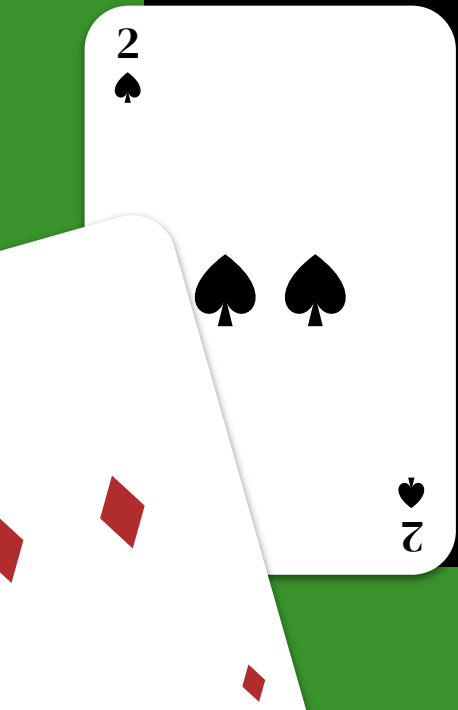
The background features a central black rectangle containing text, surrounded by green areas at the top and bottom. Several playing cards are partially visible around the edges: a 10 of Diamonds on the left, a 6 of Clubs on the top right, and an Ace of Diamonds on the bottom left.

# Non-textual data extraction assignment POKER

# Motivation

- Effortlessly find and acquire poker cards user desires, for collection or gameplay.
- Card identification in training application.



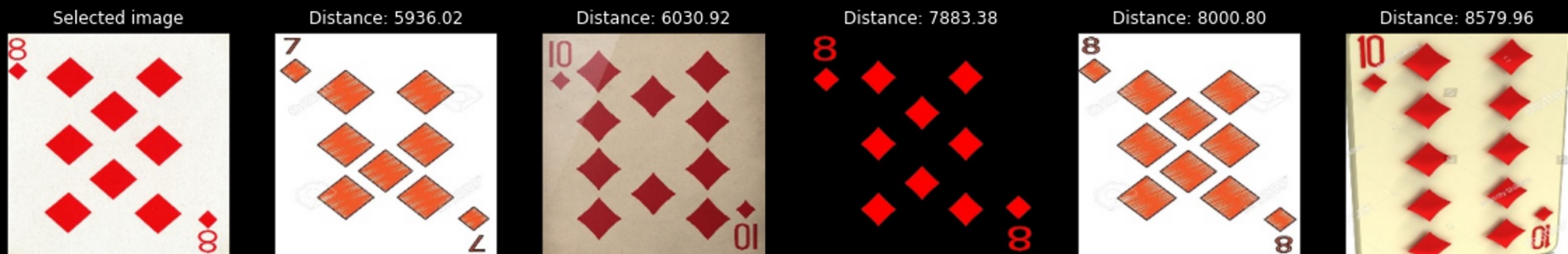
# Harris+ Histogram of Oriented Gradients

## Harris Corner

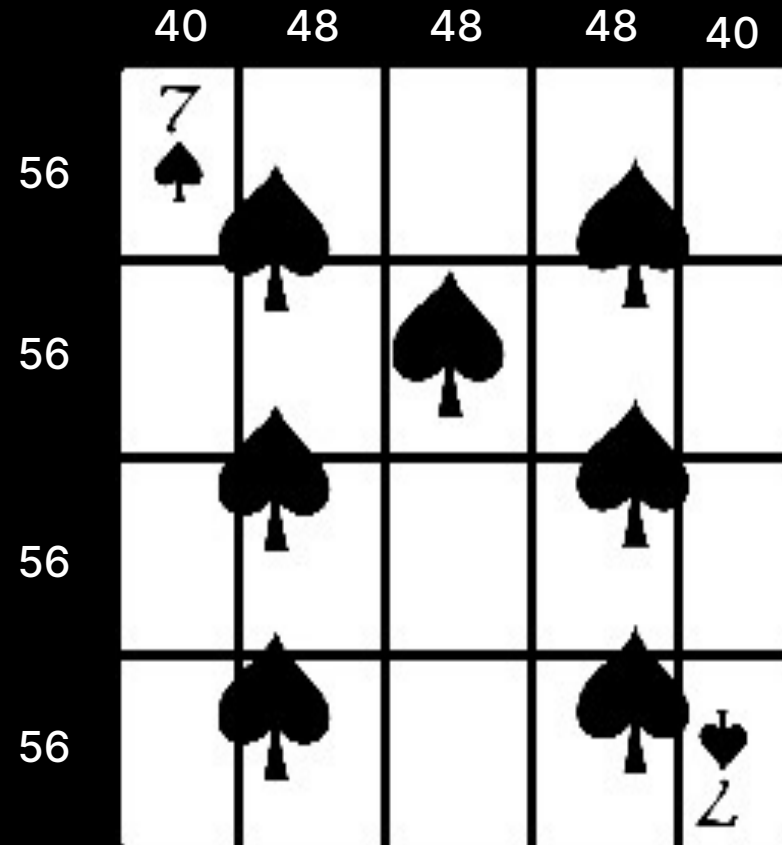
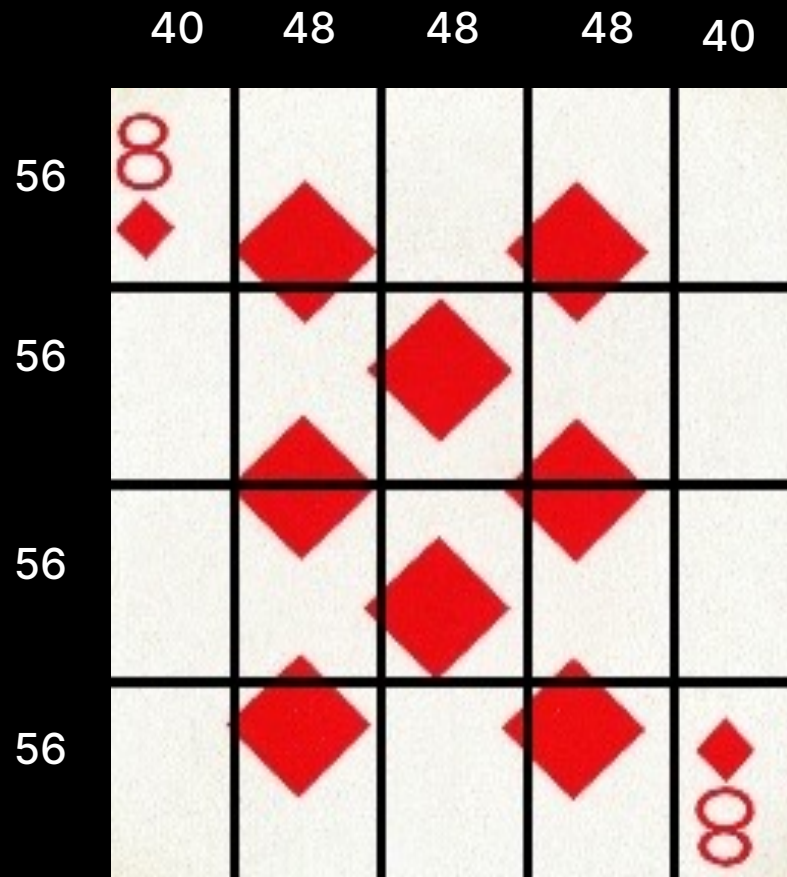
- blockSize: 2
- Ksize: 3
- K: 0.04

## Hog Descriptor

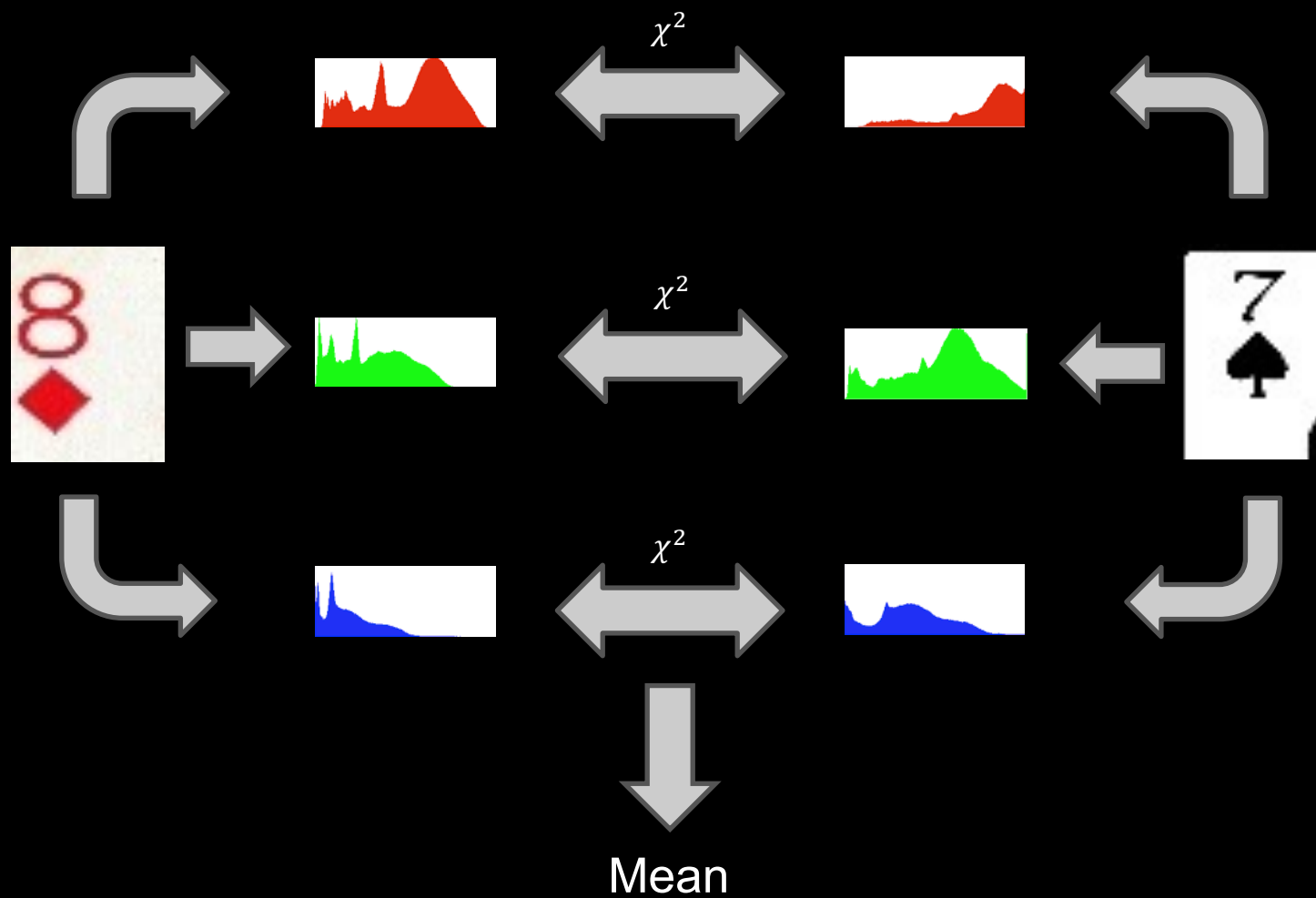
- WinSize: 220 x 220
- blockSize: 112 x 90
- cellSize: 56 x 45
- Nbins : 16



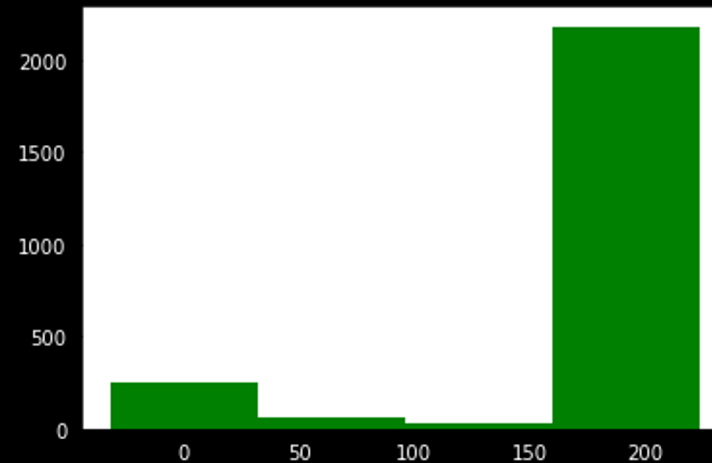
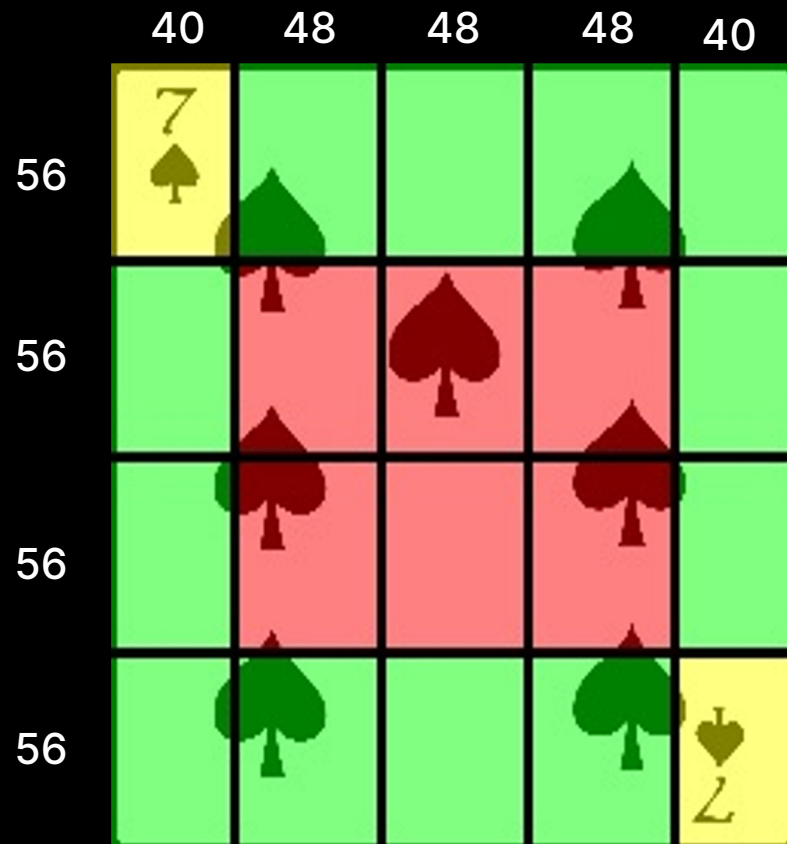
# Histogram Descriptor



# Histogram Descriptor



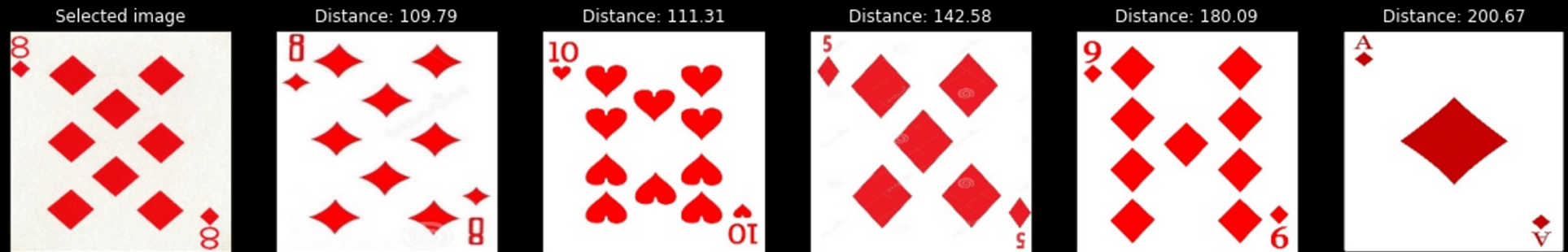
# Histogram Descriptor



3 different levels with weights :

- 6 central quadrants:  
60% total → 10% each
- Top-left and bottom-right corners:  
30% total → 15 % each
- Remaining quadrants:  
10% total → 0.83% each

# Histogram Descriptor

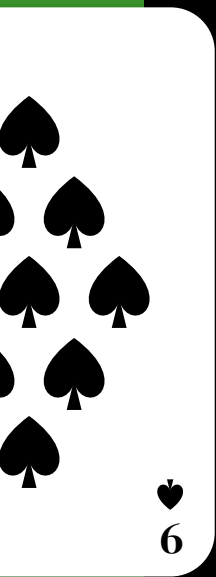




03

# Combinations

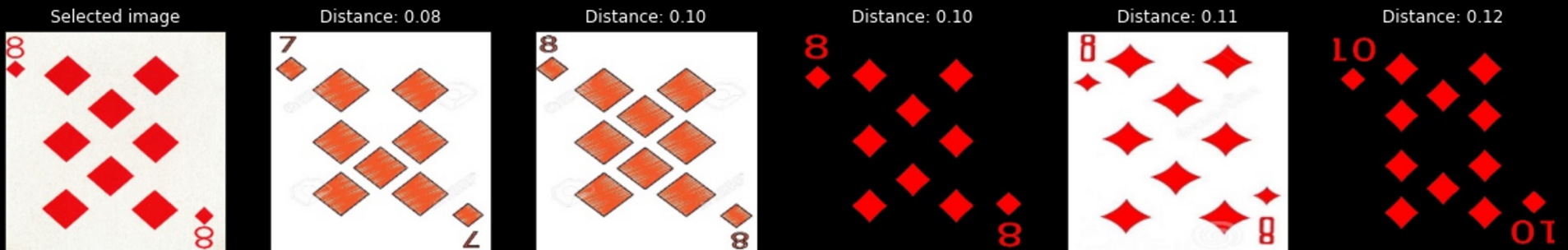
- Weighted combination
- Combination of 2 layer descriptor
  - First HOG then Histogram
  - First Histogram then HOG





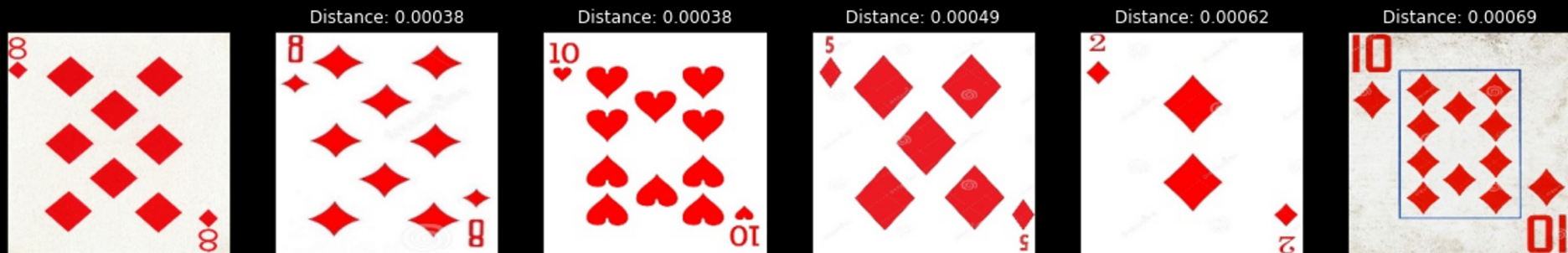
# Weighted combination

- Normalize distances
- Histogram: 30%
- Hog: 70%



# First HOG then Histogram

- Prioritizing color over shape
- First we get the top 20 ranking images based on the HOG descriptor



# First Histogram then HOG

- Prioritizing shape
- The top 20 ranked images are identified based on the Histogram descriptor

