, especially in reading and writing.
<i>Computer/It use</i>	May have experience with interactive systems.	May have some or minimal experience with interactive systems.	May have minimal or no experience with interactive systems. May have difficulty in using the keyboard, for example, because of physical limitations.
<i>Motivation</i>	May be very motivated to use the system to search for a model that fits needs and current budget, to compare models and get a more detailed description.	May be motivated to use the system to obtain information of the desired model, rapidly and efficiently, to avoid wasting time when trying to look for it.	May not be motivated to use the system, preferring to visit physical stands to get the wanted information.

User characteristics	<i>Young adults</i>	<i>Young adults to middle age</i>	<i>Middle age to senior citizens.</i>
<i>Car history</i>	May have minimal or no experience in driving and owning cars.	May have some, minimal or no experience in owning and/or driving cars.	May have experience in driving different models and in owning a car.
<i>Car knowledge</i>	May understand the displayed information based on previous research and/or enthusiasm about cars.	May understand basic information based on experiences in a professional context.	May understand the displayed information based on previous experiences in personal and/or professional context.

Task Analysis

Task 1 - User wants to search for a specific car model using simple search

1. Go to welcome page.
 - 1.1. Click on the logo or *Home* Button.
2. Write the name of the model.
 - 2.1. Click inside the search bar.
 - 2.2. Type the name of the model.
3. Click on *Search* Button.
4. In the model's page, click on the arrows to see images of the model.
5. Click on the Show *More* button to get the detailed description of the model.
6. Scroll down through the description to see all the information.

Pre-conditions: Text field must not be empty.

Time and frequency of use: Does not take much time and probably used very frequently.

Learning: Previous experiences with other systems.

Exceptions: The model may not be a part of the system's database which will lead to a not found page.

This task is expected to be performed using a computer where one is available.

Task 2 - User wants to compare multiple cars' information display in a carousel

1. Go to welcome page.
 - 1.1. Click in logo or *Home* Button.
2. Click on the arrows to see different presented models in the carousel.
3. Click on *Add to Compare* Button for each model of your choice.
4. Click on *Show Comparison* Button.
 - 4.1. Scroll down to end of page.
 - 4.2. Click on *To Compare* list.
 - 4.3. Scroll down to the end of the list.
5. Check the specifications' comparison by scrolling down as viewing them.

Pre-conditions: Must have at least 2, and no more than 4, models selected to perform this task.

Time and frequency of use: Some time may be spent in choosing/viewing the models to compare.
May be used frequently.

Learning: Previous experiences with other systems, watching others, try and error.

This task is expected to be performed using a computer where one is available.

Task 3 - User wants to buy a car using advanced search

1. Go to welcome page.
 - 1.1. Click in logo or *Home* Button.
2. Click *Find My Perfect Car* Button.
3. Fill out the presented form.
 - 3.1. Scroll down as viewing the questions.
 - 3.2. Click in tags to narrow options.
 - 3.3. In writable fields, write the wanted text for each field.
 - 3.3.1. Click inside the field.
 - 3.3.2. Type the value.
4. Click in *Search* Button.
5. Scroll down through the list of results.
6. If interesting, click to view the detailed description page of a model.
 - 6.1. Click on *Show More* Button.
7. Click *Buy* Button.

Pre-conditions: Mandatory fields must be filled.

Time and frequency of use: Take time and probably used infrequently.

Learning: Previous experiences with other systems, watching others using, trial and error.

Exceptions: Responses to form may not lead to a desired model, resulting in cars that do not fulfill the user's needs.

This task is expected to be performed using a computer where one is available.

Task 4 - User wants to search for the best brand option using advanced search and wants to check his favorite model manufactured by the result brand looking through the brand's models list.

1. Go to welcome page.
 - 1.1. Click in logo or *Home* Button.
2. Click *Find My Perfect Car* Button.
3. Fill out the presented form.
 - 3.1. Scroll down as viewing the questions.
 - 3.2. Click in tags to narrow options.
 - 3.3. In writable fields, write the wanted text for each field.
 - 3.3.1. Click inside the field.
 - 3.3.2. Type the value.
4. Click in *Search* Button.
5. Scroll down through the list of results.
6. If interesting, click to view the detailed description page of a model.
 - 6.1. Click on *Show More* Button.
7. Search for another model
 - 7.1. Click on search bar
 - 7.2. Type the desire model
 - 7.2.1. Click inside the field.
 - 7.2.2. Type the value.
 - 7.3. Click on search button
8. Add model to compare page
 - 8.1. Click on add to compare page

Pre-conditions: Mandatory fields must be filled.

Time and frequency of use: Take time and probably used infrequently.

Learning: Previous experiences with other systems, watching others using, trial and error.

Exceptions: Responses to form may not lead to a desired brand, resulting in cars that do not fulfill the user's needs.

This task is expected to be performed using a computer where one is available.

Scenarios

João, who is 26 years old, is interested in a specific car which he saw on the street right next to the bus stop where he catches the bus every day to his new job. In order to find it, he uses our website to look for it and get a detailed description of that same model.

António, who is 58 years old, is not so confident his favorite brand has done enough changes on their newest model, when compared to previous ones. In order to understand how different this new model is, he uses our website to see the images from both models and their information.

Rodrigo, who is 21 years old, has been saving money to buy his first car ever, now that he passed the exam to get his driver's license. Although is very excited, he is still struggling to find a car that will perform on its needs while staying on budget. To find the best solution, he uses our website.

Júlia, who is 31 years old, is doing some research about some brands for her work in the local newspaper, as she only wants information about random models, she will use our website's information to back her research.

Interviews

Questions made:

- While researching your dream car how would you normally search for information?
- Have you encountered problems while researching certain topics on the internet, like difficult to read or too much information on a page that could be easier by using our website module?
- As **a driver** yourself, would our website help find your new dream car?
- As an **inexperienced driver, or no driver yourself**, does our search parameters pick your interest in any way shape or form?
- If you had to choose two good aspects and two bad aspects of our website, what would those be?

Generally speaking, people who are not drivers, seem to know very little about cars, regardless of their age group. Amongst these people, a comparison page showing the similarities and differences between models, seems to be very important when trying to find the best car to suit their needs. Although this group finds the system to be a good starting point, when trying to get more information, reaching out to other people with more knowledge to check if the options presented are good, was noticed as a necessity.

A recommendation was given to display similar models when using the advanced search option, i.e, not fully comply with the filled out form, so it won't eliminate more advantageous choices. In this advanced search, it would be more important to fill out the form to express features, such as the size of the car, trunk size, number of seats, etc., than, for example, the horse power. To set priority levels for each of the features in the advanced search form seems to also be wanted by the potential users.

Amongst car owners, they seem to understand better the information about cars. For this group, searching information about specific models seems not to be confusing, so therefore a simple search bar seems more useful. For people in this group who are older, a visit to car dealerships or brands' official websites seems to be more natural. However, when trying to find the best option, a sorted list

by a chosen prioritized specification seemed to be important, which validates previous recommendations.

When asked about the carousel display of cars, car owners find it interesting and helpful.

Overall the interface we pretend to develop, when described in these interviews, seems to be seen as friendly to use and understandable.