LITERATURE SURVEY

1.A REVIEW ON OUTFIT FASHION RECOMMENDATION SYSTEM ISSN:2456-3307

According to Bhagyshree Pravin Bhure, Pratiksha Tulshiram Bansod, Monali Shivram Amgaokar, Savita Pralhad Lodiwale, Anjali Pravin Orkey, Ashish Mohod, With the quick rise in living standards, people's shopping passion grew, and their desire for clothing grew as well. A growing number of people are interested in fashion these days. However, when confronted with a large number of garments, consumers are forced to try them on multiple times, which takes time and energy. As a result of the suggested Fashion Recommendation System, a variety of online fashion businesses and web applications allow buyers to view collages of stylish items that look nice together. Clients and sellers benefit from such recommendations. On the one hand, customers can make smarter shopping decisions and discover new articles of clothes that complement one other. Complex outfit recommendations, on the other hand, assist vendors in selling more products, which has an impact on their business. FashionNet is made up of two parts: a feature network for extracting features and a matching network for calculating compatibility. A deep convolutional network is used to achieve the former. For the latter, a multi-layer completely connected network topology is used. For FashionNet, you must create and compare three different architectures. To achieve individualised recommendations, a two-stage training technique was created. As is widely known, the traditional garment recommendation depends on manual operation. To be specific, salesmen need to recommend garment to customers in order to arouse their interest in purchasing. However, it is very difficult for salesmen to understand customers' real thoughts and then recommend the targeted garment as there is no sufficient cohesiveness between customer information and merchants.

As a result, finding a set of objective indicators, rather than subjective opinions, to evaluate the fashion level in clothing recommendation technology is critical and meaningful. This will pave the way for fashion multimedia mining in cyberspace. Our solution provides considerable convenience for customers in the fashion business by providing individualised and diverse fashion analyses and recommendations. On the one hand, it aids specialists in analysing current trends in mass multimedia information. On the other hand, it provides customers with expert advise on how to find their own particular fashion clothes match.

2.IMAGE BASE FASHION RECOMMENDER SYSTEM

Fashion is how we present ourselves to the world. The way we dress and makeup defines our unique style and distinguishes us from others (Cheng et al., 2020). Fashion in modern society has become an indispensable part of who I am. Dressing in a socially acceptable combination of clothes is considered vital in contemporary society, especially where professionalism is synonymous with clothing (A. Pandit et al., 2020). In everyday life, people need to find appropriate clothes to wear. Wearing clothes that match color, texture, style, skin tone, etc., is an essential aspect of fashion and personality. Outfit selection is a common problem that people face every day. This problem is extensive and involves many visual and social factors that can be implicit and abstract. As its definition in Cambridge dictionary, in its contemporary significance, is a style popular at a particular time, especially in clothes, hair, make-up, etc. Fashionable products are highly demanded, and consequently, fashion is perceived as a desirable and profitable industry.

The fashion industry occupies a significant position in the global economy and involves a sizeable industrial value chain, including garment design, production, and sales (A. Pandit et al., 2020). In fact, in recent years, there has been an expanding demand for clothing worldwide. The fashion segment revenue is projected to reach 878,334 m U.S. dollars in 2021, with an annual growth rate (CAGR 2021- 2025) of 7.31%. The Value of the global fashion industry is alone 3 trillion US dollars today. It accounts for 2 percent of the world's Gross Domestic Product (GDP) 1, indicating that the demand for clothing will rise across the entire world. What has been mentioned above were some main reasons that make the fashion industry highly attractive for investors. Other reasons and challenges in this industry make use of fashion recommender systems essential as an integral part of all today's businesses.

Fashion recommender systems make it easier for customers to find what they are looking for, but new advancements try to provide more personalized customized recommendations. In many marketing industries, complementary item recommendation is used as a cross-selling strategy. As (M. Elahi 2021) indicated, "A major challenge in the fashion domain is the increasing Variety, Volume, and Velocity of fashion production which makes it difficult for the consumers to choose which product to purchase."

3. CONTENT BASED APPAREL RECOMMENDATION SYSTEM FOR FASHION INDUSTRY

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The industry for apparels has a major role in the development and globalization of countries as it has been incorporated into the world economy. Fashion industry involves huge supply demand chain of designing garments, and production of sales. In this contemporary world, there has been a phenomenal change in supply demand chain. Since 2008, there is a consistent increase in the sales of garments by \$3.3billion each year, and the sales of global garments has achieved \$1.25 trillion in 2012, that is a sign that there is a great and a fast growth in development of industry for apparel. The recommendation technology for apparel industry, as an emerging technology, has attracted wide attention of scholars. It is a well-known fact that the apparel recommendation depends on operations which were performed manually.

One who wants to be a good merchant, need to understand the concerned priorities of customers. If a Recommendation system can be deployed into a ecommerce application especially like apparel industry, the technology could guide the customers with high quality of recommendations and give contentful results for the customer to buy and increase the sales with good profits. A Recommendation System can be defined as a technology that gathers data about personal interests and taste of a customer and give suggestions on product sales as per their preferences.

The so-called recommendation system collects the information from the user by following two ways: either implicitly or explicitly. Implicit method of collecting information involves close observation or monitoring of customer's purchased products whereas explicit acquisition of customer preferences involves observation on previous ratings or history. Collecting the information from the customer needs could be possible by using a data filtering tool which use intelligent algorithms and customer's preferences data as input, in order to recommend the most interesting products to the concerned customer. We can consider the recommendation engine as a automated sales person who displays a product with similar products that a customer is interested in. The Recommendation Engine consists of algorithms which are well trained to increase the product sales as per consumer needs.

4. A REVIEW ON CLOTHES MATCHING AND RECOMMENDATION SYSTEMS BASED ON USER ATTRIBUTES

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The fashion industry occupies a significant position in the global economy and involves large industrial chains, including garment design, production, and sales. In fact, in recent years, there has been an expanding demand for clothing all over the world. The apparel market is projected to grow from 1.3 trillion U.S. dollars in 2015 to about 1.5 trillion dollars in 2020 globally, representing that the demand for clothing is going to rise across the entire world. Dressing in a socially acceptable combination of clothes is considered vital in a modern society, especially where professionalism is synonymous to attire. In everyday life, people need to find appropriate clothes to wear. Wearing clothes that match in color, texture, style, skin tone, etc. is an extremely important aspect of fashion and personality. Outfit selection is a common problem that people face every day, this problem is very broad and it involves a considerable amount of visual and social factors that can be implicit and abstract.

You stand in front of your wardrobe and see the same clothes, always the same output combinations? What to wear? Need a Change? This is what everyone thinks while getting dressed. In today's fast moving world people don't have enough time to dedicate to fashion and personality as a result they wear same monotonous dress in their routine, most of the people wear the same set of matching dress and repeat them over a week, they are either shy or don't have enough time to try different combinations as a consequence most dresses are not used and remain dumped in the wardrobe forever. While buying they look for match of particular dress but don't take into consideration the ones they have in their closet as a result the clothes get predefined in combination and matching and the ones which do not have any matching pair remains futile. Looking at this real-life problem, it motivated us to bring a solution which would maximize the utilization of all the dresses.

In everyday life, people need to find appropriate clothes to wear. Considering the importance of the topic and the need of users, it motivated us to develop a system to provide the best-case combinations (Optimized Pairs) of matching clothes as well as provide recommendations.