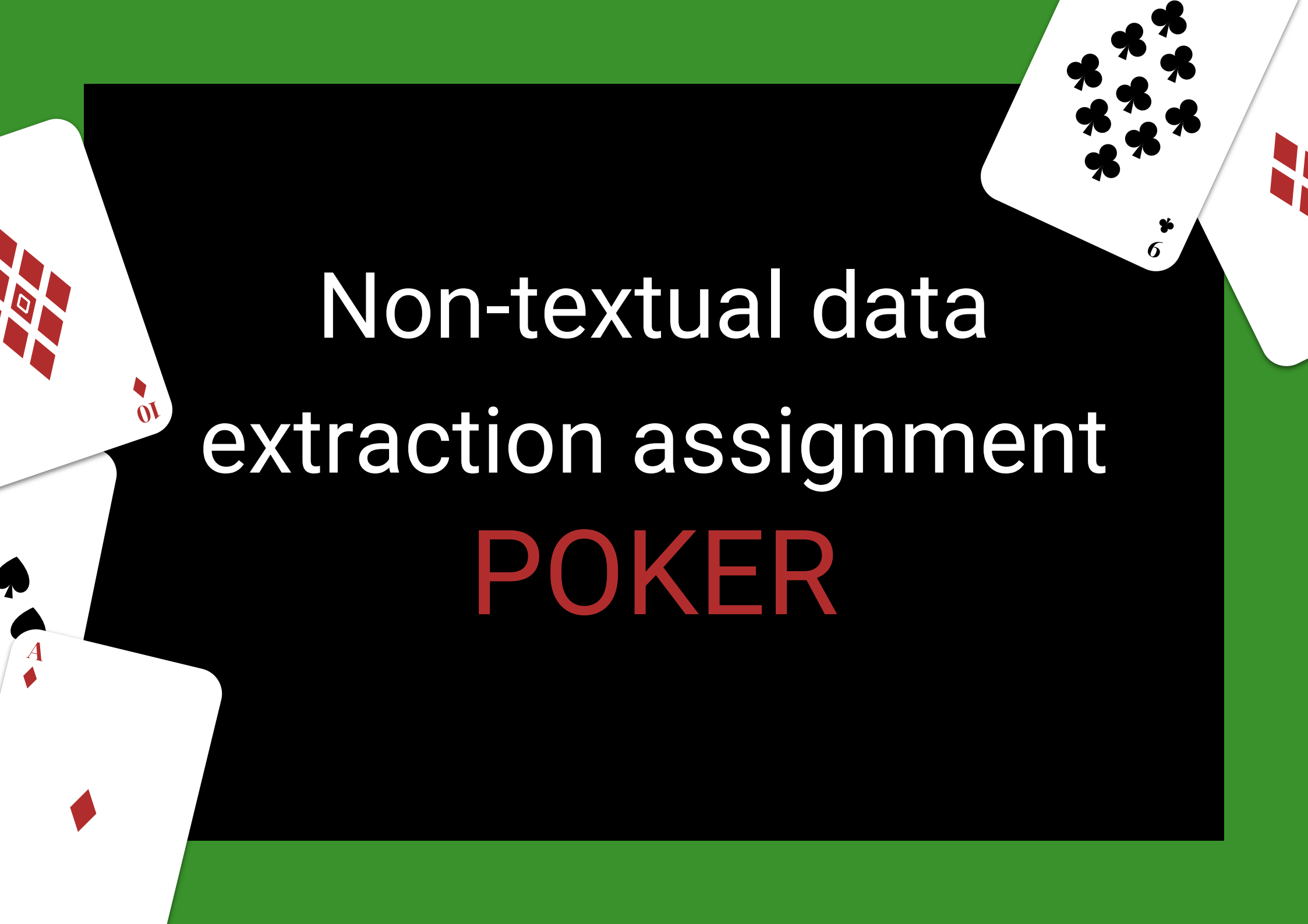
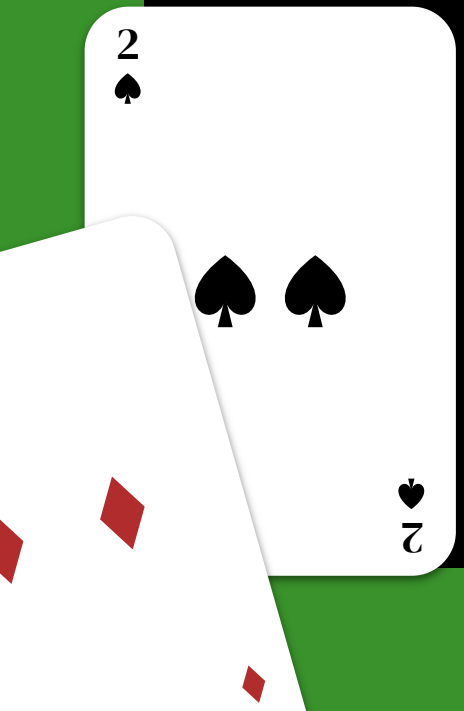

Non-textual data
extraction assignment
POKER

Motivation

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



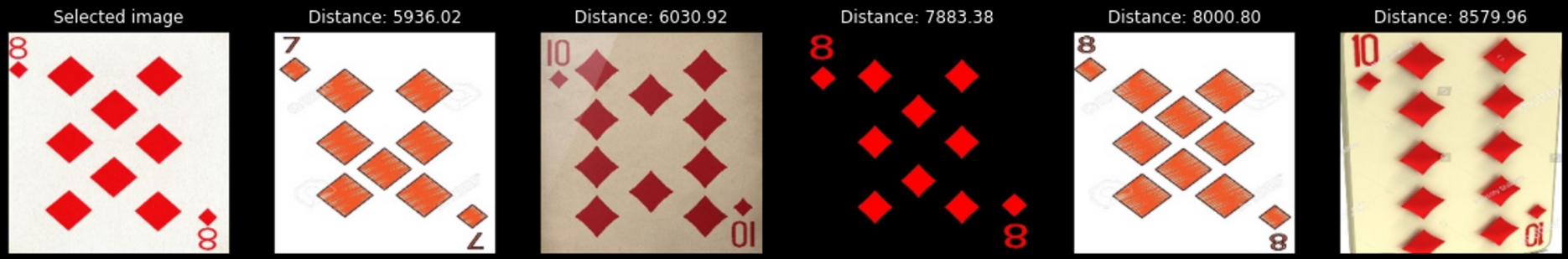
Harris+ Histogram of Oriented Gradients

Harris Corner

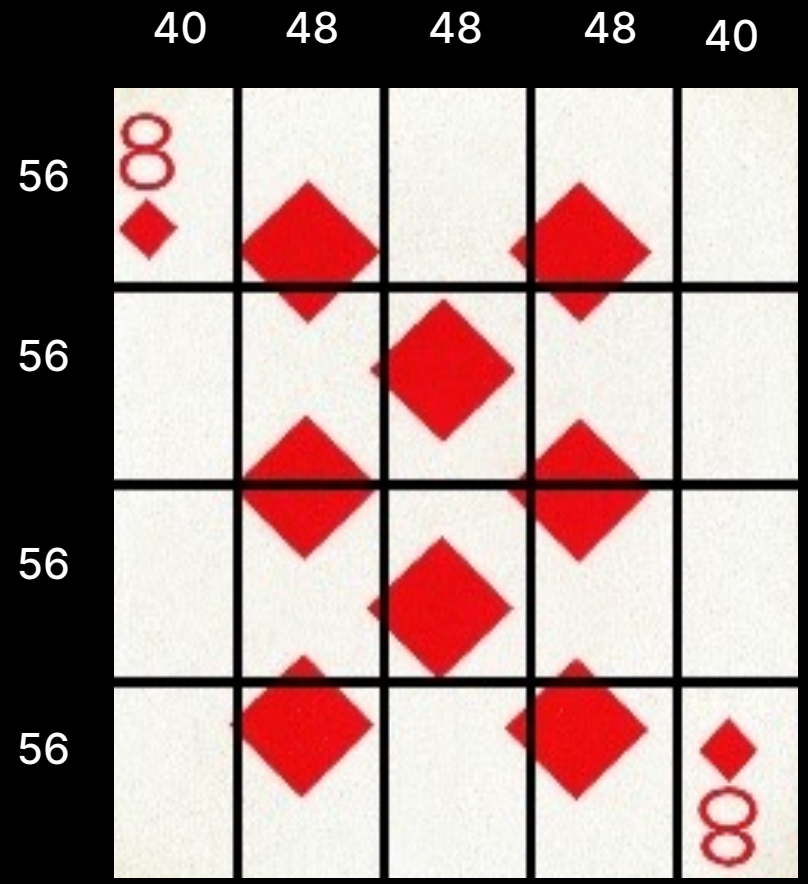
- blockSize: 2
- Ksize: 3
- K: 0.04

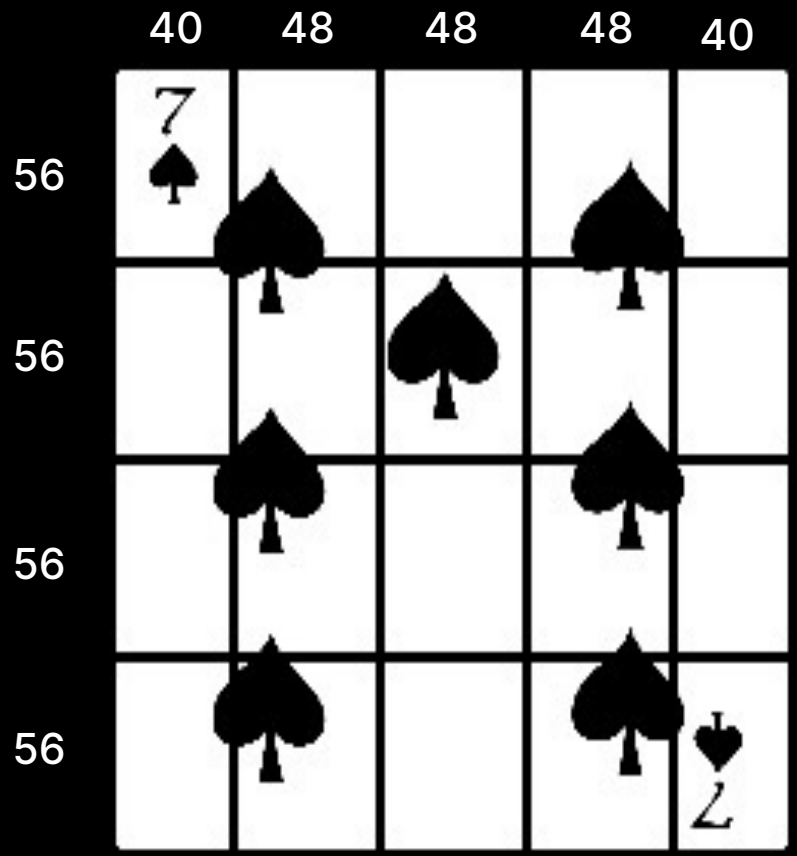
Hog Descriptor

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



Histogram Descriptor





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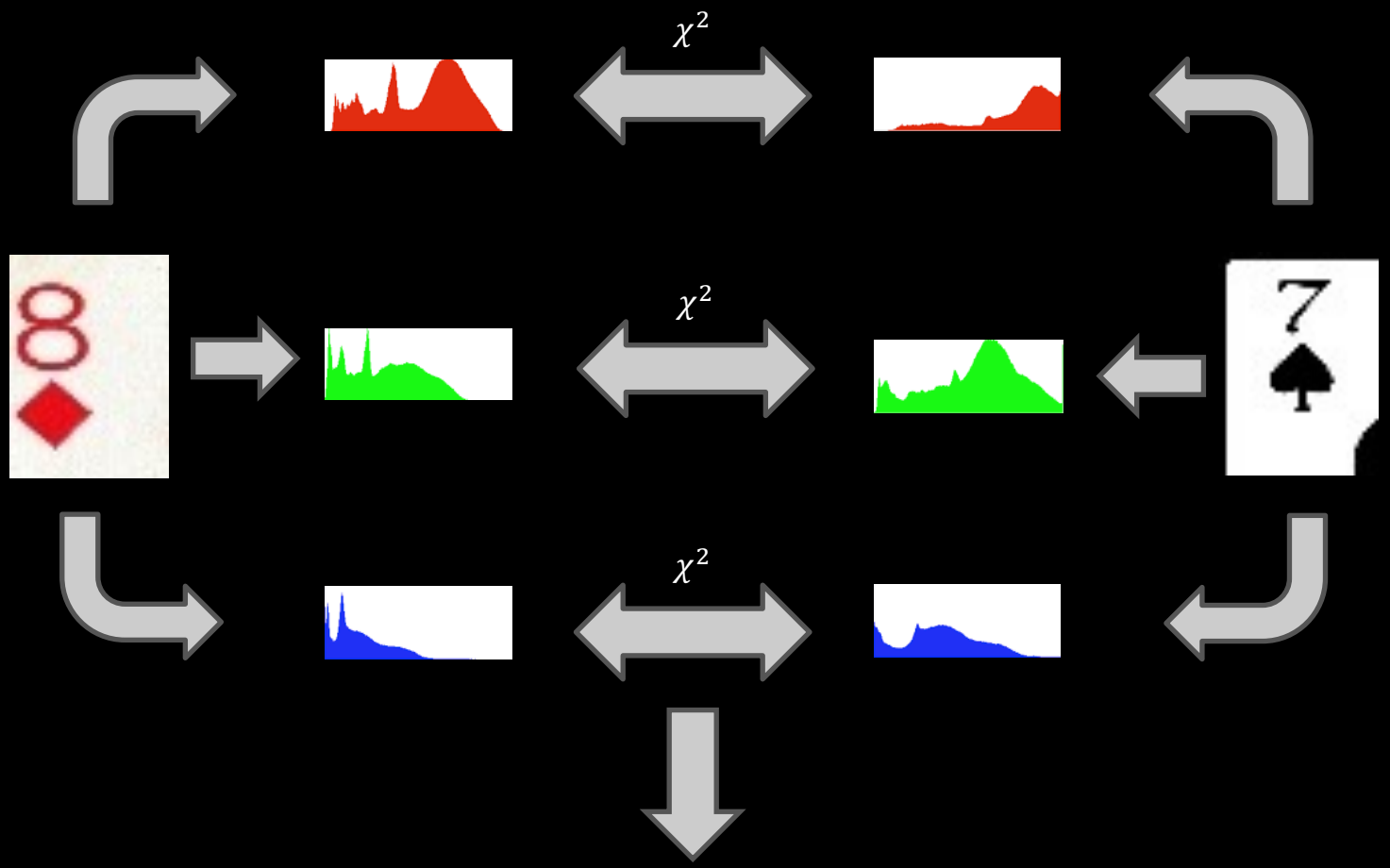
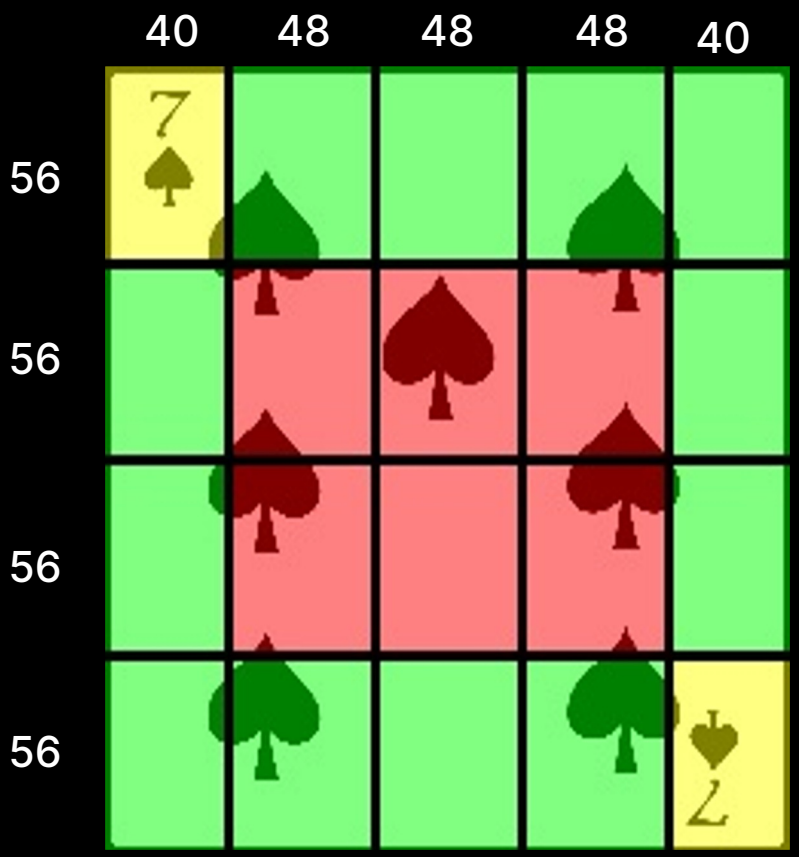
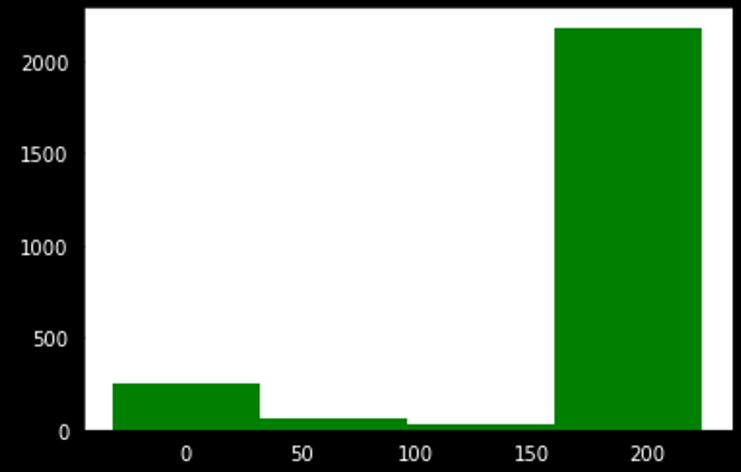


Histogram Descriptor

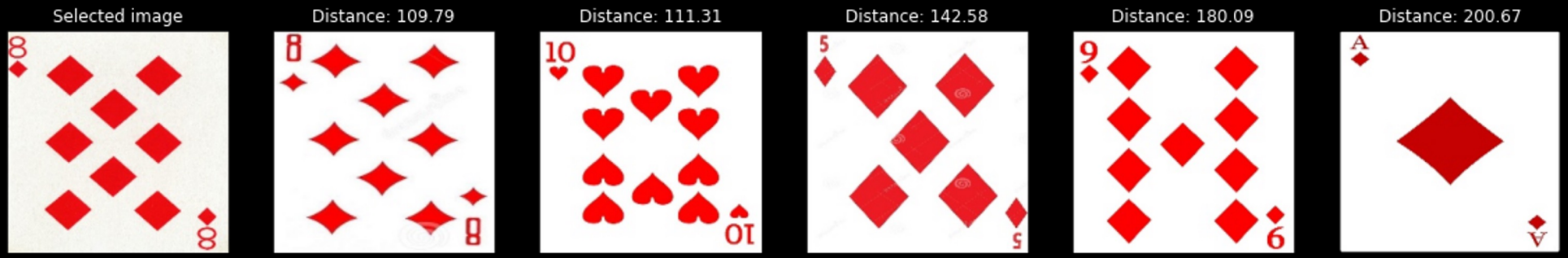


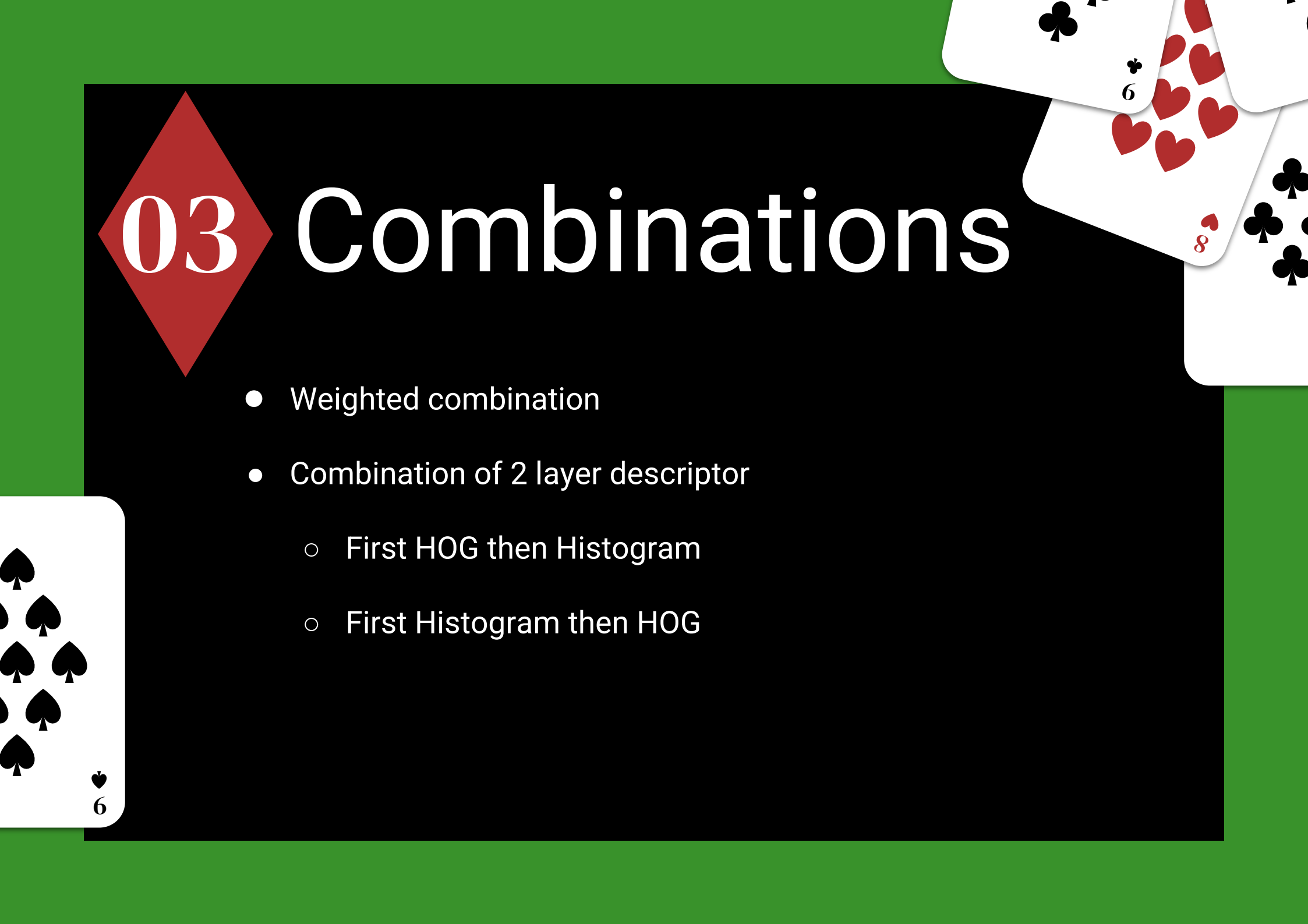


3 different levels with weights :

- 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



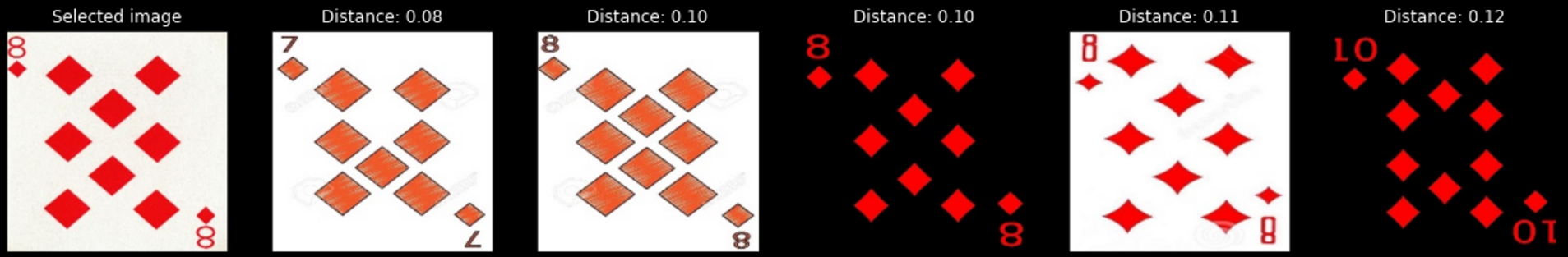


03 Combinations

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

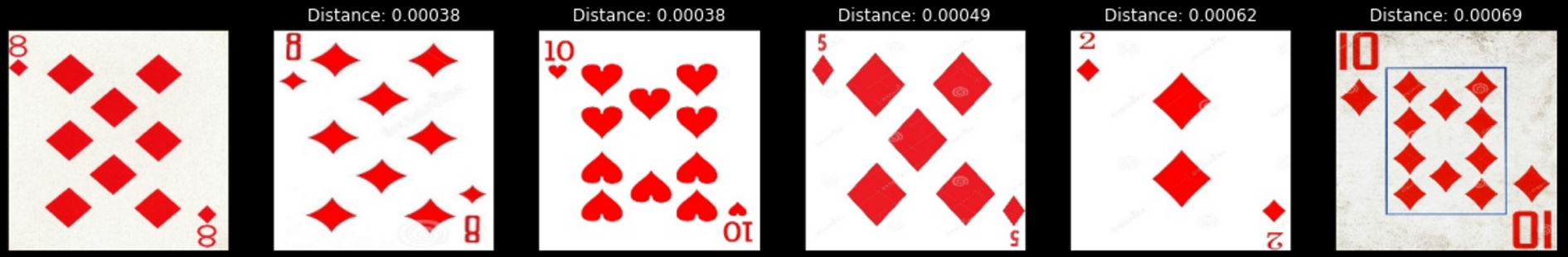
Weighted combination

- 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