ADVANCED AI BASED COSMETIC SUGGESTION SYSTEM

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ABSTRACT

Now a days, cosmetic products plays major role in personality appearance. With online Shopping and Ecommerce websites customers are given number of products. Selecting best product for our skin is difficult for us. Therefore we propose a predictive system which gives exact idea about which product is best for our skin type.The composition is based onthe skin types which can be oily, dry or neutral.T he suggestion for the composition will better than the traditional system.By using AI algorithms we will ease the challenging task of IT industry in cosmetic and beauty care.

Keywords: Cosmetic products, Skin type, Suggestion, AI algorithms, Cosmetic and beauty care

1. INTRODUCTION

Over the years beauty industry becomes more and more vast,and so the products offered by this industry and the customers. are also increased.So based on this expansion of products and consumers, the selection of appropriate cosmetic product becomes very important. As cosmetic products plays important role in personal appearance there is need for selecting best products according to their skin type. Finding perfect cosmetic for users skin type in notoriously tricky- as every individual have unique skin texture.Even if we find product for customer it can lead to skin trouble,which is very complexissue. For solving this problem we can use AI algorithms,as it works fine with unstructured and large amount of data with promising result.

2. METHODOLOGY

In this system we will implement the best composition of cosmetic product using AI architectures(CNN)

2.1 Finding the skin type

The method first find the skin type of the customers using Conventional neural network algorithm

2.2 Finding input features

This method finds input features like product ingredients, product suitability for skin type which are passed to the input layerand then to the hidden layers for automatic feature learning. Finally we get composition of cosmetic product on the outputlayer. The suggestion for the composition will better than the traditional system.

3. MODELING AND ANALYSIS

Here we will implement the best composition of cosmetic product using AI architectures (Convolution Neural Network). The proposed method takes input features like product ingredients, product suitability for skin type etc which are passed to the input layer and then to the hidden layers for automatic feature learning . Finally we get composition of cosmetic product on the output layer. The suggestion for the composition will better than the traditional system. Here we use python language.Python is an amazing programming language. It is simple to read but also powerful enough that it can do a lot of things. Compared to other languages, it allows fast iteration. If you want to tweak your code a bit, you only need to change a line or two, and you can run the modified code right away. No need to update many places for small changes. No need to wait for minutes and hours to re-compile your code to run it.Python is never meant to run fast. In fact, if execution speed is the concern, using a different language such as C++ or Java might be a better idea. In machine learning projects. We need many experiments and iterations to finalize our approach. Having a language that allows us to iterate fast means we can improve our solution faster. As a result, a lot of people are using Python. And a lot of libraries are written for Python. This virtuous cycle makes Python a mature language with a powerful ecosystem.
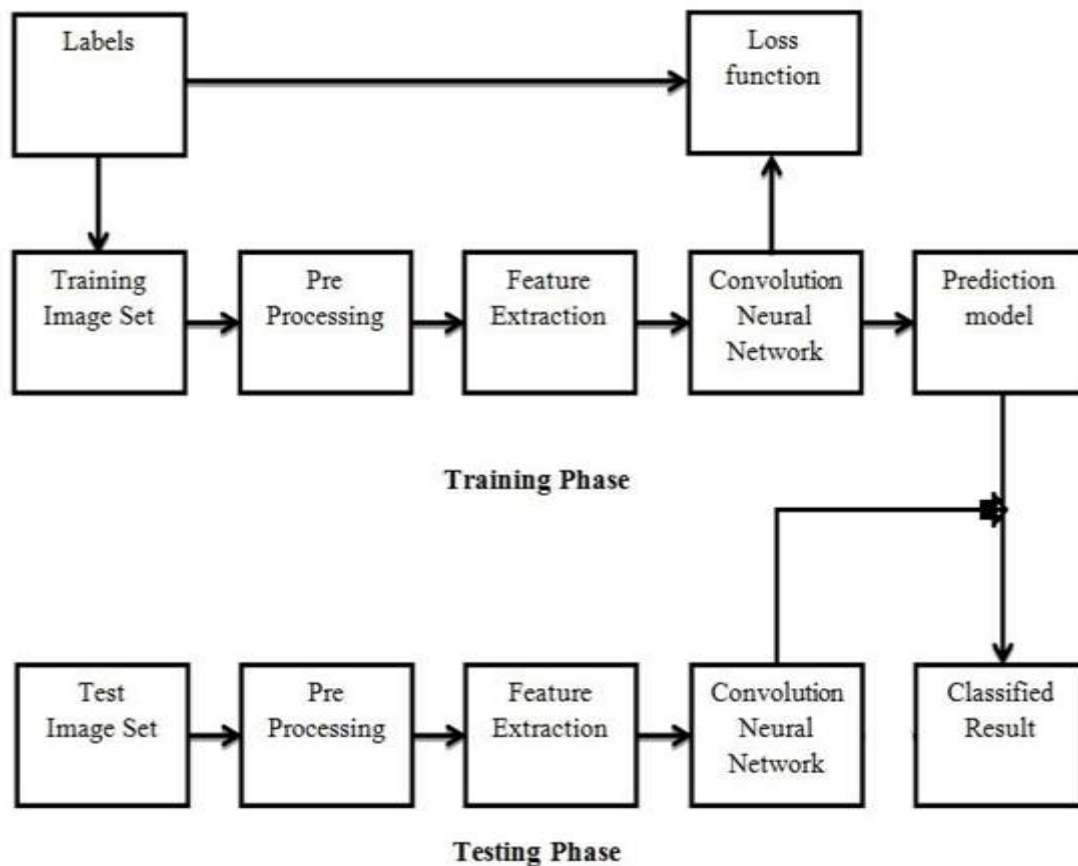
Figure 1: Block diagram

4. RESULTS AND DISCUSSION

Firstly the dataset is collected from several data science domains like kaggle and data is categorized into four classes namely oily ,dry ,combinational ,normal.The data set is imported in AI algorithm and before performing the pre-processing techniques are implemented to enhance the dataset some of the techniques are grayscale conversion and histogram equalisation.The data set is imported in AI algorithm and before performing the pre-processing techniques are implemented to enhance the dataset some of the techniques are grayscale conversion and histogram equalisation.From the trained model file the input skin image is classified and the cosmetic suggestions are provided based on that..

SN.	PRODUCT NAME	SKIN TYPE
1	Ayur Skin Toner	Combination
2	Lotus Herbal	Dry
3	Biotique Face pack	Normal
4	Blossom Face Wash	Dry
5	Mac Foundation	Combination
6	Lacto Oil Balance	Oily

Figure 2: Suggestion of accurate cosmetic product based on their skin type

5. CONCLUSION

Decision making in today's world is more complex than the past, as for consumers who are now confronted by various kind of choice for each type of products and brands. This approach provides the composition based on skin types (i.e. dry, oily or natural). Our main aim is to serve better composition of cosmetic products. By using AI algorithm technique the proposed system will definitely help in better composition of cosmetic products.

6. REFERENCES

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