Project 1 - Color, Texture, and Shape

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* Color Histogram
* Color Correlogram
* Histogram of Oriented Gradients
* Local Binary Pattern

We used the very basic pattern of LBP algorithm that only calculate the center pixel with 8 pixels that around it.

**Process:**

1. Load the image, convert the pixel’s RGB to grayscale
2. Compare with pixels around it, generate the binary pattern code.
3. Exclude the same LBP and convert binary to decimal.
4. Calculate each LBP’s number count.
5. Give out a vector result.

**Output:** LBP histogram vector.

* L1 Distance
* L2 Distance
* Chi – Square
* Cosine Similarity
* Histogram Intersection