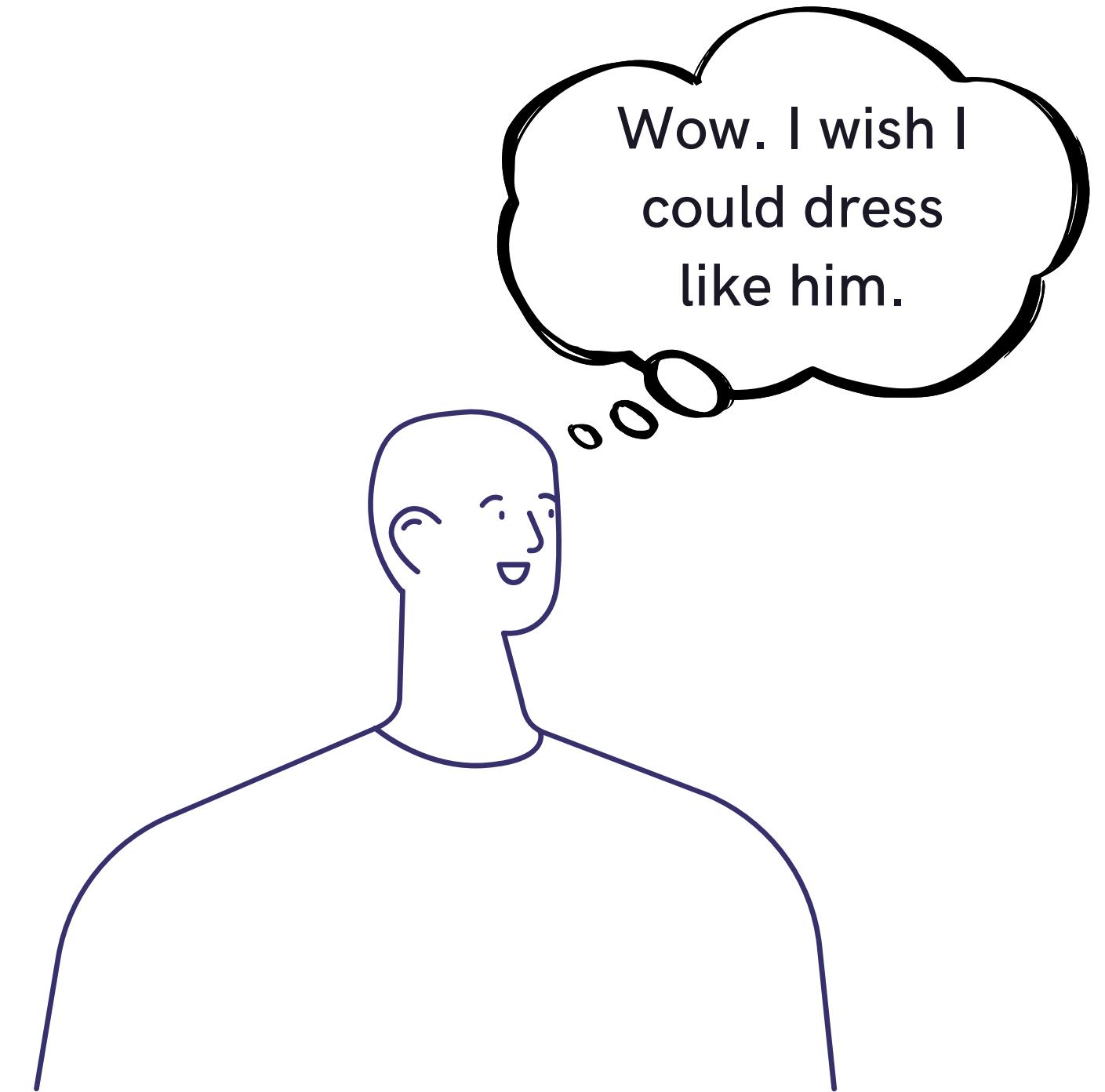


moda
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le wagon

Orlando Alexander



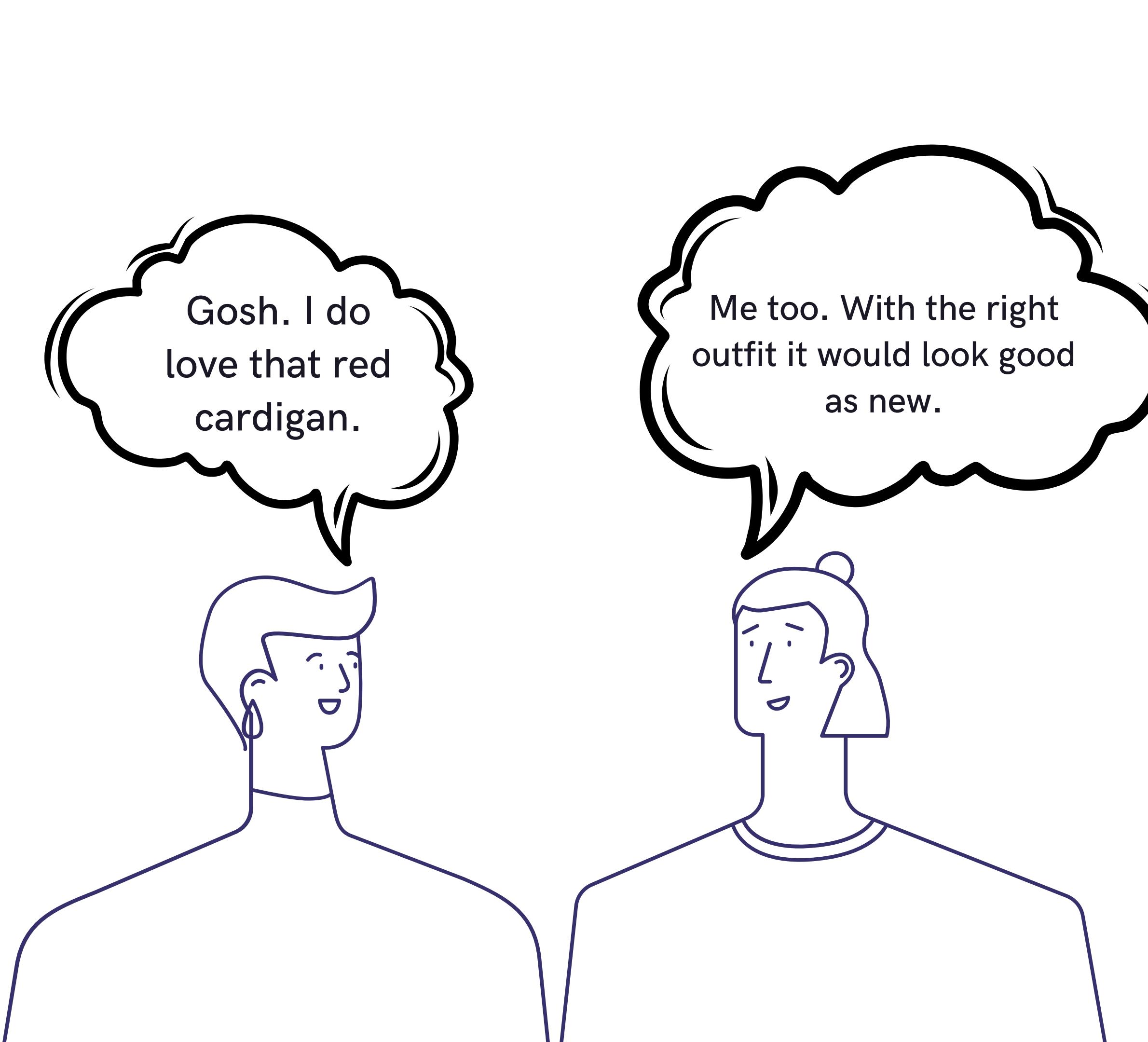


READY-TO-WEAR FOR MEN | T-Shirts & Polo Shirts for Men

Category ▾ Filters ▾ Sort by: Newest ▾

Horsebit print cotton polo shirt
\$ 1,150
SHOP THIS >

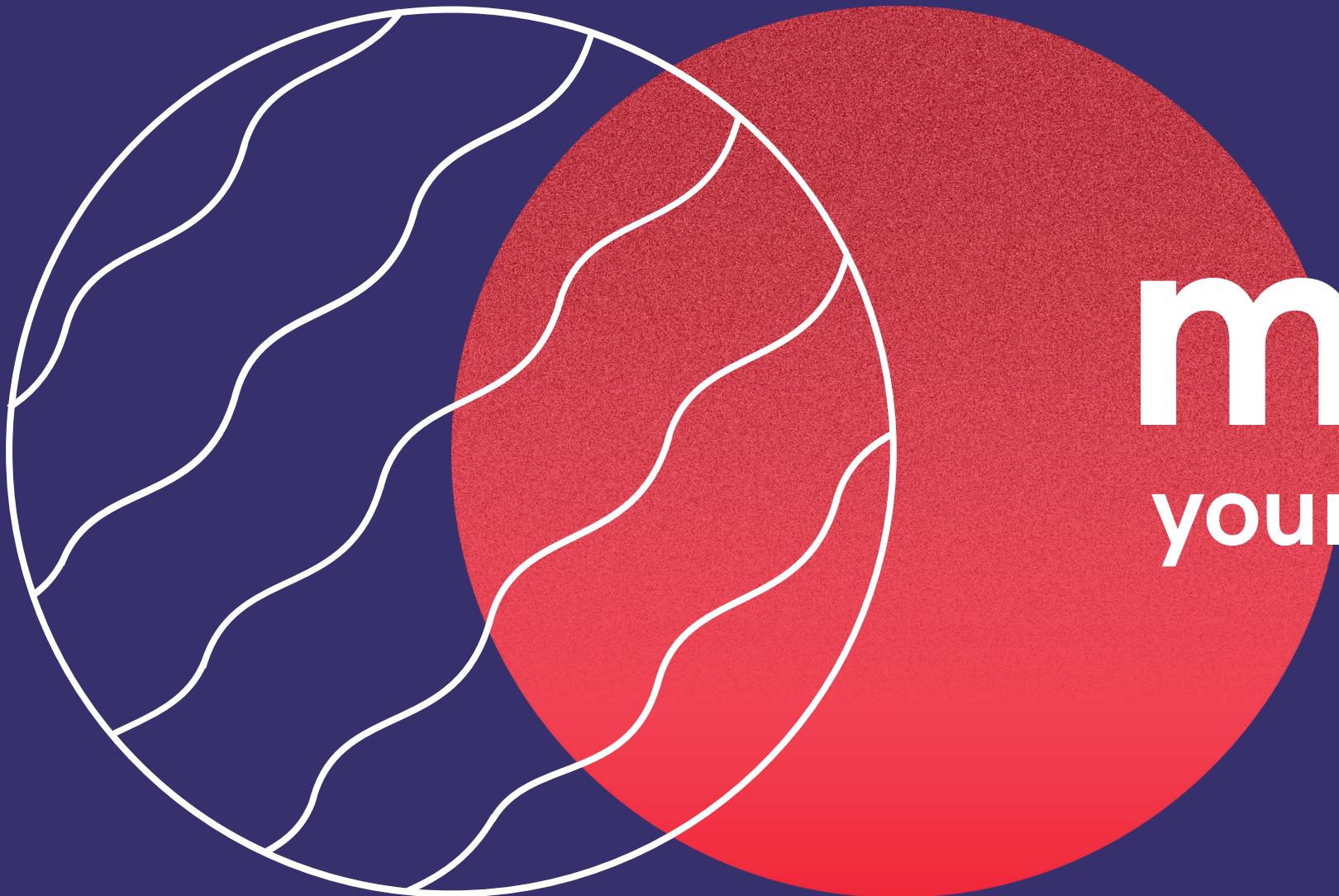
<https://www.gucci.com/us/en/pr/men/ready-to-wear-for-men/t-shirts-polo-shirts-for-men/polo-shirts-for-men/horsebit-print-cotton-polo-shirt-p-717391XJEWAA9376>



Gosh. I do
love that red
cardigan.

Me too. With the right
outfit it would look good
as new.





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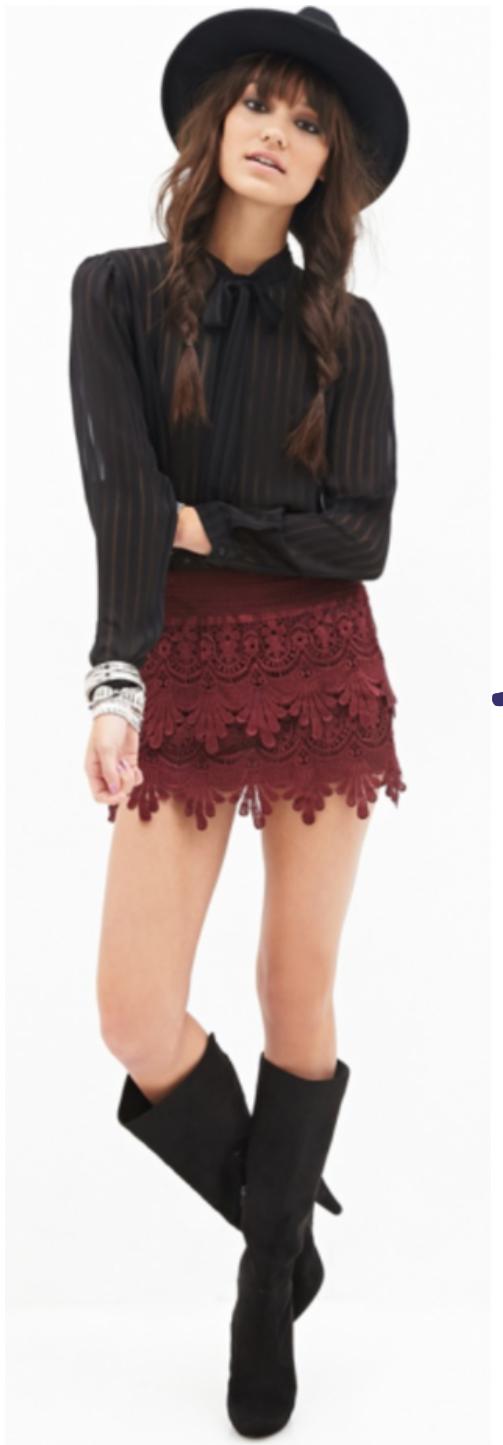
Fashion. Made easy.

Personalised.

Intelligent.

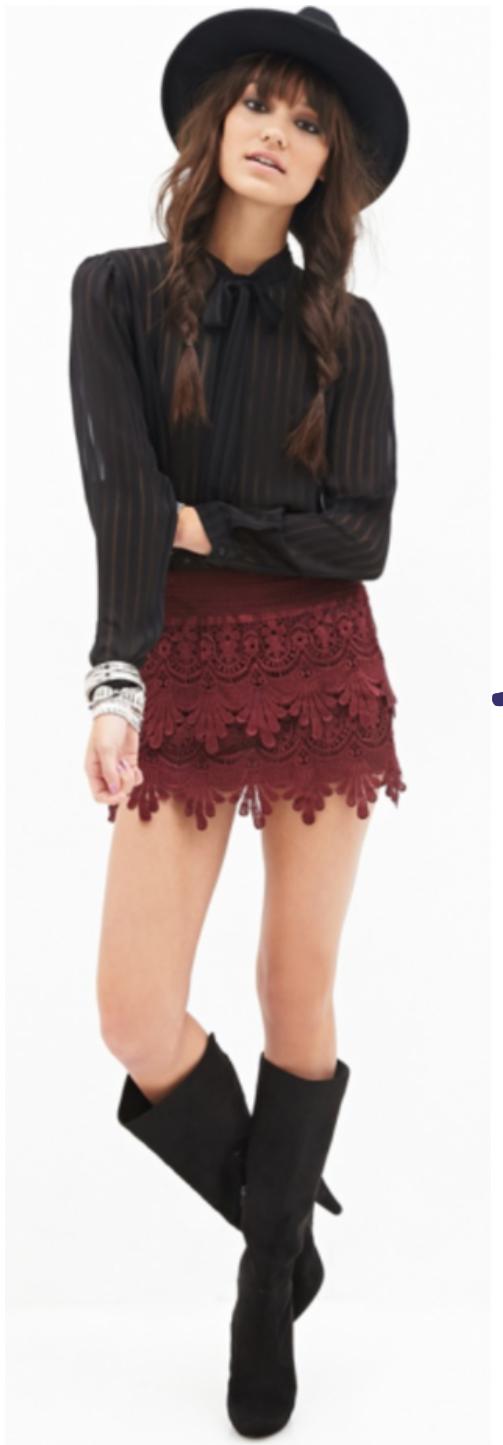
Up-to-date.





OR



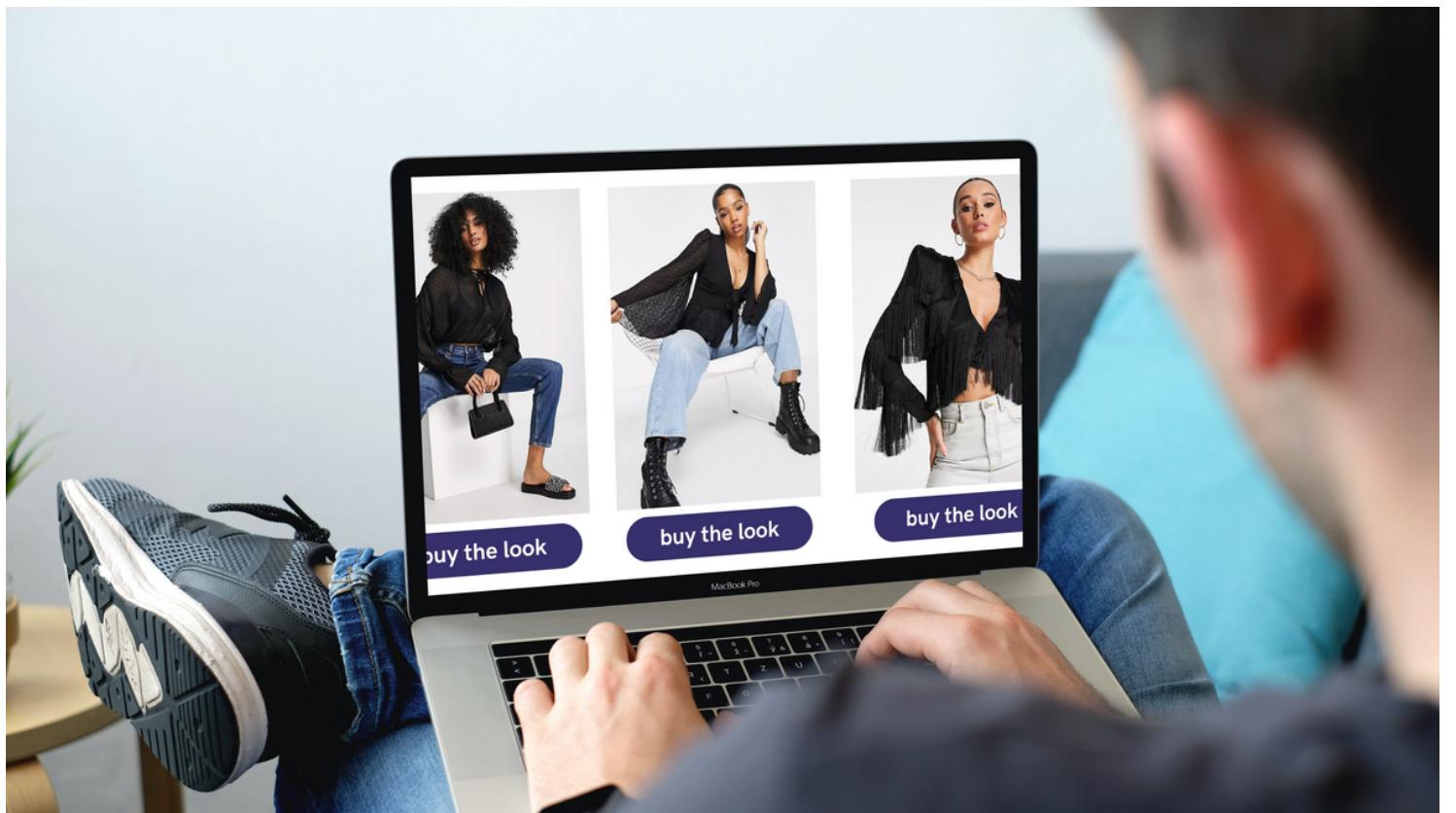
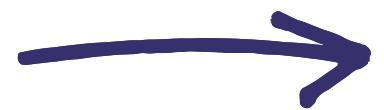


OR





OR





buy the look



buy the look



buy the look

Fashion. Made easy.

Personalised.

Intelligent.

Up-to-date.

Fashion. Made easy.

Personalised.

Intelligent.

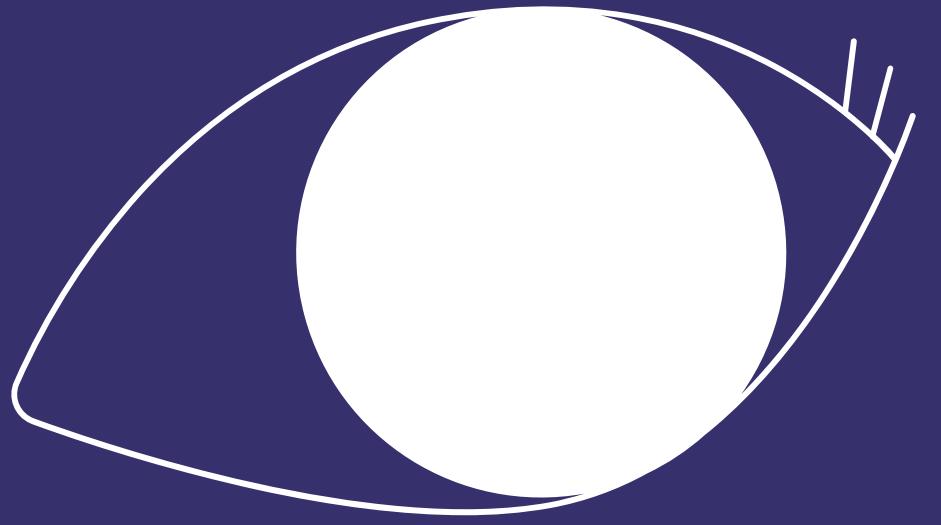
Up-to-date.

Fashion. Made easy.

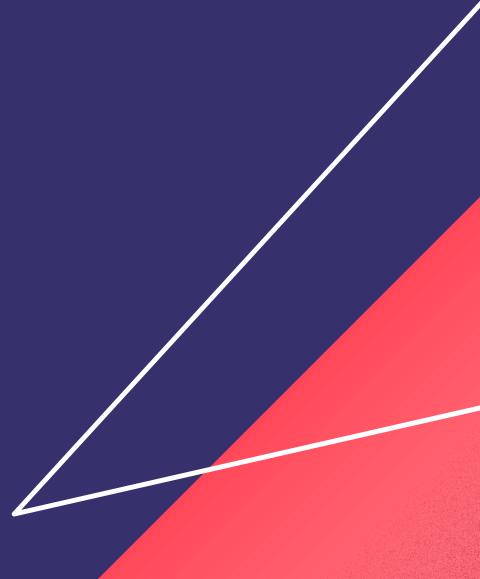
Personalised.

Intelligent.

Up-to-date.



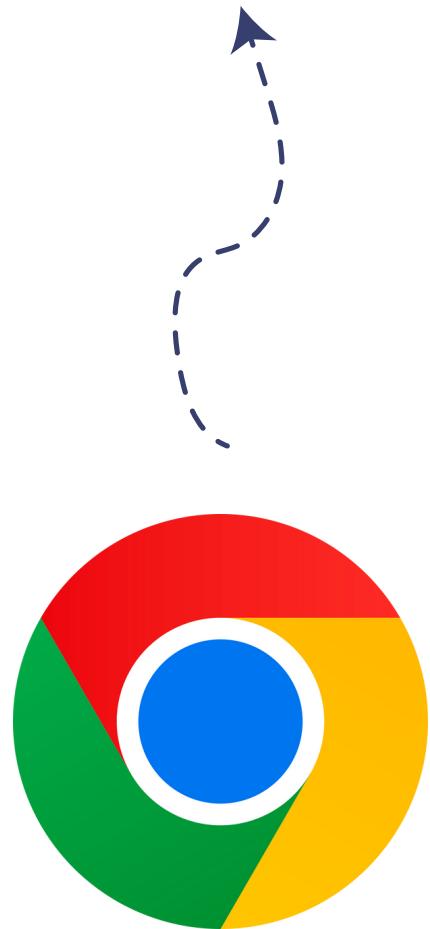
OPERATIONAL ARCHITECTURE





Category Classification

- CNN neural network multi-class model
- Model predictions through API
- Model API stored in Google Container Registry
- Model API Container run in Google Cloud Run
- Input: image
- Output: category type



Garment Classification

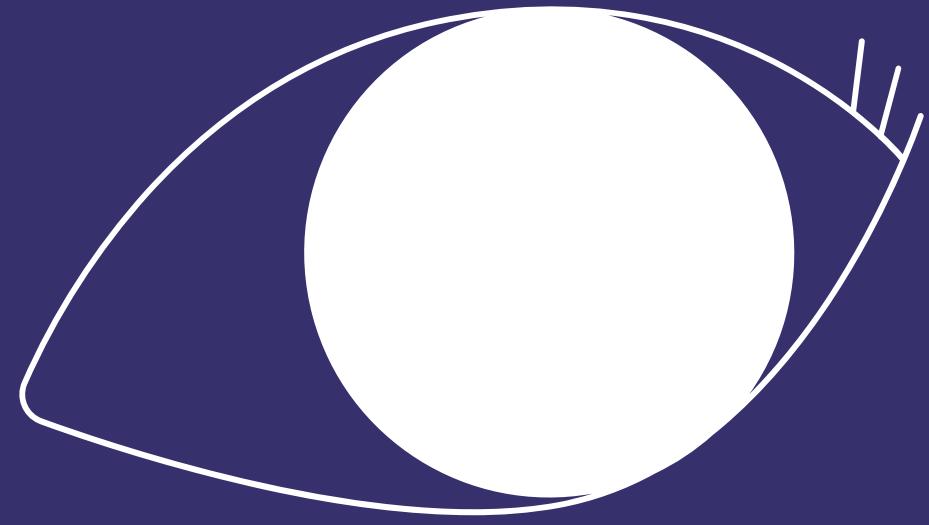
- CNN neural network multi-label model with OpenCv
- Input: image & category type
- Output: 50 categories & 1,000 attributes & color composition
- PCA and KMeans Clustering to classify garment

Products API

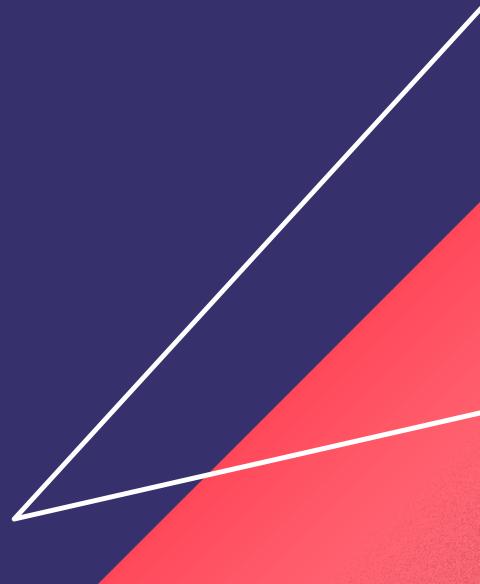
- Asos API
- All products
 - Prices/reductions
 - Images
 - 'Complete the look' links
 - Cost: \$10/month

Outfit Clustering

- Compare Clustering of garment with weighted Clustering of available products to identify recommended outfits
- Provide links each part of outfit using API



DEVELOPMENT ARCHITECTURE



Category Dataset

- 38,193 images
 - 9,266 outfit, upper & lower
 - 6,525 back
 - 3,870 full body

Attribute Dataset

- 289,222 images
 - 50 clothing categories
 - 1,000 attributes

Clustered products dataset

Clusterings stored in Google Big Query warehouse for us during operation

Category Classification - Train

- CNN neural network multi-class model
- Train using Google Cloud Virtual Machine to reduce training time

Garment Classification - Train

- CNN neural network multi-label model
- Train using Google Cloud Virtual Machine to reduce training time

Garment Classification - Predict

- CNN neural network multi-label model
- Classify each product image according to its features
- PCA and KMeans Clustering to classify image
- Store image Clustering in database on Google Big Query

Category Classification - Predict

- Classify category type of images from product API
- Use Prefect to automate weekly API queries and training

Products API

Images stored in Google Cloud storage warehouse

Category_type products dataset

Category types stored in Google Big Query