CP decomposition for matching algorithm in progress

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In progress

1. Ranks comparison

   - Two right shoe images per two person; A(005969), B(001351)
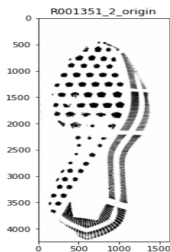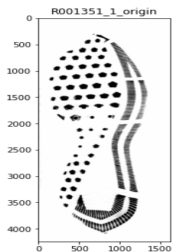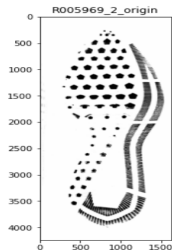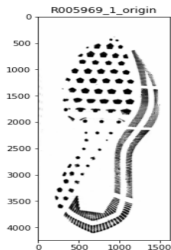   - Rank: 1, 5, 10, 30

2. Brand comparison

   - Two left shoe images with two brands(Nike, Adidas) per two person; Nike(A,B), Adidas(C,D)
   - Just use rank 1

3. decomposed vector comparison (next to do)

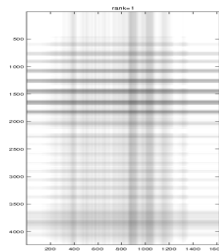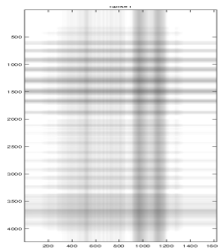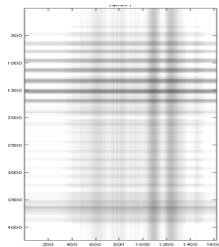   - Compare decomposed vectors' distance between match and non-match
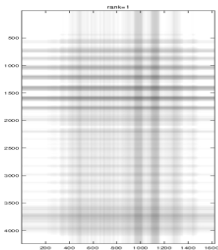
Ranks comparison

Original

Ranks comparison

Rank 1

Ranks comparison

Rank 5
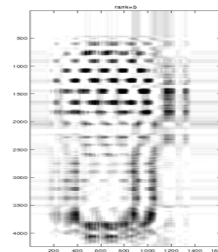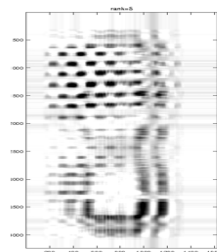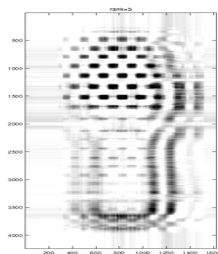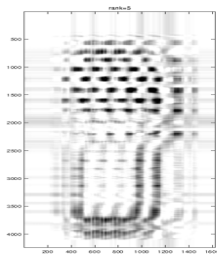
Ranks comparison
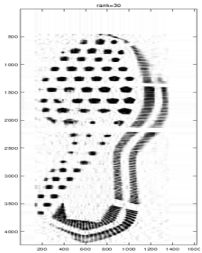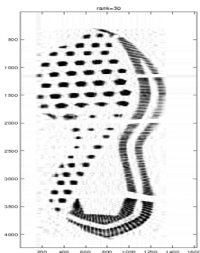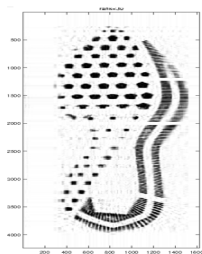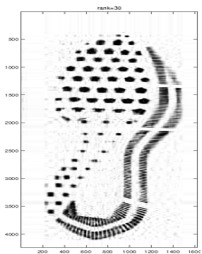
Rank 10
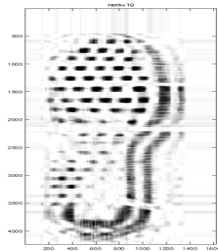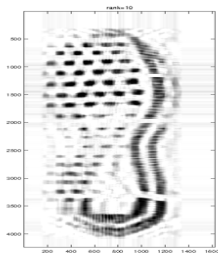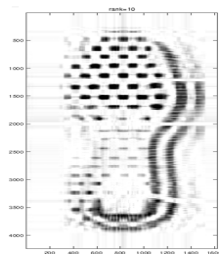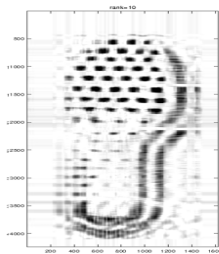
Ranks comparison

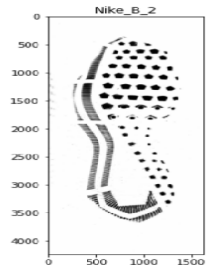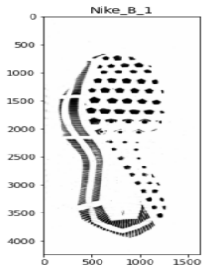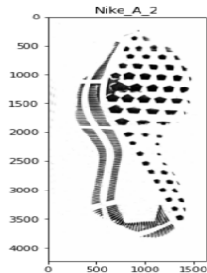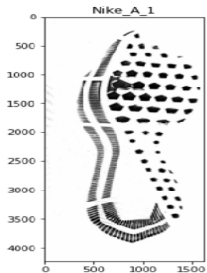**Rank 30**

Ranks comparison

Sum up

- It can be useful to use just **rank 1**
  - ▶ low dimension
  - ▶ low cost

- Can distinguish between matching and non-matching with just eyes

- It can be the only case for Nike shoe images

Brand comparison
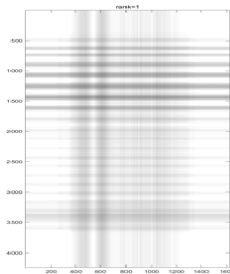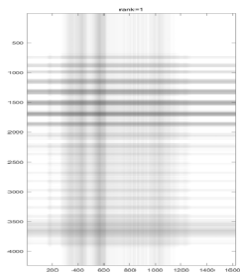
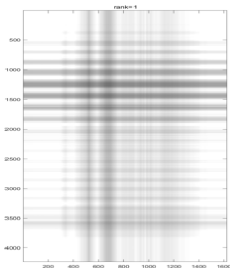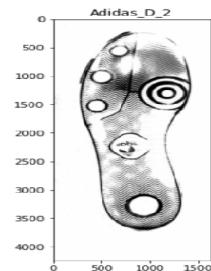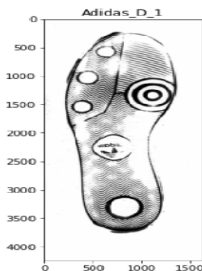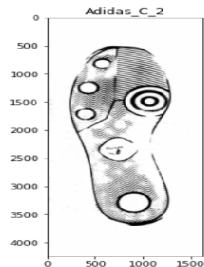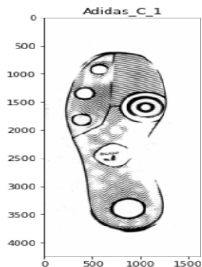$\rightarrow$ What about the difference between Nike and Adidas

Brand comparison

Nike

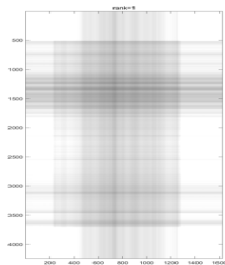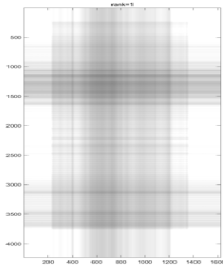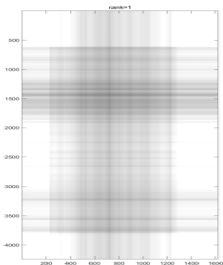# Brand comparison

Nike rank 1
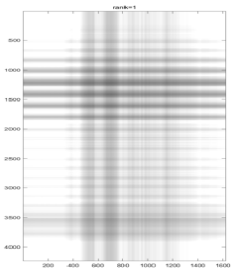
Brand comparison

Adidas

Brand comparison

Adidas rank 1
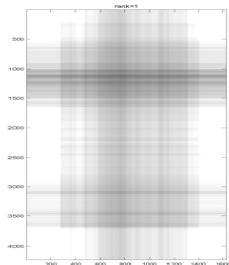
Brand comparison

Sum up

- These results have different points between brands in rank 1 images
- These results have the same points in the same person images
- Just using the rank 1 decomposition, we would be able to find matched images.

Next to do

- Rotated image decomposition
- Distance calculation with decomposed vectors
- Automation method for matching algorithm