

Semantic Web

19ECSE303

Comparison System

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Importance of semantics :

Semantics is the study of the meaning of words and sentences. The discipline studies the interpretation of individual words, the construction of sentences and the literal interpretation of text the way it is written. Semantics explains the various types of meaning that exist within a language, granting insight into how a person builds ability and understanding with that language.

Aim of semantics :

“If we view Semantics as the study of meaning then it becomes central to the study of communication which in turn is an important factor in how society is organised.”

The aim of semantics is to discover why meaning is more complex than simply the words formed in a sentence.

When You Need a Comparison ?

They can be used to compare similar items from the same organization, or to compare one organization's products against those of a competitor. The comparison table is a much more versatile tool than it gets credit for. This comparison behaviour goes for visitors of both b2c and b2b websites.

How do people make decisions?

they usually engage in compensatory decision making: they look at the individual merits of each and compare their advantages and disadvantages according to a number of criteria. Pretty much any time users want to choose among similar offerings, especially if multiple factors contribute to the decision, it's an opportunity for a comparison.

2 Product Comparison Table Showing Details...

Product 1		Product 2
\$ 790.85	 Price	\$ 735.24
720 x 1310	 Resolution	1430 x 2550
3.5 Inches	 Screen Size	4.5 Inches
32 GB	 Storage	16 GB
1 GB	 RAM	2 GB
1720 mah	 Battery	3200 mah
5.01 ounces	 Weight	5.45 ounces

This slide is 100% editable. Adapt it to your needs and capture your audience's attention.

What do your users expect?

- Main characteristics of the product or service on the product page, preferably as a bulleted list.
- An overview of the similarities and differences of comparable products on 1 page. It's really annoying if you have to get out pen and paper to write down product characteristics and then look for the differences between the products.

What do you need in order to compare?

- Clearly differentiated products or services.
- If you want to compare products in a meaningful way, you need to know what the deciding factors are for your customers. Seems easy, right? Wrong. In about half of the projects we do, the company doesn't know what their customers' deciding criteria are, so what we did was to allow users only to decide what he wants and what he doesn't such as he can choose for common features or different features and then decide.

Semantics in comparison model:

"To derive predictions about categorization times in a situation where a subject must rapidly decide whether a test item is a member of a particular target category".

In this semantic model, there is an assumption that certain occurrences are categorized using its features or attributes of the two subjects that represent the part and the group.

In this model we have addressed the most common questions that may arise to a customer regarding the comparison of any two e-commerce products. First, the customer would like to know what are the features of the two products selected. Second, what are the common features of the two products? What are the specifications? Third, what additional features does product 1 have in comparison with product 2?

Is showing all the features of the product necessary?

No, not always. While comparing any two products, we always do so by taking some attributes in common. Having a very large list of features of both the products wouldn't give a clear idea for the customer. Customer himself/herself comparing the features by looking at the list of the two products would be a tedious task.

So we've taken the common features of both the products and then made a comparison. Now customers can easily check the specifications of both the products for a common feature.

Will displaying uncommon features be a better choice than the common features?

Yes. It would make the task of the customer much easier. Knowing what product 1 has in addition to product 2 and vice versa would give a good analysis of the two products rather than common features. Knowing the basic features of the products based on its category, customers would be happy to know what extra features this particular product has.

What if a product has a very large number of features?

If that would be the case then the user could go for unique features so that his/her task is reduced and can get a clear idea about the products he/she is looking for.

Implementation :

After knowing what the user needs and expects, a model can be designed in such a way that it fulfills them such that it will make their decisions as easy as possible and we'll be happy, and they'll be happy.

Give Users Control:

Even if making the entries scannable or the headers sticky, it can be hard for users to compare products with many attributes, especially when these attributes span several screenfuls. In those situations, users may have to scroll back and forth between different rows as they compare the pros and cons of different products.

In order to make the task manageable, consider allowing users to select which attributes they want displayed in the table. Collapsible rows are an easy implementation for this feature. Additionally, let users choose between which all offerings are similar, or only show the differences.

About the dataset

It has 428 text documents which contain features of various electronic products.

Domains are mobile, TV, mobile(charging), Refrigerator and bird house .

The comparison has been applied to the same.

Link to the dataset :

<https://drive.google.com/drive/u/0/folders/1a0hq2AEK4WXC5ZqH2yVXGVDOB7m1sjq9>

Users are given control to choose desired option such as view

1. Features of Product1
2. Features of Product2
3. Common Features
4. Uncommon Features
5. Show the common features
6. Show the uncommon features

What's the need of these many options ?

- Because being able to easily see differences is one of the central purposes of a comparison, it makes sense to consider adding a toggle to allow users to switch between seeing only differences, seeing only similarities and seeing all available attributes. Seeing the differences is exactly why customers actually prompt for a comparison view in the first place. That means that the option to highlight differences should be quite prominent.
- Seeing only differences is useful, but would users also benefit from seeing only similarities? In fact, providing this option is not very common, but there are some good use cases for it. As it turns out, one important scenario is when selected products have too many differences to scan through easily.
- With an option to see only similarities or only differences, the customer can break down the complexity into two parts. What you notice in such cases is that customers tend to take care of the “easier” task first: they will look into similarities first (just to be sure all options are “solid”), and then look specifically into the differences.
- Customers don’t want to miss out on important details, and because they want to be certain about all available attributes, they will seek and examine the “all attributes” option as well, scanning it at least once during the session.

Advantages of comparison tables:

- Most comparison charts are simple to construct and read.
- Estimations are quick and easy to understand.
- These charts are approachable to a wide range of audience.
- It permits the viewers to get the data comparison at a glance.
- These charts help summarize a large amount of data.

Real-time implementations:

- *Flipkart* provides feature comparison on most category pages and most product pages, with advantages, disadvantages and highlights extracted from reviews. That makes the feature comparison infinitely more relevant, and it might make it slightly easier to jump to a purchasing decision.
- *Cool Blue* has a fine feature comparison: Not only does it display similar and different features prominently by default, it also highlights the pros and cons of each product and the pros and cons of each feature.
- *Versus* goes one step further, highlighting how the features of the selected products compare against other products on average in a bar chart. Even better, the website puts every attribute into context by highlighting how much better the best product in that category is performing.
- *Samsung* allows customers not only to see all attributes, only similarities and only differences, but also to select what attributes are relevant and compare only by them, removing everything else

“Semantics is about the relation of words to thoughts, but it also about the relation of words to other human concerns. Semantics is about the relation of words to reality - the way that speakers commit themselves to a shared understanding of the truth, and the way their thoughts are anchored to things and situations in the world.”

Link for the code:

<https://github.com/anchaljain31/semantic-web>

References:

- [1]. <https://www.theclassroom.com/importance-semantics-10060884.html>
- [2]. https://en.wikipedia.org/wiki/Semantic_feature-comparison_model
- [3]. <https://www.nngroup.com/articles/comparison-tables/>
- [4]. <https://www.smashingmagazine.com/2017/08/designing-perfect-feature-comparison-table/>