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

- **Users**
- **Images**
- **Color & Patterns**

Manual separation of garment from background *

### Our approach

![Images](image_url)

**Automatically**
(no user intervention)

- Identify humans
- Analyze posture
- Estimate proportion of garments relative to body
- Separate garment from the background

**Fashion Attributes**

- Lengths (dress, skirt, sleeves)
- Proportions
- Shape

**Fashion optimized features**

* User has to draw a bounding box or define the outline of the object
Our approach: optimized for fashion

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

- **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

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

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

- Minimizes the impact of shadows
- Searching for the true color of the item
Smart auto-tagging

- 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

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

- 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