

Image search and retrieval

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Intro



Search by image ×

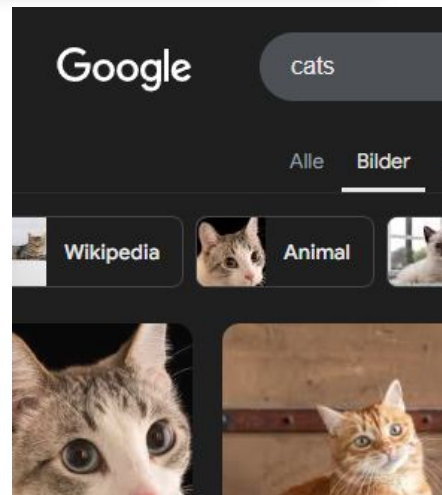
Search Google with an image instead of text. Try dragging an image here.

Paste image URL

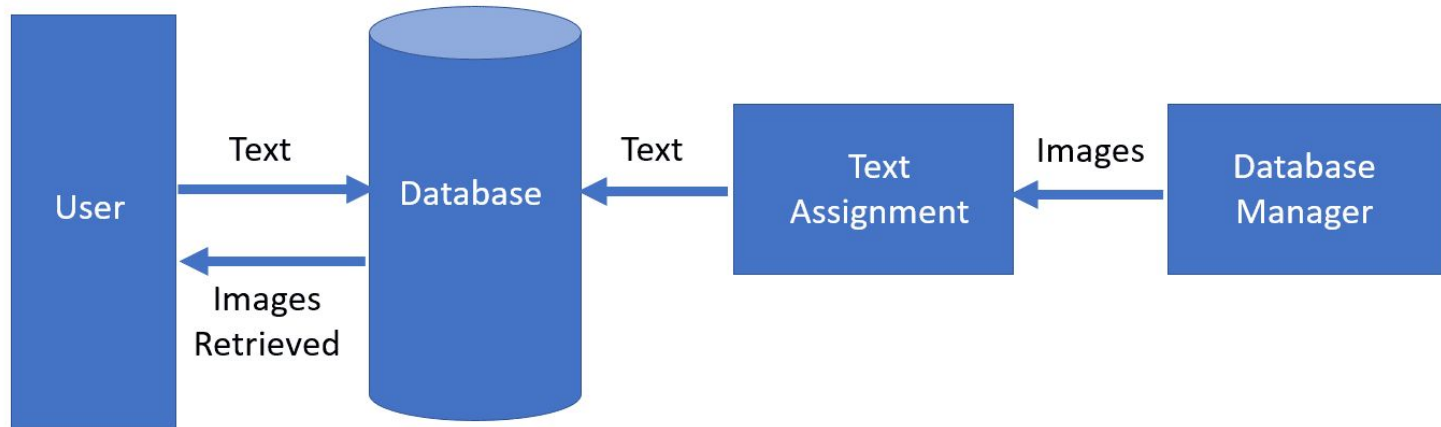
Upload an image

Choose File

No file chosen



Text-Based Image Retrieval





CBIR

(Content-Based Image Retrieval)

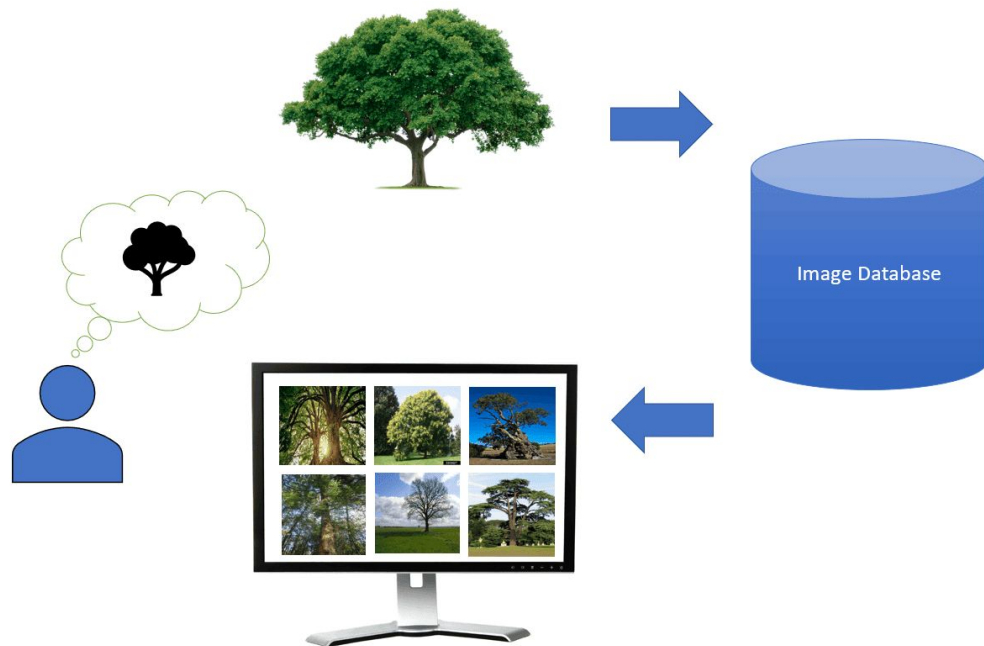




Image features - Local vs global features

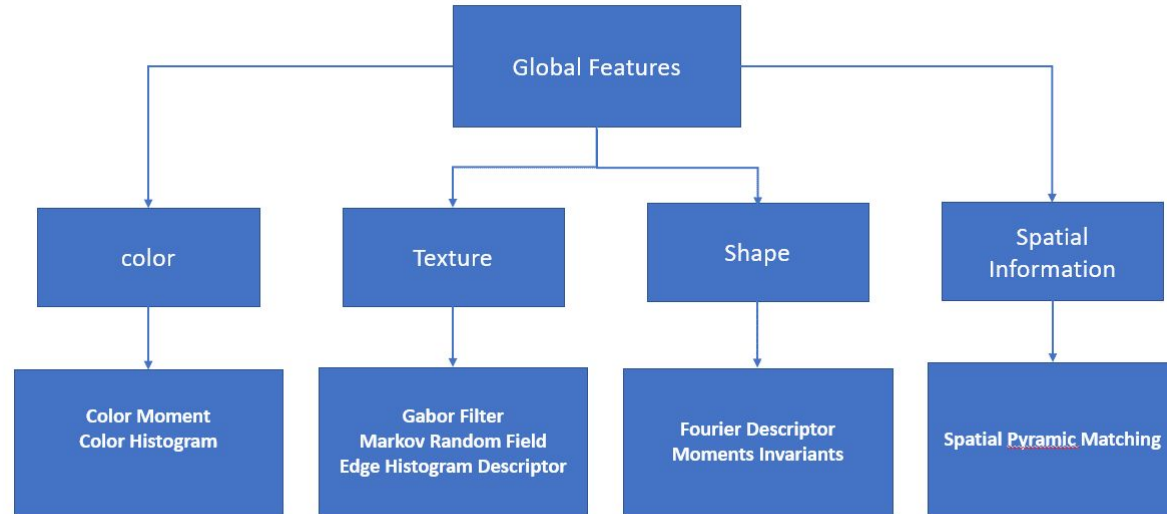




Image features - local vs global features

Describes visual patterns or structures identifiable in small groups of pixels.

Bag-of-VisualWords:

Edges, points, image patches

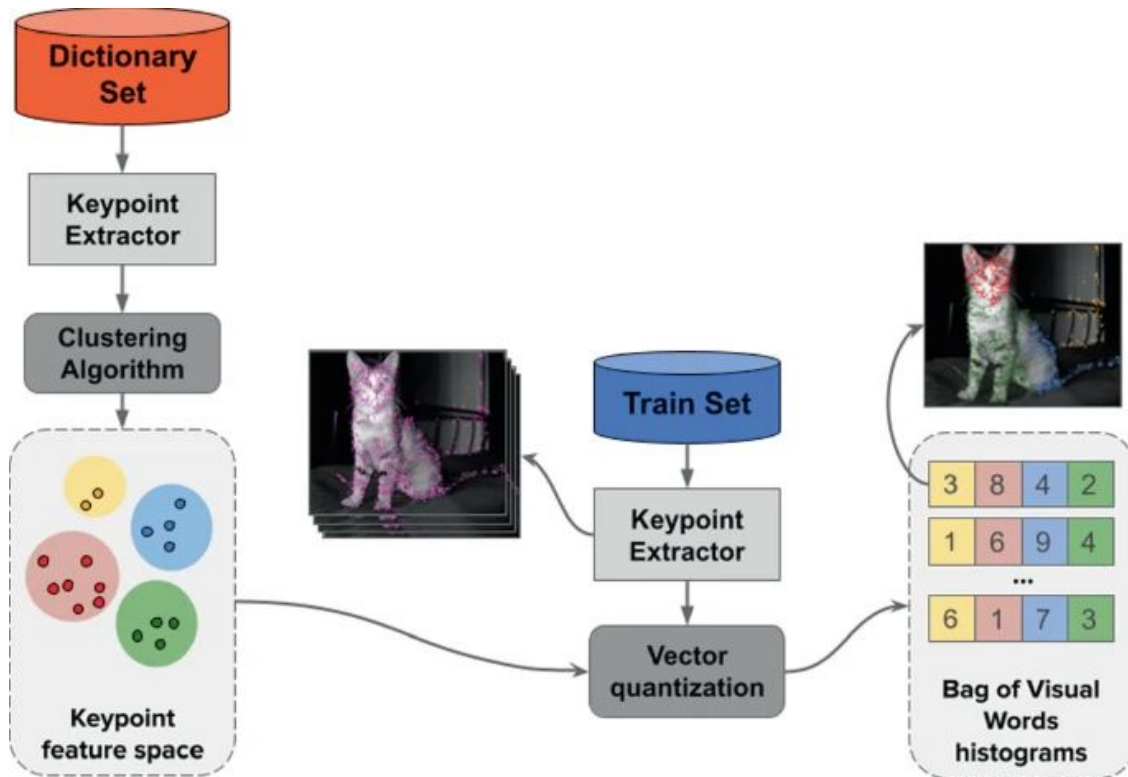
Grayscale

223	150	91
39	71	150
221	150	221

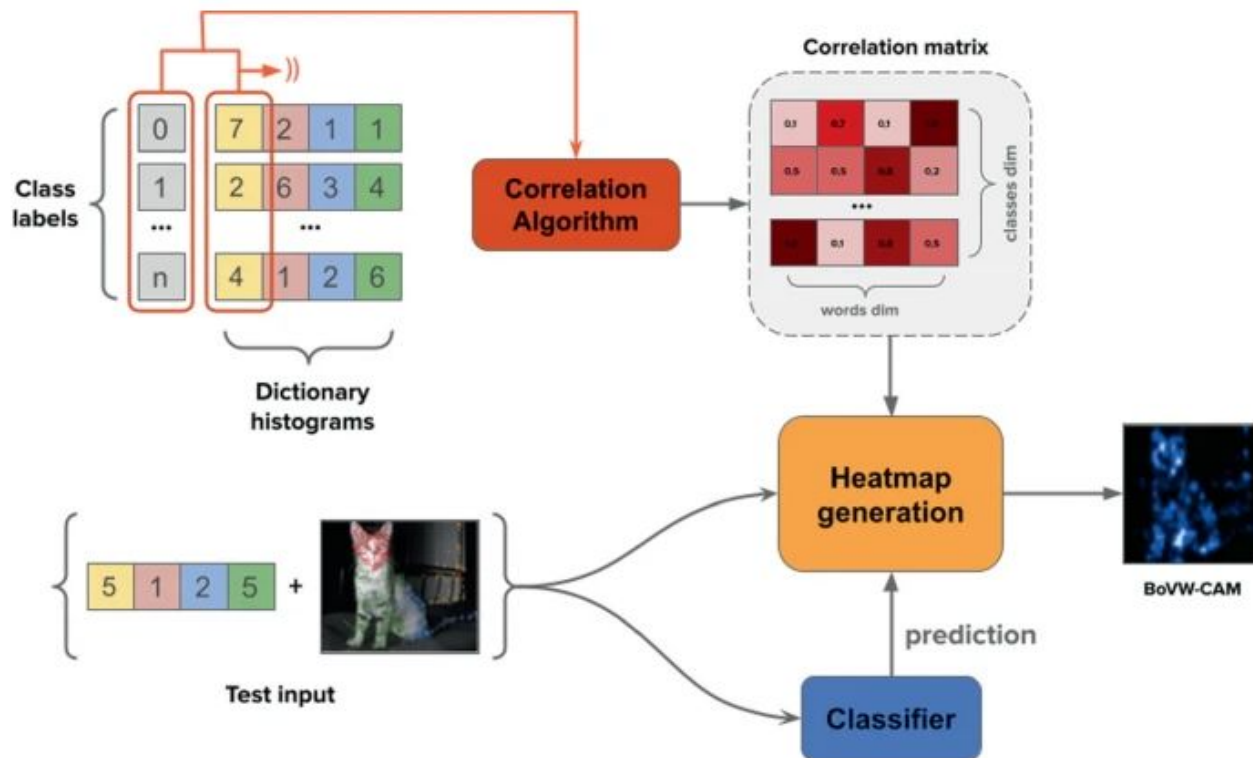
RGB

255	79	42			
79	255	42	181		
42	79	255	102	63	
	102	255	29	105	
		63	105	255	

Feature extraction

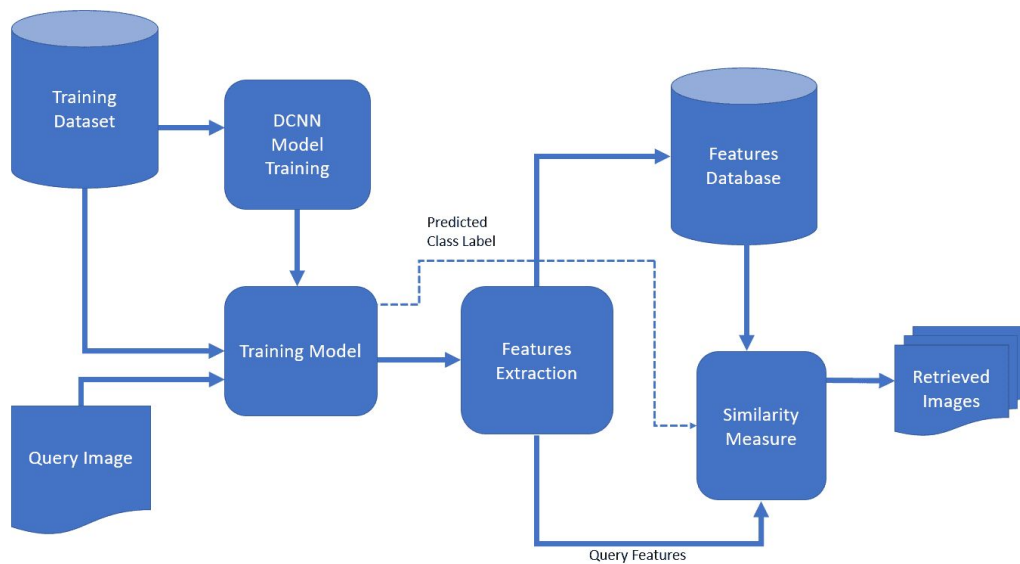


Feature extraction





Deep Neural Networks



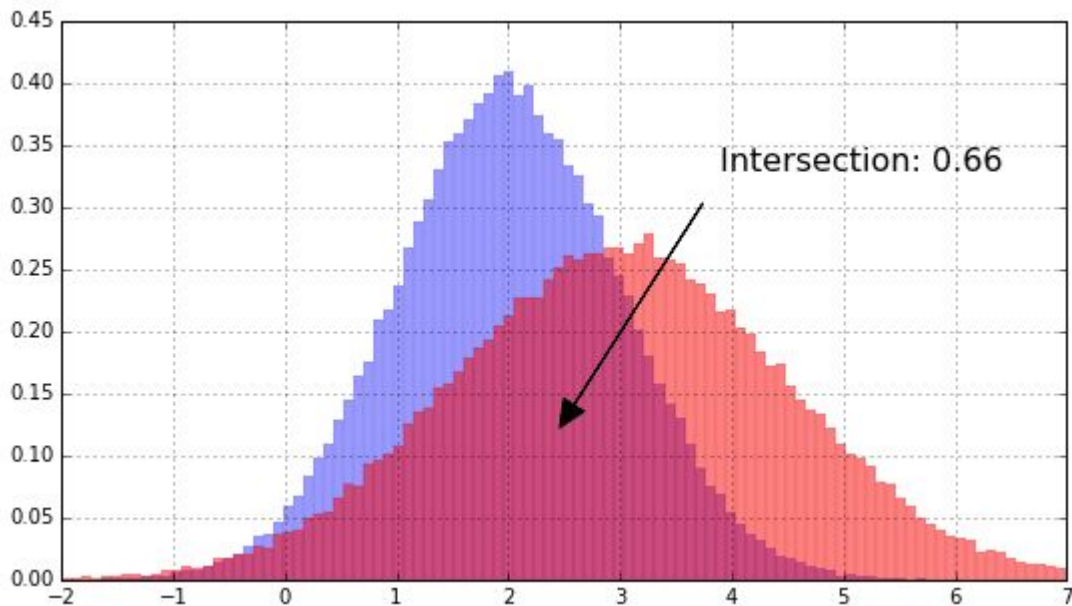


Evaluation

union av histogram

eller

CosineDistance



$$\text{CosineDistance}(X, Y) = \frac{\langle X, Y \rangle}{|X| \times |Y|}$$



Takk for oss!



References

- <https://www.baeldung.com/cs/cbir-tbir>
- <https://www.baeldung.com/cs/image-histograms>
- <https://www.baeldung.com/cs/scale-invariant-feature-transform>
- https://link.springer.com/chapter/10.1007/978-3-031-21689-3_4