ALL-IN

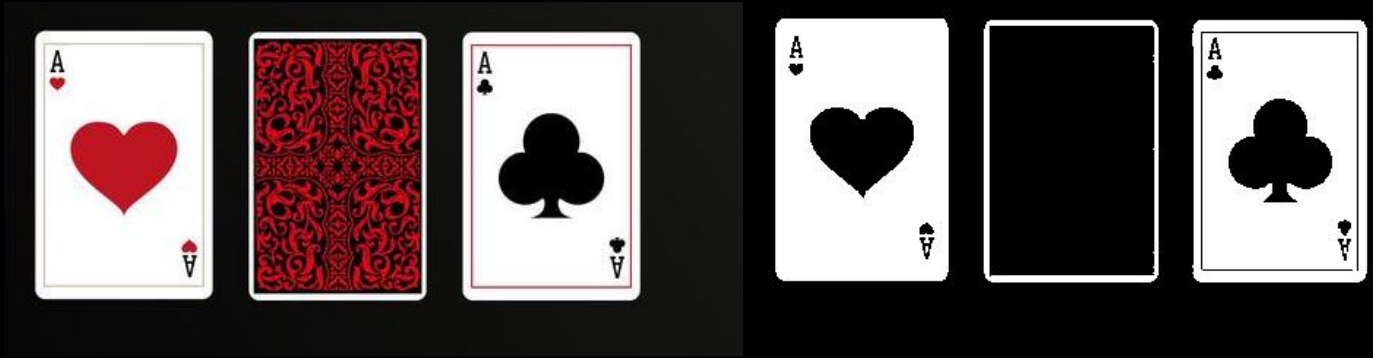
Shagun Uppal - 2016088
Sarthak Bhagat - 2016189

Objectives :

Edge Detection
Registration
Matching
Detect state and recommend

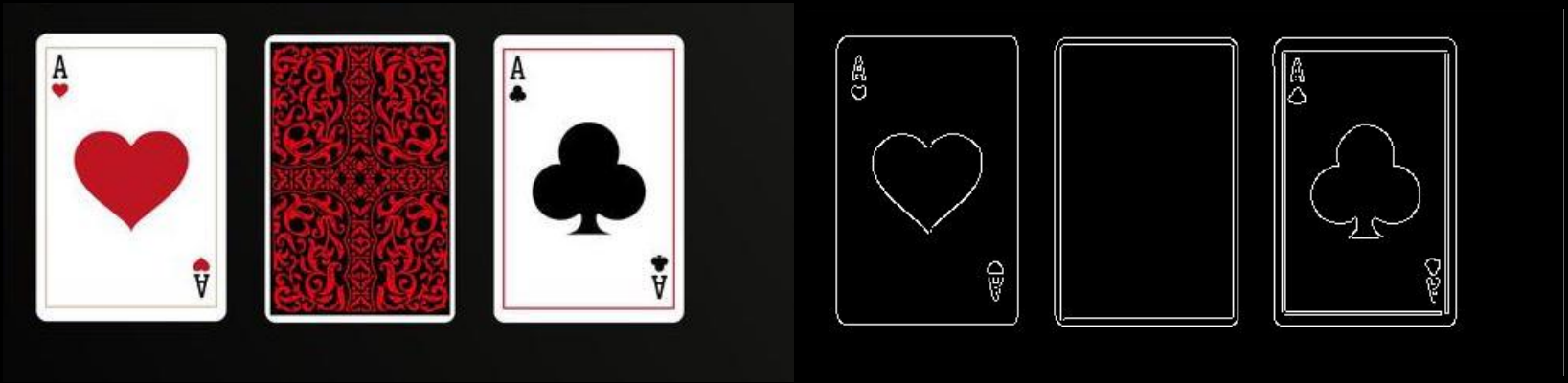
Tasks Completed

Thresholding : Trivial Binarization, Otsu's Method



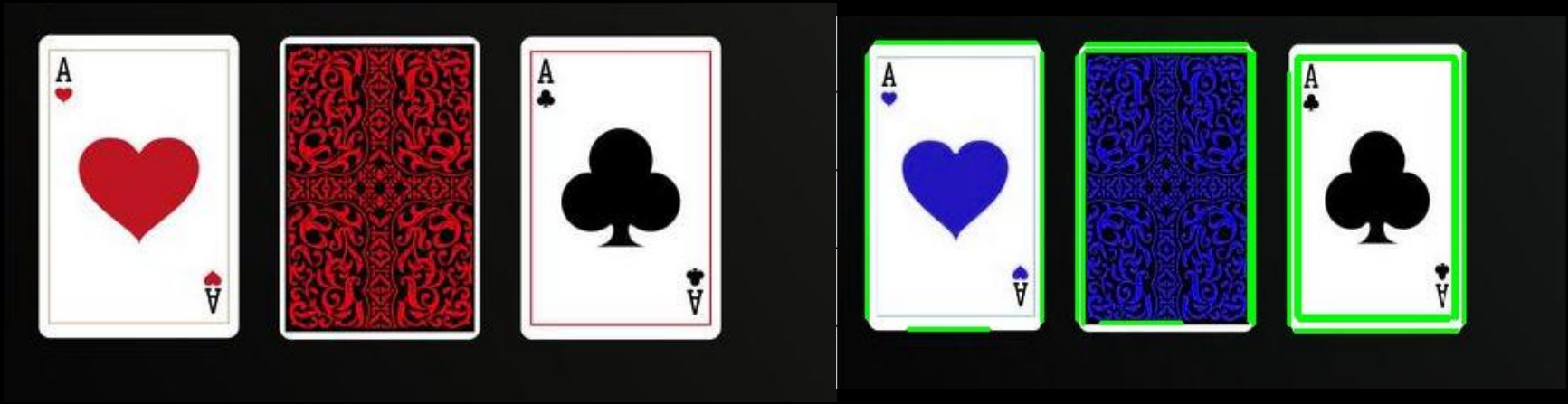
- Iterate over various threshold values
- Choose the one that minimizes the spread in foreground and background intensities.

- Contour Extraction (to be improved) : Used Canny's Method



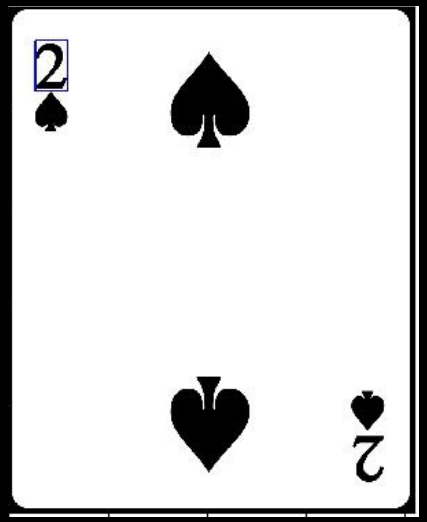
- Gaussian Filter for smoothing the image.
- Calculate gradients of intensity levels.
- Non-Maximum Suppression.
- Double Thresholding.

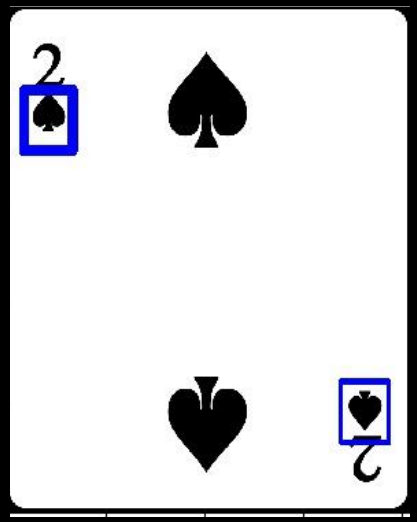
- Hough Transform : Probabilistic and Normal Hough Transform to detect edges

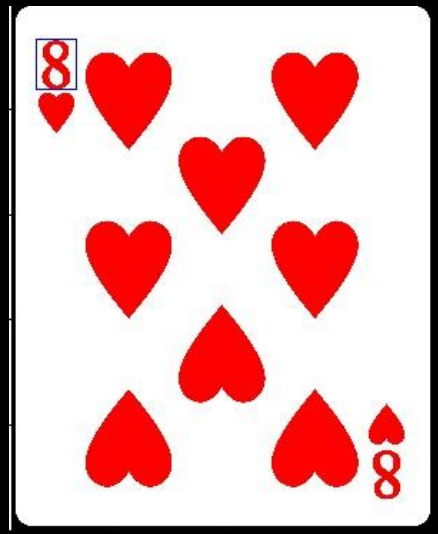


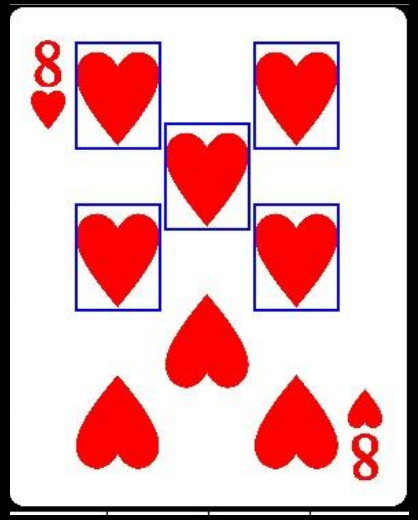
- Iterate over various angles to find a line.
- Parameters : MinLineLength, MaxLineGap.

Template Matching : Detect Card Color, Suit and Rank









- Convolute the template and the source image and report if accuracy more than the threshold.

To be Done

- Improve Contour Extraction.**
- Improve Edge Detection.**
- Train a neural network to detect suit and rank.
- Detect number of folded cards.
- Detect the state and Recommend.