

Face Recognition and Image Processing in E-Commerce Domain

Ms. Shreya Bhuran¹, Ms. Shubhangi Mundhe², Prof. Mrs. Diksha Bhave³

^{1,2} Students, Computer Science, Shivajirao S. Jondhale College of Engineering, Mumbai, Maharashtra, India.

³ Professor, Dept. of Computer Science Engineering, Shivajirao S. Jondhale College of Engineering, Maharashtra, India

Abstract - "StyleCracker" is a web-based project which is made for remote-styling and shopping or styling and shopping via Internet. As technology is getting advanced, the way of life is changing accordingly. Now a day's we can ask any type of queries to the internet and get answers for everything, so why not get appropriate styling suggestions too from the ease of our home and from our favorite stylists as well as get new outfits options to choose from while getting our queries sorted? There is no need to go the physical person or shop for the same anymore.

The styles can be chosen over the internet at our own ease and also, orders can be places via internet. The styles, the preferences and the budget while at the time of purchasing; we can do choose everything we want. The ease that comes with having your data entered while at the time of registration or the sign up and then using facial recognition and image processing, getting the points mapped to get your perfect body shape and vitals to have the perfect suggestion of your outfits for your desired occasion.

Using StyleCracker, you can register or sign up for the first time where you will be asked about some basic questions like your height, your body shape, your body type, your face shape and skin tone while at the same time answering some basic questions like your general styling preferences and your personality type. Our in-house stylist will help you choose the best outfit while at the same time accessorizing it well. All this process happens once the customers give a go ahead and mentions their budget and prize range. Our stylists are available on chat 24*7 to help the customers with their queries. If at times, the customer does not know of their body type or body shape, our stylists will also help them to understand their shape better so that the customer is able to access their own body type and choose better outfits for themselves. The customers can also buy new outfits that the stylist suggests them with our third party affiliated websites which have collaborated with us for selling their merchandise exclusively. The customers can choose from a wide variety of casuals, luxury and prêt a port brands that suits their needs and budget.

1. INTRODUCTION

1.1 Purpose

An Online Shopping Portal is web-based application software with RDBMS which performs actions like administrating, providing information and shopping via the internet. It used facial recognition technology as well as image processing. The nature of this software is to handle a

particular task and hence it is in the category of application software.

This project falls under the category of Internet Technologies with RDBMS, since the project is mainly about online style guidance as well as third party shopping. This project used relational databases as the back-end. Having online services for the interested user, it has great demand in the market scenario, as we know that the internet is huge client- server architecture. The client is a web browser, requesting a web-based data, a file or styling advises, from the server staying anywhere in the world. More than the server, the service provider also provides services to the client. It holds almost all the information that the client side wants and also the styling tips that they need.

We have used .Net framework too, to develop the software. Asp.Net is a rich set programming framework for building the web-based application. It offers great support to both the developer and the administrator.

1.2 Product scope

From the user's point of view, the interface of the system is very easy and no technical knowledge is required to use the system. But to use this styling service, the customers need to create an account first where they have to fill all the necessary information required and asked by prompt. If a client has already booked an appointment with a particular stylist, he/ she can also reschedule another meeting with another stylist or he/she can choose amongst the existing stylists to get their work done. From a survey carried out by the shopping apps available in the market, it is concluded that an app/ website like this can help the general population in staying up to date with their fashion needs as well as help the shopping portals in keeping up with the latest trends and styles.

2. OVERALL DESCRIPTION

2.1 Product Perspective

This product will be a new product in market which has no competitor in the existing systems. This has been developed with end goals in mind of having an independent website which caters to the niche needs of styling for customers.

2.2 User Classes and Characteristics

Currently there are two user classes that is Admin and Moderators. This software will link both the components and will help each other for the betterment of each other.

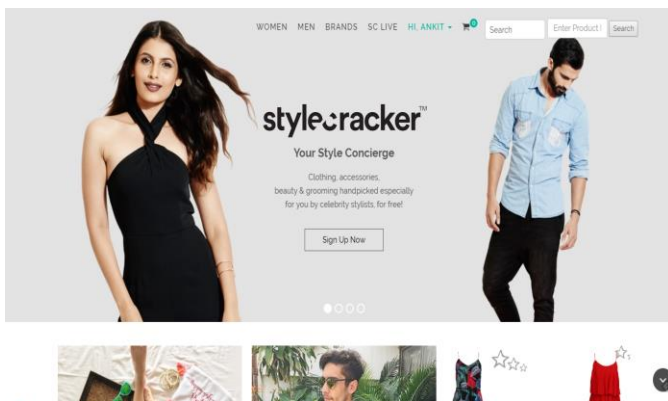
2.3 Operating Environment

The software is hardware independent. Any system with an internet connection and web browser will be able to access our website.

2.4 User Documentation

The user will be provided with help options to help them operate the site easily. FAQ's will also be available to the people to get solutions to common problem. Users will also be having a portal to ask questions and they will be answered as soon as possible.

Figure -1: Homepage for the website



The landing page for the website shows a marquee banner which has an auto timer. Once you land on the page, you can either surf on the page or you can sign up if you are a new user. You can also login if you are a recurring customer. It will ask the detailed information about your body type, body shape, personal style preferences and budget. The search will be modified according to these set preferences.

Figure -2: Face and image detection function

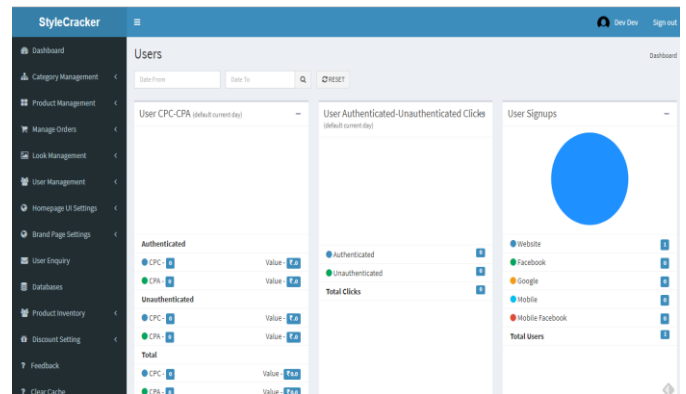


FACE DETECTED

Note: Wait 2-3 sec. after clicking button.

The face and image recognition function takes help of multiple technologies which will help map the different points of the body which will help us make the dimensions available without having to really ask for them. It will help us try on outfits or products online and choose for ourselves whether they are meant for us or not.

Figure -3: Backend and admin function for the website



The backend of the website shows the inventory and the brands attached to the website. It is confidential for the admins or the brands that are associated with the website. New products in the inventory can be added here as well as the old and out of stock products can be deleted or restored.

3. CONCLUSION

The facial expression recognition system and the image detection system presented in this research work contributes a resilient face recognition model based on the plotting of behavioral characteristics with the physiological biometric features. [1] The physiological characteristics of the human face are associated with geometrical structures which restored as base matching template for the recognition system. The design of a novel asymmetric cryptosystem based on biometrics having features eliminates the need of suspecting whether or not it can be used for E-Commerce.[2] It requires a special hardware support like all other biometrics system. This research work promises a new direction in the field of E-Commerce where it provides a new dimension in personalizing a customer's shopping experience.

ACKNOWLEDGEMENT

We are thankful to this institute to channelize our skills and encourage us to work together with cooperation and coordination. We would like to thank our project guide Prof. Mrs. Diksha Bhawe for her encouragement and tremendous guidance throughout the making of this project. We would like to thank every other person who might have helped in the making.

REFERENCES

- [1]Jolliffe IT . 2002 Principal component analysis, 2nd edn. New York, NY: Springer-Verlag.
- [2]Diamantaras KI, Kung SY . 1996 Principal component neural networks: theory and applications. New York, NY:Wiley.