

FIND THE LOOK

(CLOTHES VISUAL SEARCH APPLICATION)

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ABSTRACT

Online cloth shoppers often face several challenges when completing purchases, such as technical glitches, incorrect shipping addresses, payment errors, and fraud. These issues result in lost sales for both retailers and consumers.

Sometimes it's more convenient to just find the look you want in your nearby clothing store from the comfort of your home or any place by just taking an image of the look you like and searching it up on an app which will find you the matching clothes from the nearest shop where it is available.

In this report I propose the idea of an app Spot the Look, by which shoppers can take a photo of the clothes they want to buy and the app will find the perfect match for them from the nearby shop.

PROBLEM STATEMENT

With the rise of e-commerce and online shopping, consumers have access to a vast array of clothing options. However, the process of finding a specific item of clothing can often be challenging, especially when searching for something that is not easily described in text-based search terms. Visual search technology has the potential to revolutionize the way customers search for clothing online by allowing them to search for items using visual cues rather than textual descriptions.

The goal of this project is to develop and implement a visual search system for a clothing dataset. The system should be able to accurately identify and match clothing items based on visual features such as colour, pattern, style, and texture. The system should also be able to handle large datasets and provide relevant search results in a timely manner. The success of this project will be measured by the system's ability to accurately identify and match clothing items, as well as user satisfaction with the search experience.

BUISINESS/CUSTOMER NEED ASSESSMENT

Assessing the needs of both the business and customers is important for the success of a clothes visual search app. Here are some key factors to consider:

1. **Market Research:** Conduct thorough market research to determine the size of the target audience, their preferences, and purchasing habits.
2. **Unique Value Proposition:** Identify the unique value proposition of the app that sets it apart from competitors and appeals to customers.
3. **Revenue Streams:** Determine how the app will generate revenue, such as through advertising, affiliate marketing, or charging a fee for premium features.
4. **Partnerships:** Identify potential partnerships with fashion brands, retailers, or influencers to promote the app and generate more revenue.

Customer Needs:

1. **User Experience:** App should be easy to navigate, visually appealing, and provides accurate search results.
2. **Personalization:** Allow users to personalize their search criteria based on factors such as style, colour, size, and price.
3. **Integration with social media:** Enable users to share their favourite items with friends and follow influencers and brands for fashion inspiration.
4. **Customer Support:** Provide reliable customer support to address any issues or concerns that users may have.

In summary, a successful clothes visual search app should meet the needs of both the business and customers. It should provide a unique value proposition, generate revenue, and build partnerships while also providing a great user experience, personalization options, social media integration, and reliable customer support.

TARGET SPECIFICACTIONS

We are targeting *clothing stores small or big and the Generation Z and Millennials*, who regularly go online for buying clothes it will make it easier for them to not only find but to also buy the clothes instantly and it will also improve the sales of the stores.

BUISNESS OPPORTUNITY

A clothes visual search app can offer various business opportunities. Here are some potential opportunities:

1. **Affiliate marketing**: The app can partner with fashion brands and retailers and offer a commission-based model for promoting their products.
2. **In-app advertising**: The app can offer targeted advertising to fashion brands and retailers. The app can use data analytics to analyse the users' search history and offer personalized advertising.
3. **Product recommendations**: The app can offer product recommendations to users based on their search history and preferences. This can be a valuable tool for fashion brands to showcase their products to potential customers.
4. **Data analytics**: The app can collect user data and offer insights to fashion brands and retailers. The insights can help the brands to optimize their product offerings, pricing, and marketing strategies.
5. **Subscription-based model**: The app can offer a premium subscription-based model that offers additional features to users. The app can offer features like early access to new products, personalized styling advice, and exclusive discounts.

Overall, a clothes visual search app has the potential to offer various business opportunities. The success of the app depends on the app's ability to attract and retain users and offer a valuable service to fashion brands and retailers.

APPLICABLE CONSTRAINTS

1. Data Collection from clothing stores.
2. Regularly updating the clothing database.
3. Lack of technical knowledge for the users (Retail).
4. Bringing the shopkeepers to the application platform.

APPLICABLE REGULATIONS

1. Data Protection and privacy regulations.
2. Govt Regulations for small business.
3. Antitrust Regulations.
4. Regulations against false advertisement.

EXTERNAL SEARCH

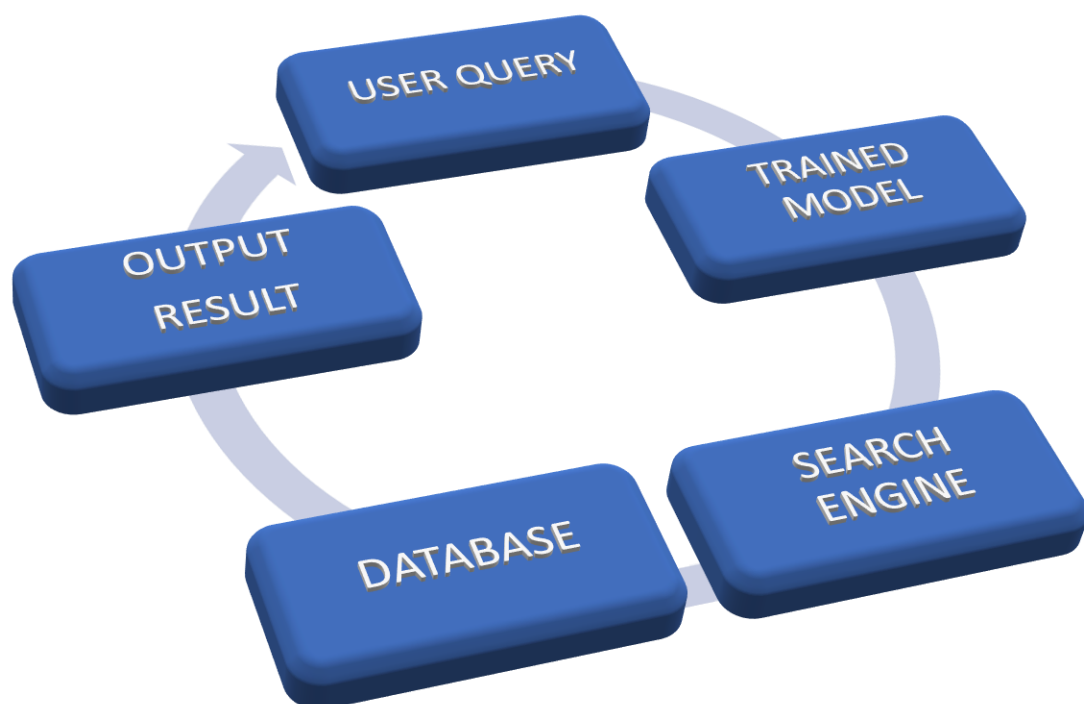
Multi label image classification - <https://www.analyticsvidhya.com/blog/2019/04/build-first-multi-label-image-classification-model-python/>

CNN - https://dev.mrdbourke.com/tensorflow-deep-learning/03_convolutional_neural_networks_in_tensorflow/#3-create-a-model-start-with-a-baseline_1

Dataset - <http://www.kaggle.com/datasets/paramaggarwal/fashion-product-images-small>

CONCEPT DEVELOPMENT

Building an app for visual search involves multiple steps and requires knowledge in several areas, including computer vision, machine learning, and app development. The user will make query which will be an image, the image will be pre-processed for model and then model will make predictions which will be queried in the search engine, which in turn will look for them in the database.



FINAL PRODUCT

The Product takes the following functions to perfection and provide a good result.

1. Collect and pre-process the data: The first step is to collect the data that you will use to train your machine learning model. Pre-process the data to remove any duplicates or irrelevant images.
2. Train the model: Next, you need to train a machine learning model to recognize and classify images. There are several popular machine learning models for image recognition, including convolutional neural networks (CNNs), which are well-suited for visual search tasks. You can use popular deep learning frameworks such as TensorFlow or PyTorch to train the model.
3. Build the search engine: Once you have trained your model, you need to build the search engine that will take in user queries and return relevant results. We can use popular Python libraries such as Flask or Django to build the back-end of your app.
4. Create a user interface: Finally, you need to create a user interface that allows users to upload images and retrieve search results. We can use Python GUI frameworks such as PyQt or Kivy to build a desktop or mobile application.
5. Feedback Mechanism: A valuable feedback mechanism must be developed to get to know the needs of the customers that have not been met.

CONCLUSION

In conclusion, a clothes visual search app has immense potential to help small clothing store owners and also many business opportunities in fashion industry.

With the growing popularity of online shopping and the increasing demand for personalized experiences, a visual search app can offer an innovative solution to customers and fashion brands alike. The app can provide a seamless shopping experience for users and offer valuable data insights for fashion brands and retailers.

The potential business opportunities for a clothes visual search app are vast, including affiliate marketing, in-app advertising, product recommendations, data analytics, subscription-based models etc. However, the success of the app depends on its ability to attract and retain users and offer a valuable service to fashion brands and retailers. Therefore, it is essential to invest in user experience design, data analytics, and marketing strategies to ensure the app's success.

Overall, a clothes visual search app has the potential to transform the fashion industry and create new business opportunities for entrepreneurs and fashion brands.