

Fashion at Your Fingertips

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Motivation

Where is that from?
What is the clothing product in any given image?

Alo Yoga
Accolade Hoodie

Problem Definition

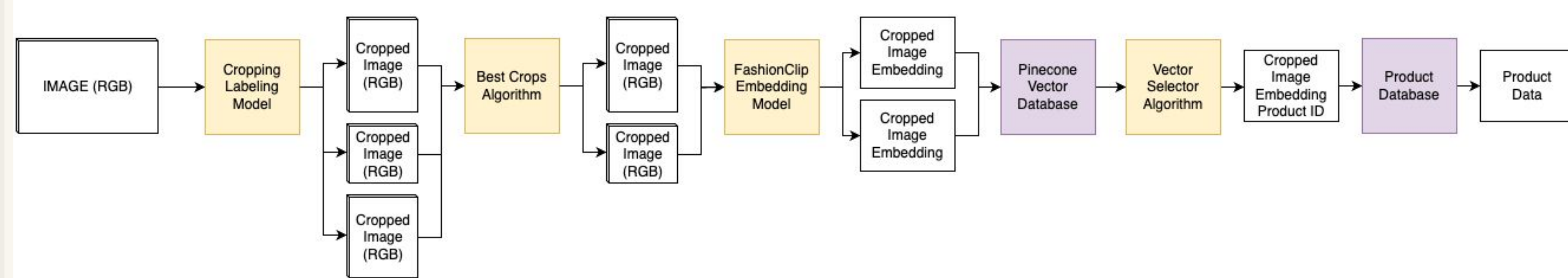
- 1. Find**
Identify and bound known clothing products to tag them with labels.
- 2. Aggregate**
Aggregate & add clothing products & labels to a vector database.
- 3. Tag**
Take a clothing image and identify its label from a database of clothing items.

Goal

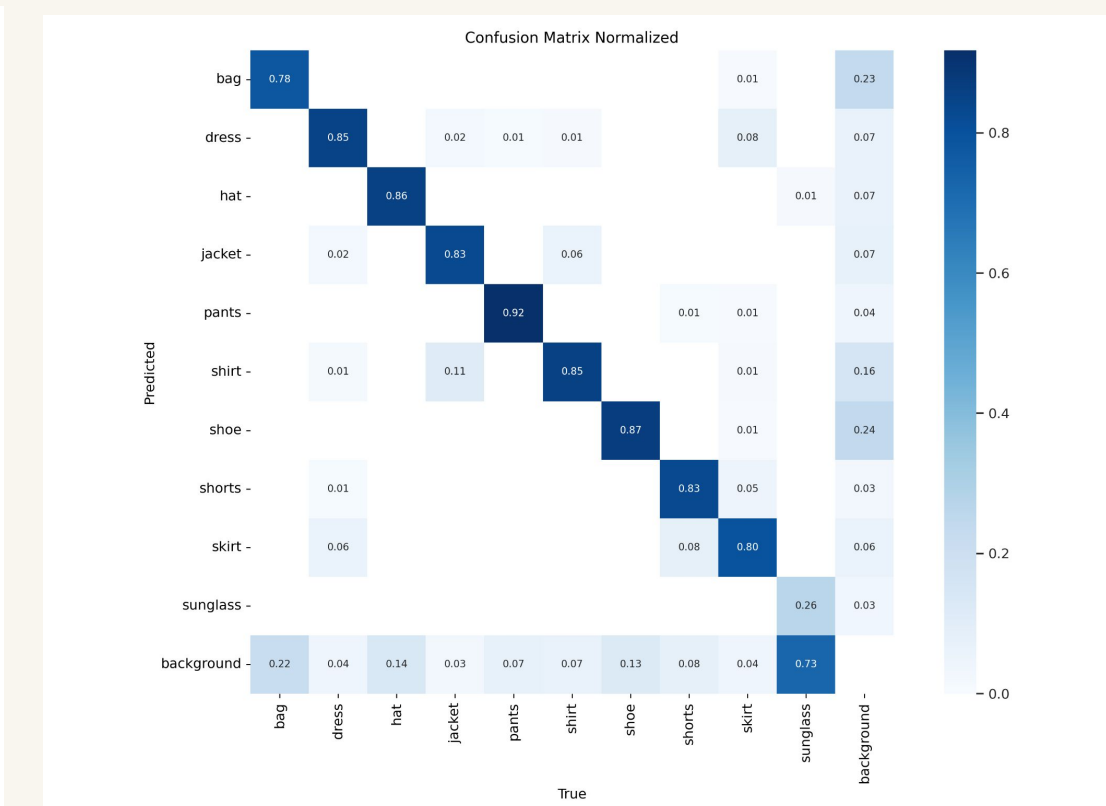
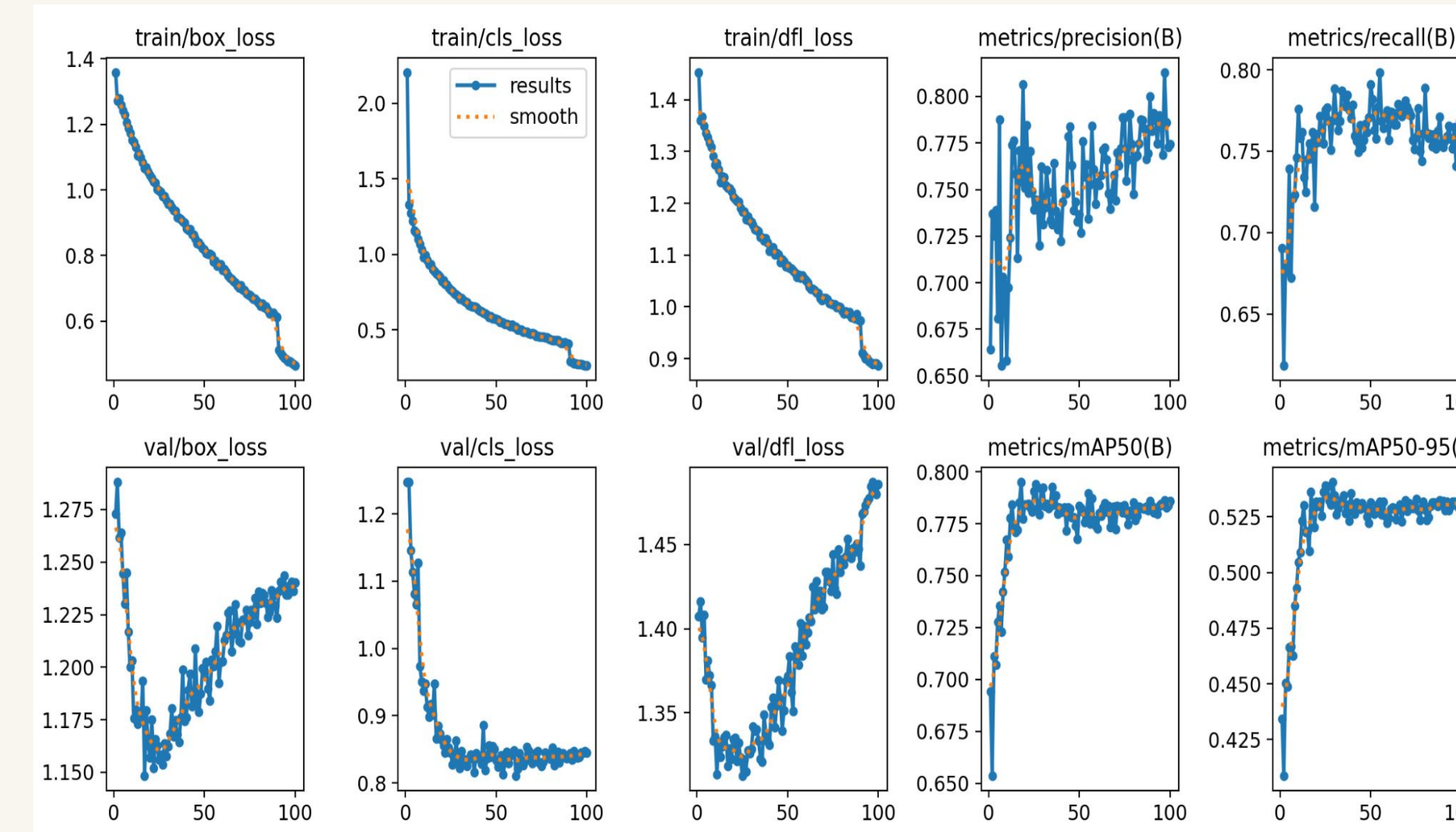
Given an image we want to identify and tag the clothing items.

Free People
Lounger Ankle Pants

Approach

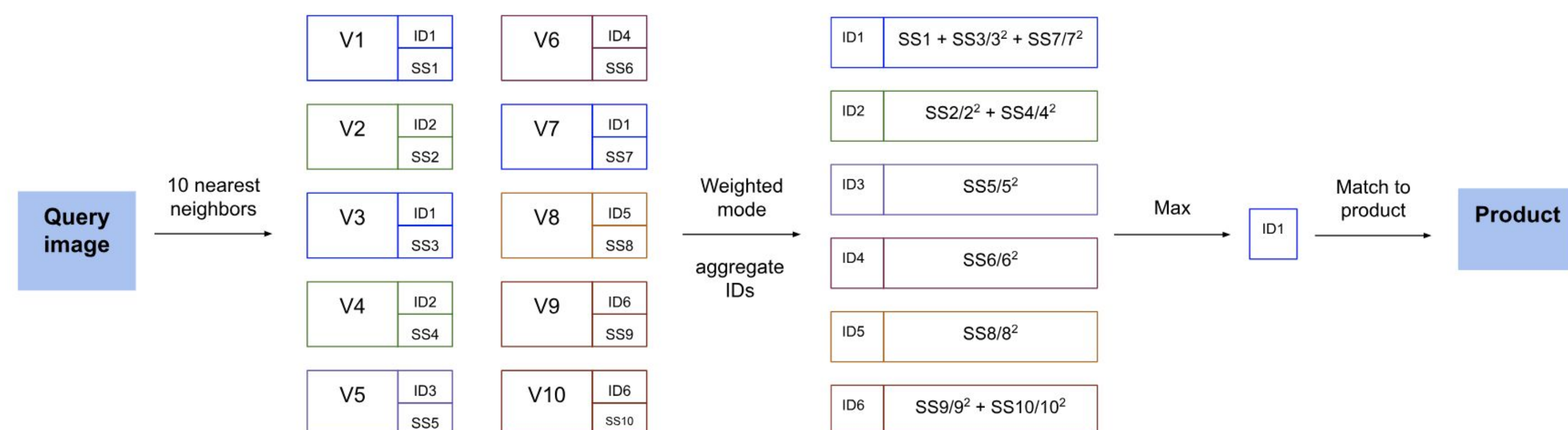


Cropping Model Performance



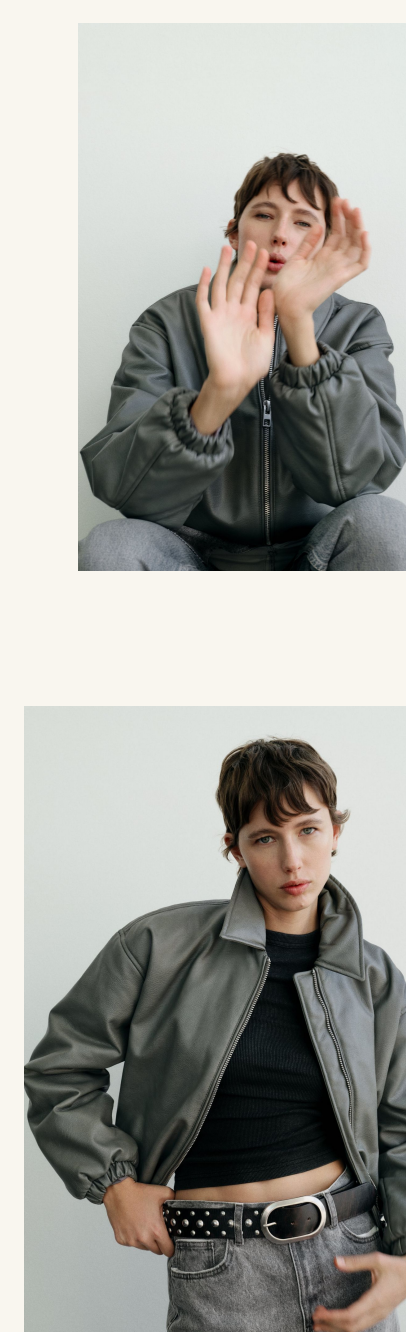
The model exceeds in identifying non-accessory "tops" and "bottoms".

Vector Matching Algorithm



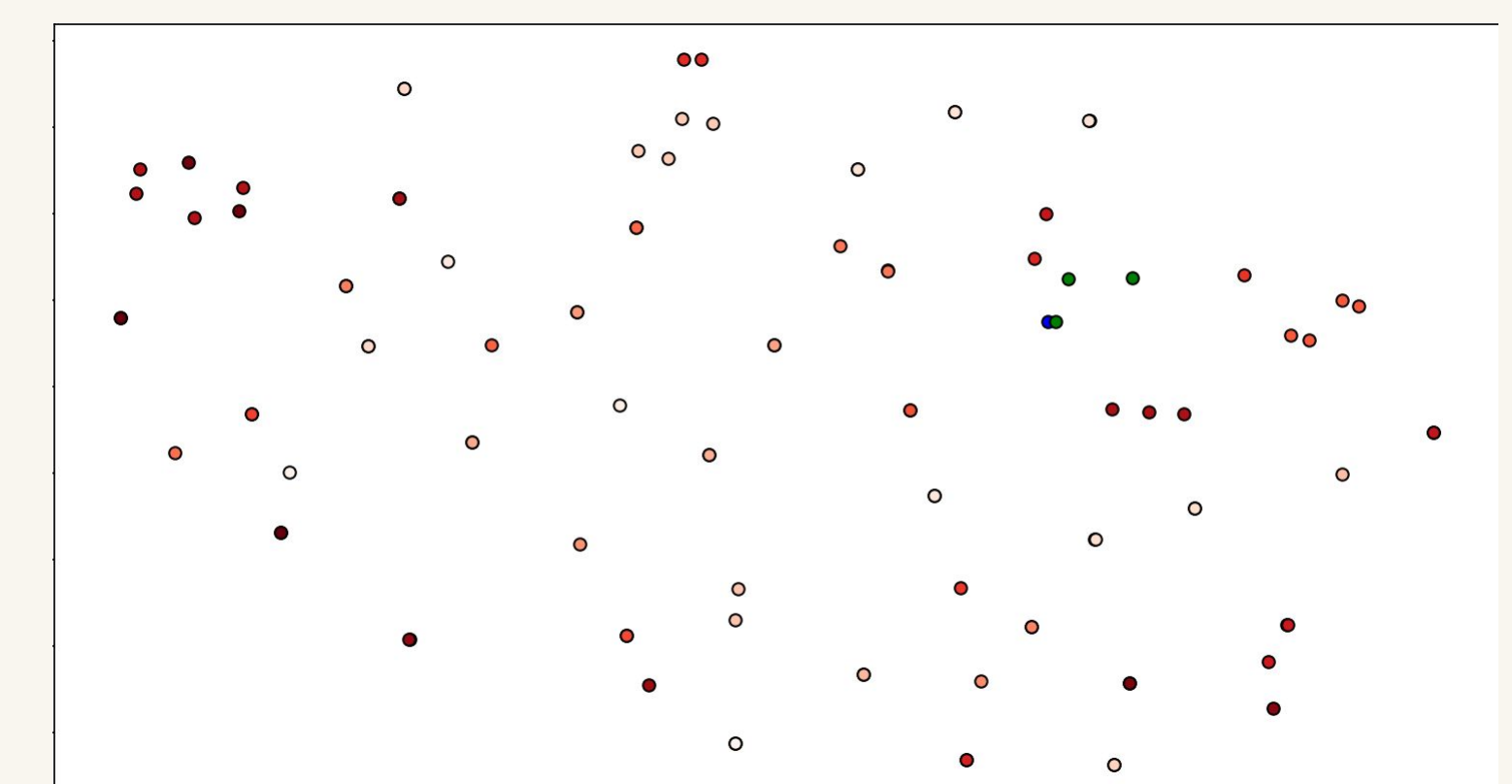
The query image is vectorized and the 10 nearest neighbors each have a similarity score. Each neighbor with the same product ID is aggregated using a exponential weighted mode calculation to find the product with the highest aggregate score.

Vector Matching Algorithm Visualized



Zara
Faux Leather Jacket

100 Nearest Neighbors



References

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- [3] Ultralytics. Ultralytics yolov8. GitHub. <https://github.com/ultralytics/ultralytics>.
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- [5] Pinecone Vector Database. Pinecone. <https://www.pinecone.io/>

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