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Saudi Qumra

قمرة السعودية

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Bara'ah Kado - Hanan Al-Maliki - Sadiah Barnawi - Taif Alsharif

Supervised by: Sara Albakry

Abstract:

Considering the increasing ambition of Saudi citizens to produce local products. the problem is there aren't platforms or apps that hold the Saudis shops with their provided products, also if there is only a picture of the product without knowing the name of the shop that provides this product. here becomes the idea of Saudi Qumra to solve these problems by creating an app that holds Saudi shops with their products' pictures from Instagram and these shops are verified by Maroof. The main feature of Saudi Qumra app is the search by image method using CBIR improved with CNN architecture.

What is Saudi Qumra?

Saudi Qumra is the App who is provided to anyone who is interested in Saudi products, it will hold Saudi shops that are reliable by Maroof from the Instagram platform in one place so users can reach shops at any time. The main feature of Saudi Qumra app is the search by image feature, this allows users to search by image by uploading a product image that user wants and the search engine will retrieve the most similar products images to the user's image with the shop's account names. The purpose of this feature is to make people find a product easily. The app collects the Saudi shops in one place which will help shops to be known instead of being on different social media platforms randomly.

Objectives:

- Build an app for search by image feature
- Create search by image engine
- Collect stores accounts and photos from Instagram
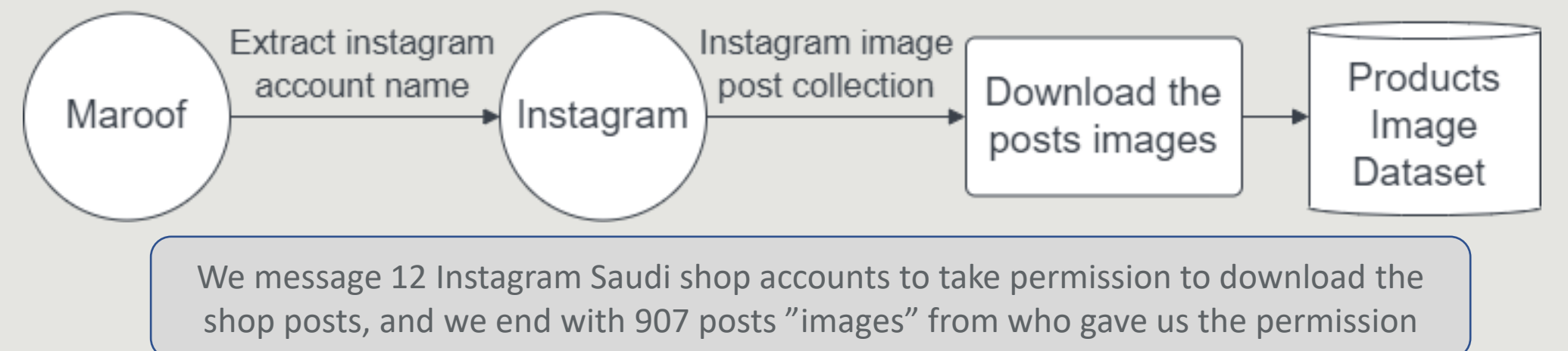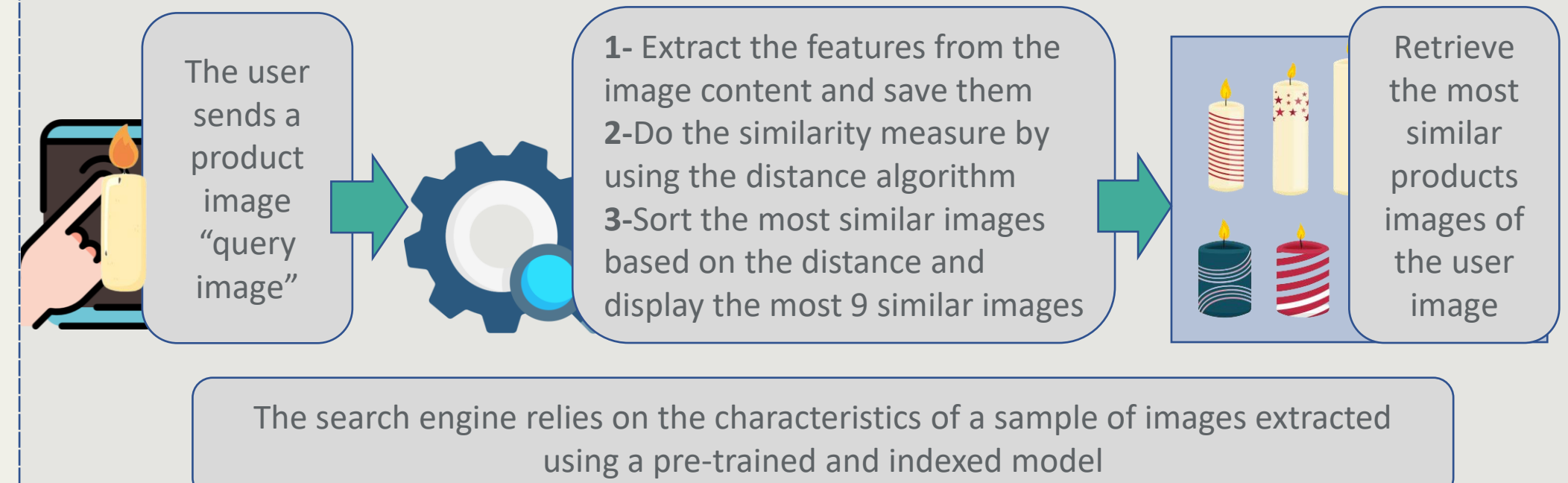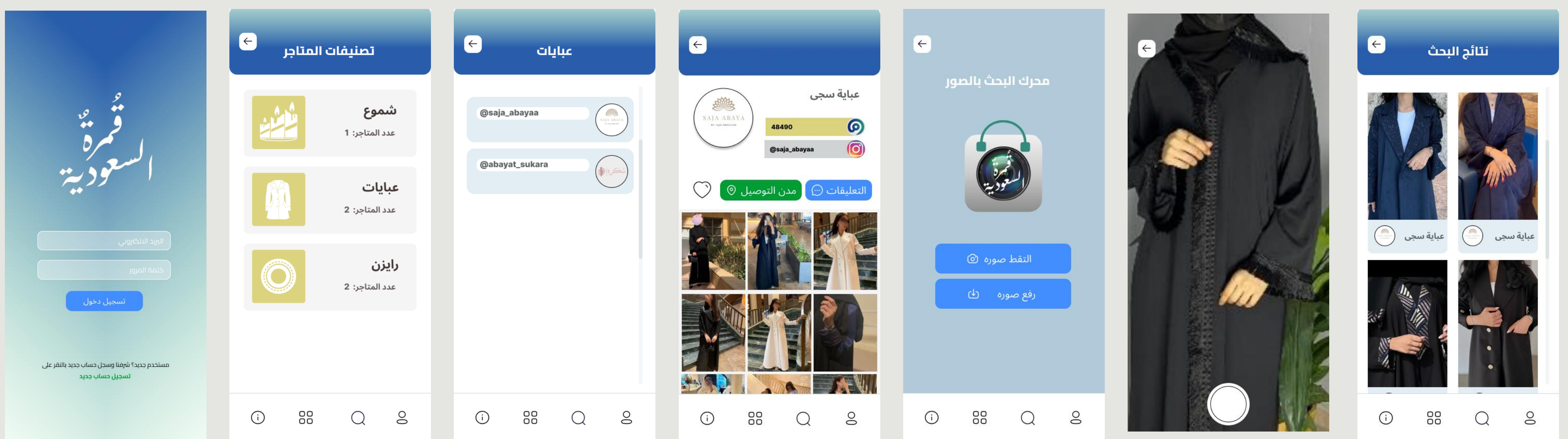- View trusted stores from Maroof

Data Collection:

Maroof → Extract instagram account name → Instagram → Instagram image post collection → Download the posts images → Products Image Dataset

We message 12 Instagram Saudi shop accounts to take permission to download the shop posts, and we end with 907 posts "images" from who gave us the permission

Development Tools:

Python   Flutter   Fire Base   Keras   Visual code   Flask

How it works:

The user sends a product image "query image"

1- Extract the features from the image content and save them
2- Do the similarity measure by using the distance algorithm
3- Sort the most similar images based on the distance and display the most 9 similar images

Retrieve the most similar products images of the user image

The search engine relies on the characteristics of a sample of images extracted using a pre-trained and indexed model

Interfaces:

Conclusion:

At the end of this project, we discovered how important is Saudi Local production and the development of production and industry in the Kingdom of Saudi Arabia. We proposed the idea of an image search engine, and the dataset of this search engine is the images from Instagram, and we made sure that the Instagram accounts are trusted by the Maroof platform of the Saudi Ministry of Commerce.

Contacts:

Email: QumarApplication@gmail.com
Instagram: @qumraapplication
Superviser email: ssbakry@uqu.edu.sa

References: