Dades3

UPC Datathon 2023

Fashion Compatibility Challenge

MANGO

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Pre-processing data

- One-hot encoding of variable ‘des_fabric’
- Cleaning of ‘cod_color_code’ (character -> numerical)
- Delete HOME products (99.9% of products are from SHE line)

User chooses product from catalog

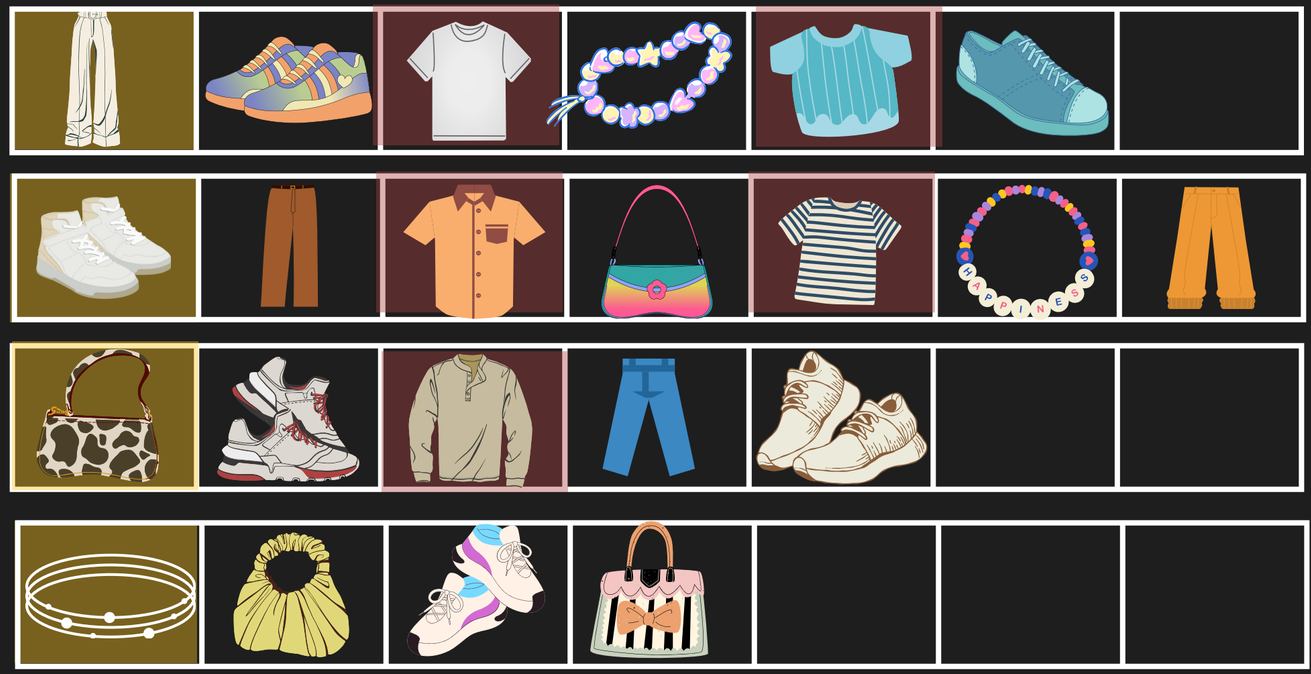
Design

outfit related
posting list

Design

key

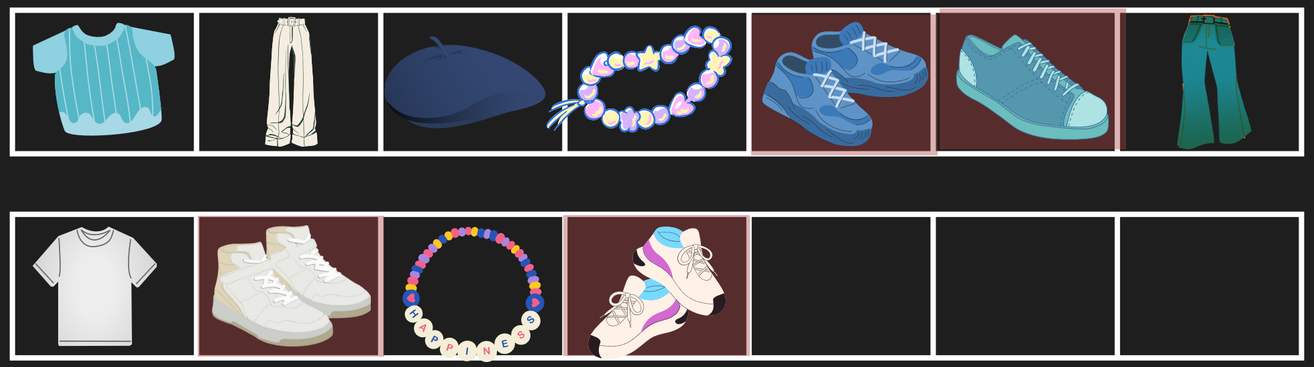
outfit related
posting list



Similarity Ranking

User selects next clothing type for outfit

User selects product type shoes

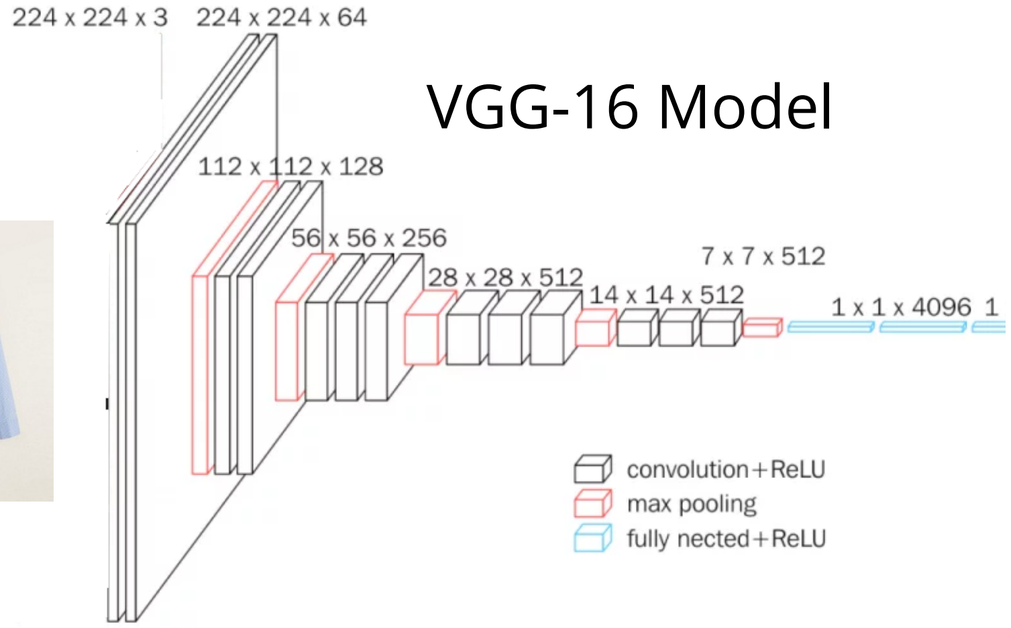


Show user top-5 shoes according to similarity score

If there are not sufficient shoes, we search through whole dataset with type product ‘shirt’

How is Similarity is calculated?

Image Similarity



VGG-16 Model

For each image feature map (vector) of 1st fully-connected layer

Features maps are compared using cosine similarity

Tabular Similarity

Between 2 products:
fab = Cosine similarity of one-hot encoding of des_fabric
col = Absolute difference between cod_color_code

Tabular similarity = beta*fab + (1-beta)*col (beta=0.9)

Global Similarity

Hyperparameter alpha (alpha=0.8)

Global Similarity = alpha*image_similarity + (1-alpha)*tabular_similarity