



AI-Powered Virtual Fashion Stylist with Machine Learning

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ABSTRACT

This application is designed to be highly user-friendly, offering a range of features that support fashion online business improvement. It includes tools like machine learning to provide customized fashion recommendations on user preferences and dynamically change. The system includes a cloud-based database for scalability, and aims to redefine fashion by providing responsive and personalized solutions, helping users choose clothes that suit their style and make the experience easy and sufficient.

Introduction: Background

Concerns about fashion online business are growing globally, and as technology use increases, this article provides a discussion about personal style, body beauty, and personal identity to solve the users face when choosing clothes. The system provides customized fashion recommendations based on users preferences and dynamically adapt to change. Key features include a user-friendly interface, real-time updates and personalized instructions. Its design is discussed in terms of ease of flexibility and scalability, and the user experience is investigated in terms of ease use.

Problem Statement

Many people are facing problem in choosing clothes that can fit them accordingly during different occasions such as wedding ceremony, culture day, concert, job interview, etc., and lack fashion advisors to assist them due to the long distance between the user and the fashion stylist.

Therefore, we want to solve this problem to provide personalized recommendations that take into account personal style, body shape and rapid change using this application that can help user gets the right outfits and advice from the stylist.

Objectives:

To create a personal fashion advisory system

The system aims to create a personal fashion advisory system using smart technologies such as artificial intelligence (AI) and machine learning (ML). The system monthly helps users choose clothes that suit their style, but also make the experience easy and efficient. We ensure that fashion lovers meet their needs.

Educational Tips.

It gives educational tips on how to manage and exercise specific strategies for special lesson such as fashion design.

Literature Review

Author	Title	Objective	Advantage	Disadvantage
Atharv Pandit kunal Goel MJ Katre N.A	Clothes matching and recommendation systems based on user attributes` 2020/09/08	Personalize fashion recommendation	Responding to users fashion preferences or need.	Limitations to people who have no smartphones.

Bettaney EM, Hardwick	Fashion outfit generation for e-commerce.	To satisfy consumers' needs	Improvement on fashion stylist.	
Myntra	Matching clothes recommendation	Put on clothes or items which are married to each other.	Time management; clothes or items that match are found easily.	Expensive and a must of buying the items that together even if you don't need some.
Guo Et Ali	A photo fashion item.	Detects the face region, and determines the top and bottom by assuming that they were divided into certain portions.	Improvement on fashion stylist to see how the item fits the user's requirements.	

Methodology

Agile methodology

Involves an iterative approach that emphasizes flexibility, collaboration, and customer centricity. The methodology has several stages that are approached during project development, requirement, design, development, testing, deployment, and review. The stages are iterative which means after going through all the stages one can easily go back to any stage to make an update.



The project begins with the requirements phase, where all necessary materials and tools are gathered to lay a solid foundation. Next, during the design phase, these materials are organized, and a strategic layout is established to guide the project's implementation. The development phase follows, which is the core of the project where coding and resource integration take place to create the intended product. After development, the testing methods are employed to identify and resolve any issues. Once testing complete, the project enters the deployment phase, where it is finalized and realized to users. Lastly, the review phase gathers user feedback to assess performance and satisfaction. This feedback is crucial for identifying areas that need improvement, and guiding any necessary updates or revisions to enhance the project's effectiveness and user experience.

Results

Fashion AI is quickly becoming an essential tool for personal styling, providing personalized recommendations and helping users embrace their unique aesthetics. From virtual fitting rooms to trend analysis and sustainable shopping options, fashion AI can enhance your style journey with precision and creativity.

Conclusion

In conclusion, this app is a big step forward in fashion online shopping and fashion design offering an easy-to-use platform for different outfits styles show and advisory tool helping user easily find the outfits of their preferences, and discover different other outfits styles that can fit them accordingly. The app also uses google maps for emergency navigation, showing a commitment to user safety. It provides educational resources about fashion online business and fashion design to help users understand these challenges better.

References

Atharv Pandit Kunal Goel MJ, Katre N.A review on clothes matching and recommendation systems based on user attributes. Int J Eng Res Technol (IJERT). 2020;09(08).

Bettaney EM, Hardwick SR, Zisimopoulos, O, chamberlain BP. Fashion outfit generation for e-commerce. In: joint European conference on machine learning and knowledge discovery in databases.

Springer. 2020.p.339-354

Bollacker K, Diaz-Rodriguez N, Li X. Beyond clothing ontologies: modeling fashion with subjective influence networks. In: KDD workshop on machine learning meets fashion. 2016.

Bossard I, Dantone M, Leistner C, Wengert C, Quack T, Van Gool I. Apparel classification with style. In:

Asian conference on computer vision. Springer, 2012.p.321-335.