

# Smart shopping carts by Fitting alerts

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**Abstract:** Humans are drawn to social media by marketing that are based on cognition. Users are primarily interested in the apparel section; what is their opinion on the size of clothes? Most designers produce dresses based on overall ethnicity, while others use free-size dresses, mostly undergarments, which is not a wise clothing approach. Is this study’s assessment on the future of online clothes negative? Is there any way to save money on the internet with this strategy? Any adroit method that can make buyer and seller happy. By merging deep learning and neural networks, this study is taking the initiative to overcome this challenge. Initially, participants in this research were asked to accept cookies, which are a type of intelligent agent, sometimes known as a we-agent that is loaded as an app on your browser. When you place an order, it establishes a connection with the shopping server and browses recommended cloths for the user by calculating or matching user fittings attributes and cloths attributes, such as Chinese shoe size 42 but user wears 10 sizes, both sizes are the same but attributes are defined for China from 10 to 45+, whereas shoe sizes in our country are generally 0-12. This study depicts an intelligent agent is mandatory to bridge attribute gap to save time. An intelligent agent is the ultimate remedy to address this problem. The goal of the project is to offer users an idea and to estimate which brand and size will be the best for them based on data/input supplied by consumers. The agent, which compares user qualities with available attributes from the shopping cart (the name of this study is fitting alerts) and follows a deep learning algorithm, will produce the best result

**Keywords:** clothing shopping cart, deep learning, artificial intelligent agent, attribute comparison

## INTRODUCTION

Online purchasing is breaking new ground in the commercial world, with estimates of \$2 billion in online sales. Two broad groups are in support of this business, while the other believes it is their right to inspect the goods in detail before purchasing it. Consumers have lost faith in the sector’s QoS quality of service, particularly in the fabric business. Others, on the other hand, valued quality items and associated them with the International Standard Organization (ISO). What exactly is the issue? Why does it have anything to do with internet business? How can a consumer be satisfied? Is there a technological solution available at this time?

## LITERATURE REVIEW:

Women desire a product that matches the color, size, price, and delivery options listed on the shopping site when they purchase online. People have reported receiving things with sizing issues, color changes, and late delivery. To get the most perfect answers, Chin-Tsai et al suggested an online electronic item purchase model combining the analytic network process (ANP) and analytic hierarchical process (AHP) techniques of (TOPSIS) with linear programming (LP). The reasoning is based on a customer’s ranks and additional clever computations using ANP and TOPSIS [1]. The model is as follows, and this research follows the same rationale.

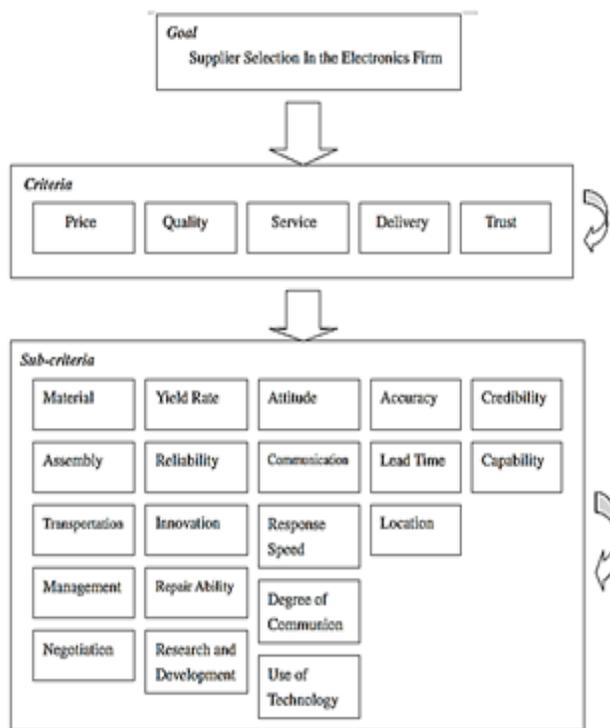


Figure 1. Criteria for customer selection.

Saaty proposes -new logic Analytic Hierarchy Process (AHP) is a theory of measurement it depicts results on comparison and measurement. In other words, it depicts an expert system mathematically. In one line priority outcome will relate with prime inputs to jolt down the right prioritized facts [2].

Customers have mostly lacked technical and they have very low information about the architectures. Most of the time they choose the wrong architecture and face huge losses.

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For this concern Qiushi-et al developed a model on AHP which systematically selects the right architecture, processes it, and provides the most suited software architecture for a problem put by a customer [3].

In Mechanical engineering, it would take serious effort to decide on a good, efficient vehicle whose delivery time is fixed and meet all quality standards. Ravindra -et al proposed a Vendor Selection Model (VSM) for potential customers who wants expert opinion about their procurement logically. This can be helped by AHP who will guide them more realistically with their relative importance [4].

Ming-Lang et al highlighted the significance of Cleaner Production (CP) electronics and their competitive advantages on the electronics industry. In other words, they are towards safe procurement of electronics devices and ignore those which can cause hazardous effects on human health. This research prioritizes electronics goods by clarifying, categorizing, arranging, correlating, and concepts relevant implementation of Cleaner Production and its structured management [5]. Exploring new sites for tour and travel is a new concept that takes any travel agency to greater heights. Ching-Fu explores this area more critically, two major inputs are considered sensitivity and efficiency for choosing the right sight. Another aspect that is considered is tourist facilitates based on regional characteristics and demographics [6].

M. Ilankumaran et al write Textile industry is the backbone of any country its design and fabric are based on the state of the art machinery. Its critical maintenance and related output need an expert opinion which can be taken by AHP. A smart maintenance policy requires a strong strategy which can be achieved through AHP and TOPSIS [7].

**METHODOLOGY**

This study aims to create a system that assists online shoppers who want to buy but don't have access to a professional opinion in order to help them choose the right outfit. This study analyses the facts and offers the best solution based on the needs of the users. A consumer, for example, wants an expensive black dress in a tiny size and needs it right away. Here, AHP assists the user by displaying all of the pricey small-size black gowns, making it simple for the consumer to select the finest selection. Two male and two female genders were chosen for this study. Normal outfits appeal to men, whilst costly gowns and rapid delivery appeal to women. The customers' demands are as follows:

**Question**

Custo mer	Gender	Age	Size	Color	Price	Delivery	Nature Predict
1	Female	27	Small	Black	Expensive	Immediate	On time delivery
2	Male	51	Medium	Blue	Cheap	2 Week	
3	Male	52	Large	Green	Average	3 Week	
4	Female	33	Small	Red	Very Expensive	4 Week	

Figure 2. Customer Query and outcome.

AHP is a decision process that provides the best alternatives based on relative weights and ranks by doing clear judgments through user-defined conditions. The following diagram depicts user-selected attributes which are consist of Age, size, color, price, Delivery, Rating.

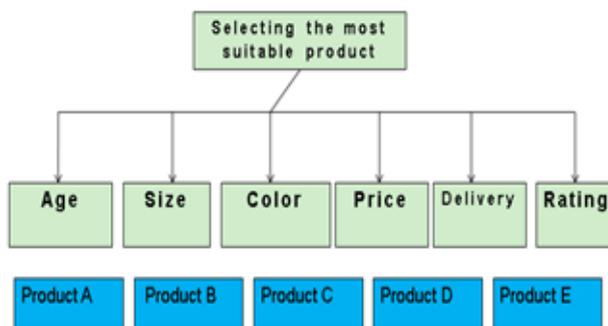


Figure 2. Analytical Hierarchical Process tree.

Attributes	1	3	5	7	9
Age	Teen(13-17)	Young(18-Adult(23-3	Old(36+)		Expensive
Size	Small	Medium	Large	XL	Cheap
Color	Blue	Green	Black	Red	Average
Price	Cheap	Average	Expensive	Very Expensive	Very Expensive
Delivery	1 Week	2 Week	3 Week	Immediate	

Figure 3. Intensities of importance for comparison matrix.

The aforementioned intensities depict user categories like the color (Black, blue, red, and green), size of a user (small, medium, large, and XL), and price of a product varies from cheap to very expensive, etc. The following diagram is a comparison matrix in which the system got results. Further, it depicts which area is closer to the user demand.

	Gender	Age	Size	Color	Price	Delivery
Gender	1.00	0.14	0.20	0.20	0.20	0.14
Age	7.00	1.00	0.14	0.20	0.14	0.14
Size	5.00	7.00	1.00	0.20	0.33	0.14
Color	5.00	5.00	5.00	1.00	3.00	0.33
Price	5.00	7.00	5.00	0.33	1.00	0.14
Delivery	7.00	7.00	7.00	3.00	7.00	1.00
Sumation	30.00	27.14	18.34	4.93	11.68	1.90

Figure.4. Comparison matrix.

The following diagram depicts about higher average which shows this state is closest to user requirement. Here study depicts user wants urgent delivery then the color of the dress and other results.

	Gender	Age	Size	Color	Price	Delivery	Average
Gender	0.03	0.01	0.01	0.04	0.02	0.08	0.03
Age	0.23	0.04	0.01	0.04	0.01	0.08	0.07
Size	0.17	0.26	0.05	0.04	0.03	0.08	0.10
Color	0.17	0.18	0.27	0.20	0.26	0.18	0.21
Price	0.17	0.26	0.27	0.07	0.09	0.08	0.15
Delivery	0.23	0.26	0.38	0.61	0.60	0.53	0.43
sum	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Customer 1 having 0.43 times higher priority (delivery) over color which is 0.21 times.

Figure.5. Comparison matrix with the result.

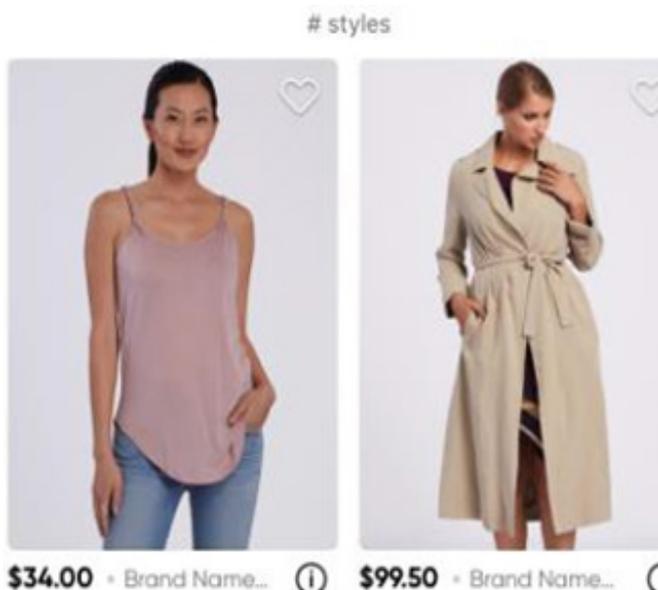


Figure.6. Both Medium prices are doubled.

### LIMITATION OF THIS STUDY

The majority of customers claim that they ordered something and received an inferior sort of item that is not suited for them or is not the color they were searching for. Few people indicate they won't buy it because of late delivery or bad materials, or because the fit isn't what they expected?

### CONCLUSIONS / FUTURE WORK

This research emphasizes the importance of online clothing business research, rate of return was always high due to lack of appropriate size, color, price, and delivery etc. This software gathers user input by an app installed on user PC, processes it, and offers the best possible result to the client on the product they are looking for. The consumer in this study is more concerned about rapid delivery and dress color. This research will lead to future work on online consumer behavior, which is now a research project in the works.

### Contribution

Our contribution to this article is that we employed the AHP approach in conjunction with user measurements and product features to arrive at the best fit product conclusion.

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