AIO DESK
A Retail Management System with Reverse Image Search using pHHash and SURF Descriptors

Milestone II

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PROJECT SUMMARY
The Big Idea

- Convenience for retail sellers in the market.
- Enhanced System with advanced technologies.
- Reverse Image Search
MILESTONE II
Goal

Milestone 1: Implementation of all Data and Transaction modules
Milestone 2: Reverse Image Search Implementation
Milestone 3: Application Testing
End: Final Report and Presentation
Basic Image Search

**Indexing**

- Image
- Feature Extraction
- Database

**Searching**

- Image Search Query Input
- Feature Extraction
- Feature Matching
- Output Similar Images
Why Additional Layer?

- Fast Computation
- Balance between Precision and Recall
DCT Based Perceptual Hash
The Complete CBIR System

1. Image Search Query Input
2. Extract Features of queried image
3. Compare and Match Features of queried image with database features
4. Display Result containing Similar Images
5. Compute 64-bit pHash value of queried image
6. Calculate Hamming Distance of queried image pHash with the values stored in database
7. Subset of Images
8. Fetch Image Features of this subset from Database
9. pHash values from Database
My Head Scratchers

- Understanding the algorithms
- Storing features for almost 50k images - time consuming + lots of space
Results

Search

Search Complete, 2 Product(s) Found!

Upload

Upload Image
Choose file No file chosen

Search Results

Helix Women White Watch
47991
Aisle No: 2

Helix Women White Watch
47993
Aisle No: 2
WHAT’s NEXT?