

Fashion Match



Fashion-optimized Image Search

What is FashionMatch?

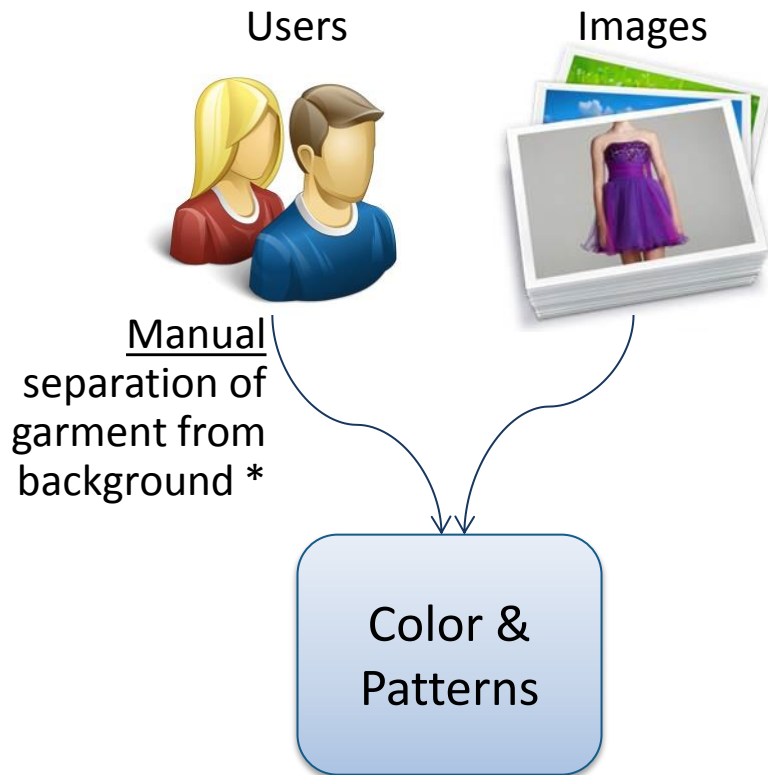
- A technology that allows to **instantly** search for **visually similar** apparel items, in a **big database** of images



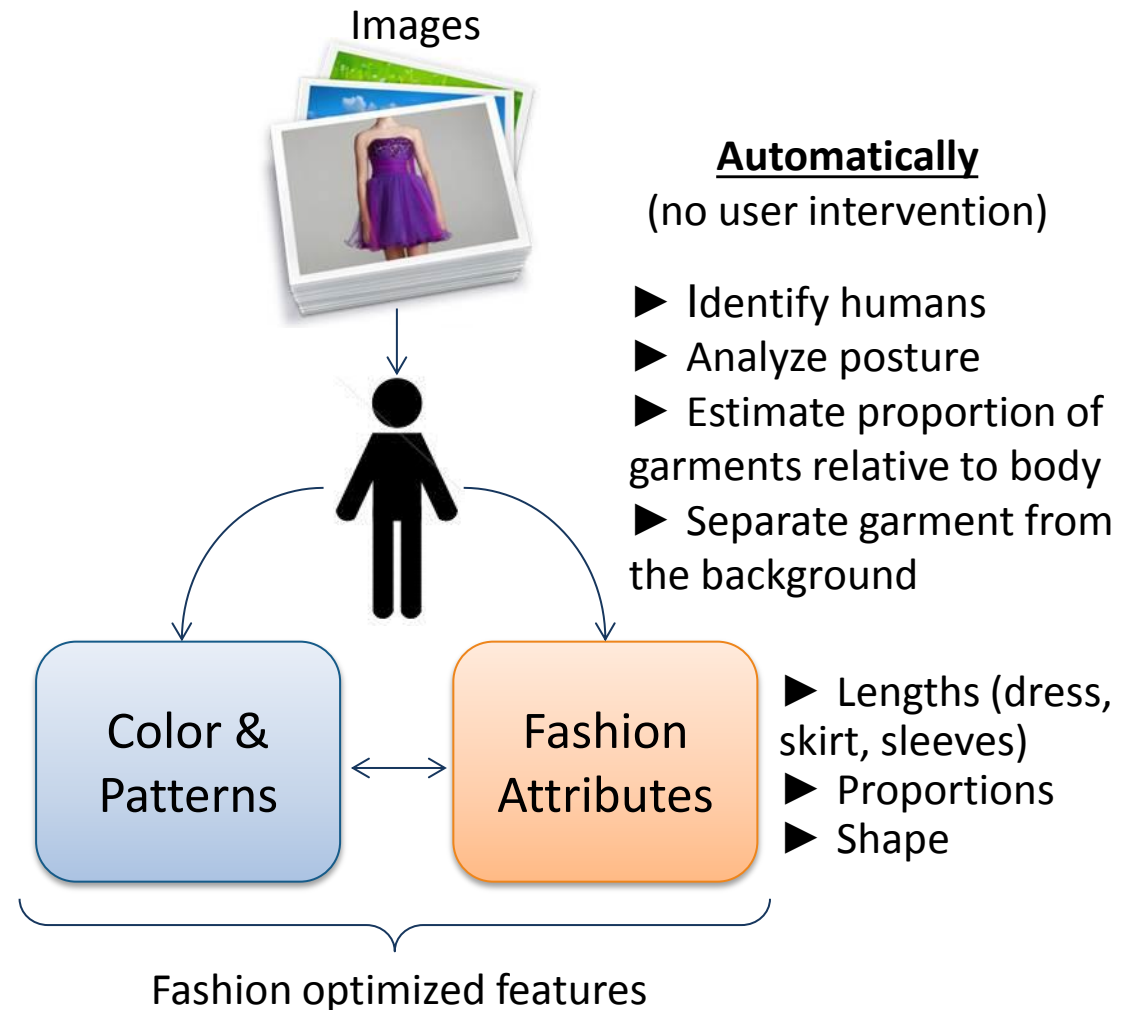
Given an image of a dress/shoe/bag, the system can instantly find visually similar ones

Competitive advantage

Others



Our approach



* User has to draw a bounding box or define the outline of the object

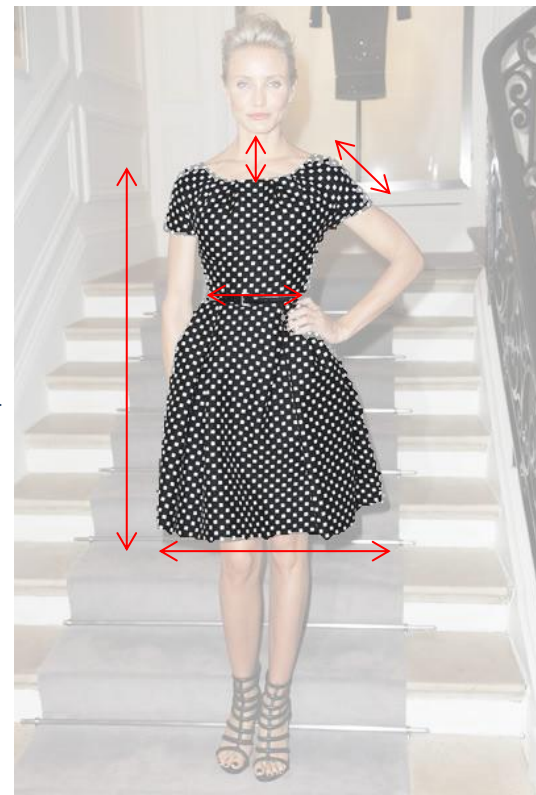
Our approach: optimized for fashion



Input image



Identify human and posture
(place of limbs and torso)



Identify where garment is
(based on human body)

Separate garment from the
background

Extracted attributes

- ▶ Length of dress / skirt
- ▶ Length of sleeves
- ▶ Depth of neckline
- ▶ Waist width
- ▶ Proportion of waist to ending
- ▶ Shape

+

- ▶ Color
- ▶ Pattern

Robust to cluttered backgrounds

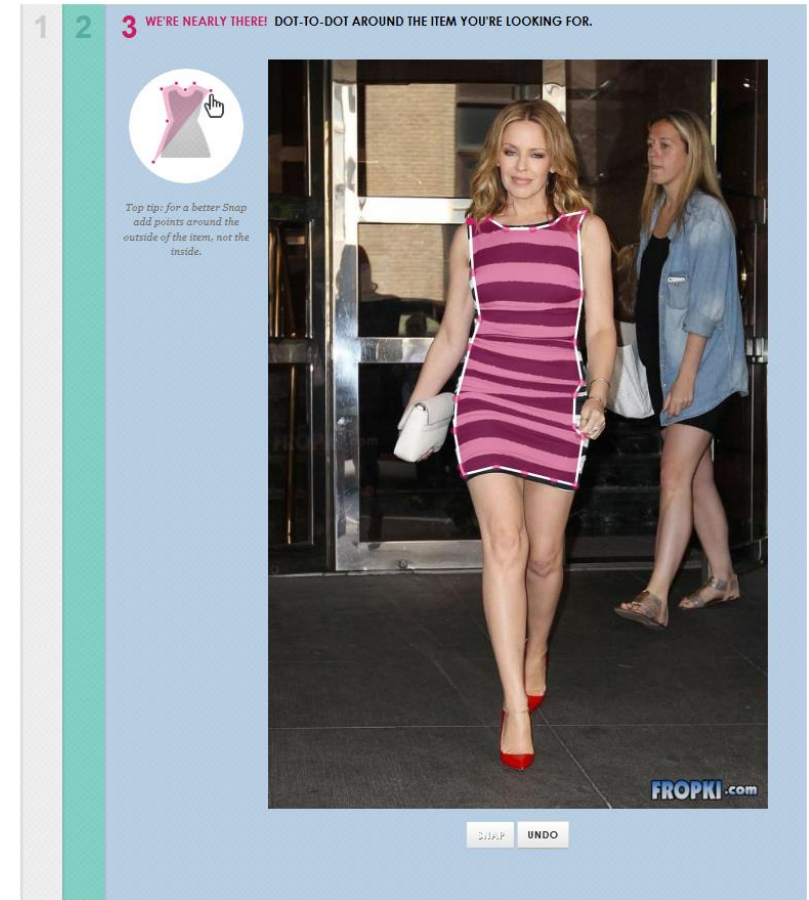
Original photo



Fashion Match



Competitor A

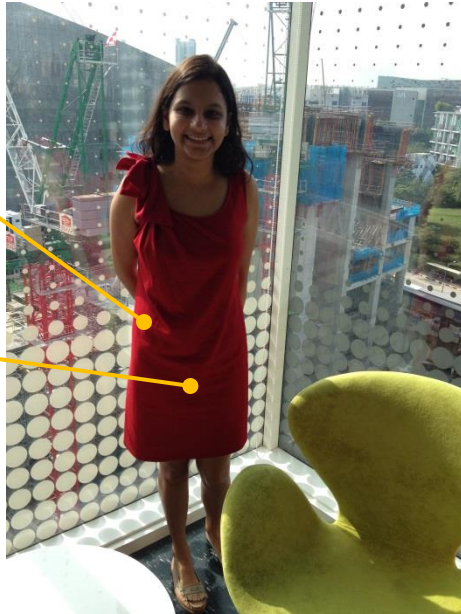


- **Automatically** identifies the item and separates it from background
- No human intervention needed
- Can handle both catalog images and images on the wild (with cluttered backgrounds)

- Requires user to draw around the outline of the item

Robust to shadows

Original photo



True color of the item



Color caused by shadow



Similarity results for the original image



- Searching for the wrong color due to the impact of shadows

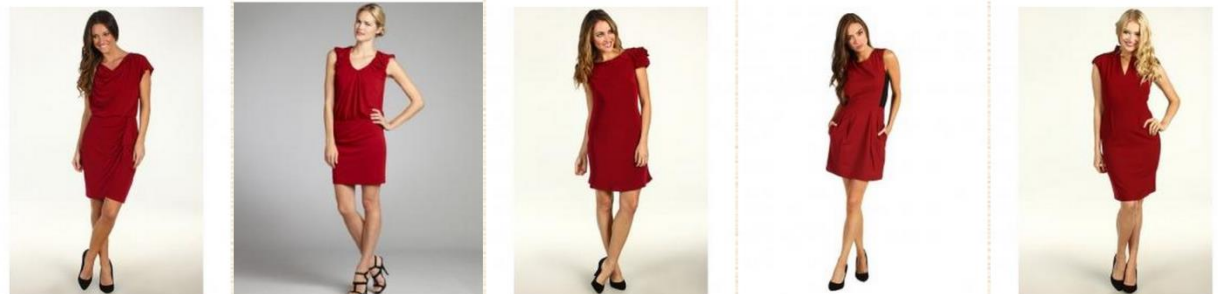
Fashion Match



Recovered true color



Similarity results using Fashion Match enhancement algorithm in the Fashion Match Mobile App



- Minimizes the impact of shadows
- Searching for the true color of the item

Smart auto-tagging



Coarse color: ORANGE,
Fine colors: Burnt Sienna,
Texture: Not Textured
Dress length: short
Sleeve length: sleeveless

- Automatically generates fashion text tags for a given image
- Tags can be used for text-based search
- No need for manual tagging

- General color description (12 color names)
- Detailed color description (256 color names)
- Patterned / Not patterned
- Dress/skirt length (short, medium, long)
- Sleeve length (sleeveless, short, medium, long)

For all images

For images with people

Personalization & Customization

The image shows a user interface for personalization and customization, divided into two main sections: 'Importance weights' and 'Pre filtering'. The 'Importance weights' section features three sliders for 'Color', 'Pattern', and 'Shape', with corresponding numerical values of 0.80, 0.60, and 0.40 respectively. The 'Pre filtering' section contains four checkboxes for 'Color', 'Patterned', 'Sleeve length', and 'Dress length', all of which are currently unchecked.

Attribute	Importance Weight
Color	0.80
Pattern	0.60
Shape	0.40

Pre-filtering Option	Status
Color	<input type="checkbox"/>
Patterned	<input type="checkbox"/>
Sleeve length	<input type="checkbox"/>
Dress length	<input type="checkbox"/>

- The user can set his/her own importance degree for the similarity attributes
- Allows a more personalized definition of similarity

In a nutshell...

Our strengths

- **Fully automatic:** no need for human interaction in the separation of item and background
- **Fashion-optimized features** (proportions, lengths, shapes)
- **Smart auto-tagging** (text color names, lengths, patterns)
- **Robust to shadows** and illumination changes
- **Robust to cluttered backgrounds**
- **Fully customizable**
- Can handle **both** humans and mannequins

