

Set

MostOEDDefinitions

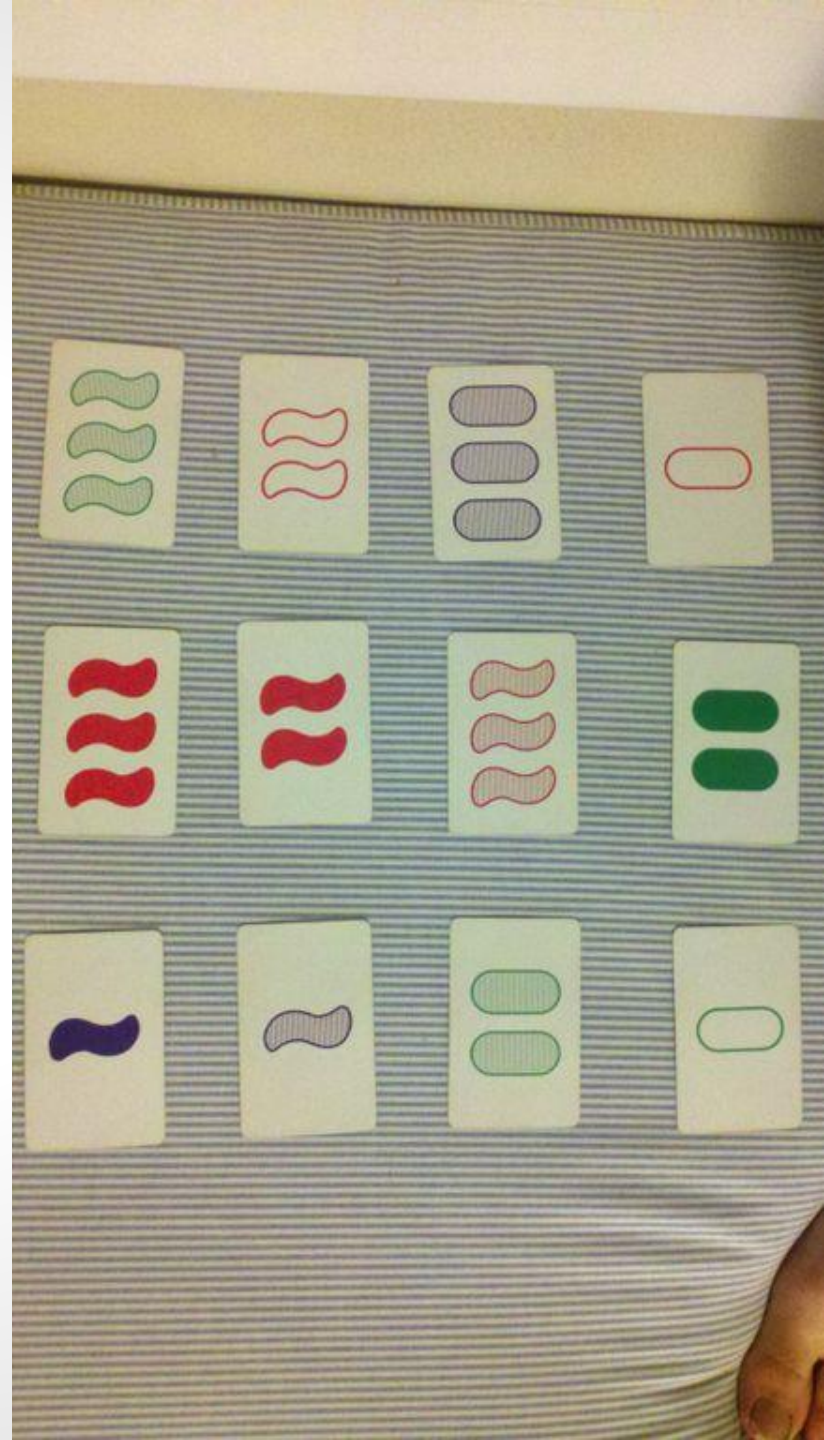
Adam Lerner & Will Scott

Set

Card game to detect sets of 3 cards.

Brute force will work.
(12^3 potential sets)

Tractable computer vision problem.



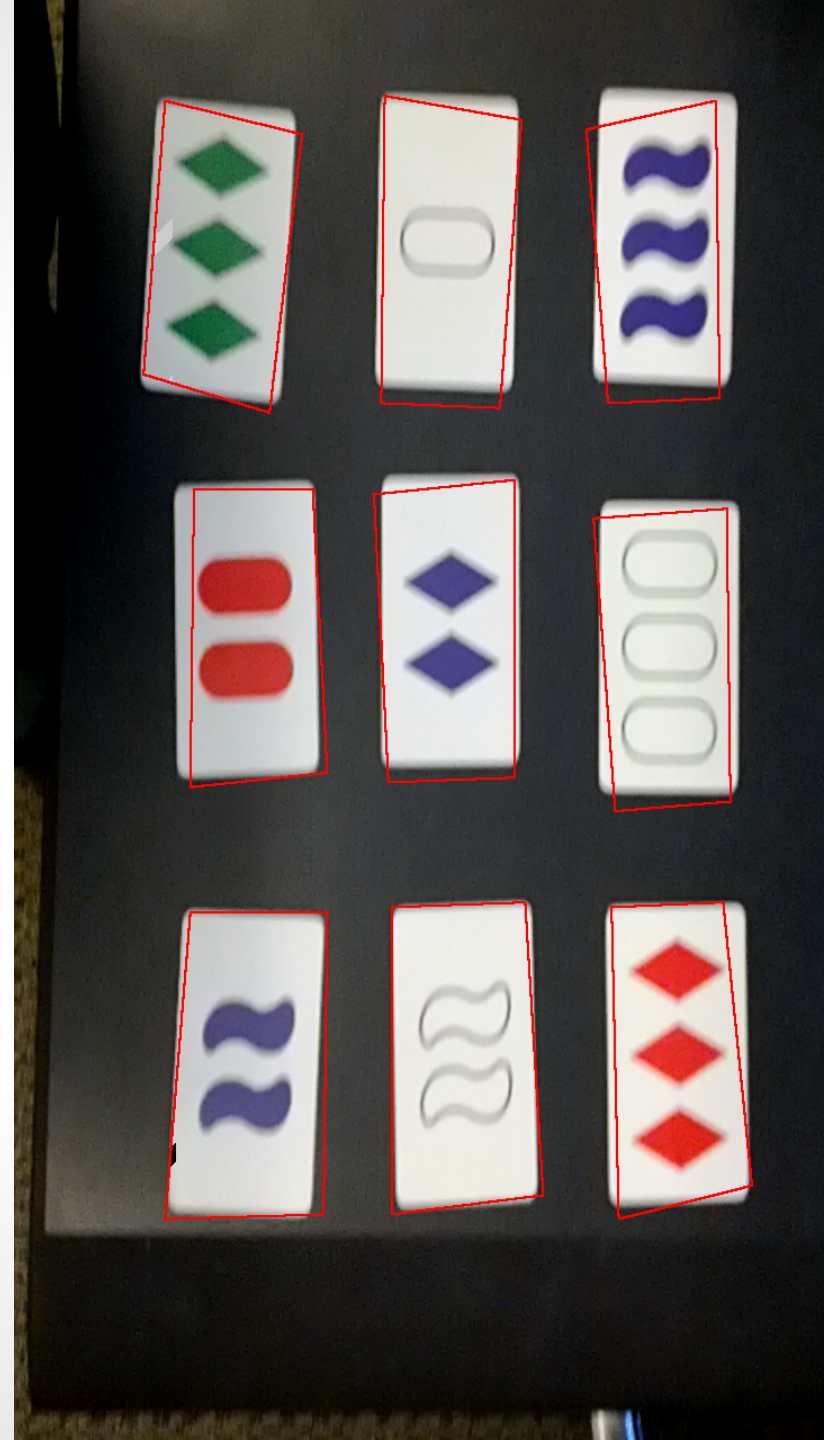
Vision: Segmentation

Blur & Threshold
Edge Detection

False Positives
Card Shape
Card Size

False Negatives
Variable Lighting

Idea: Incorporate Classification



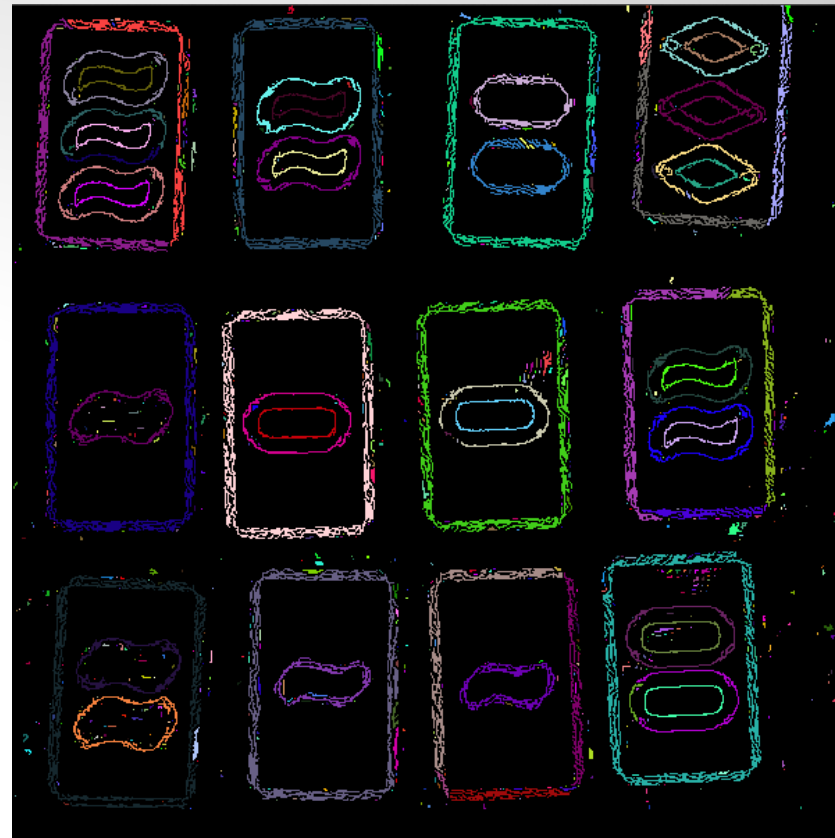
Vision: Classification

Features

Internal Edges

HSV Histogram

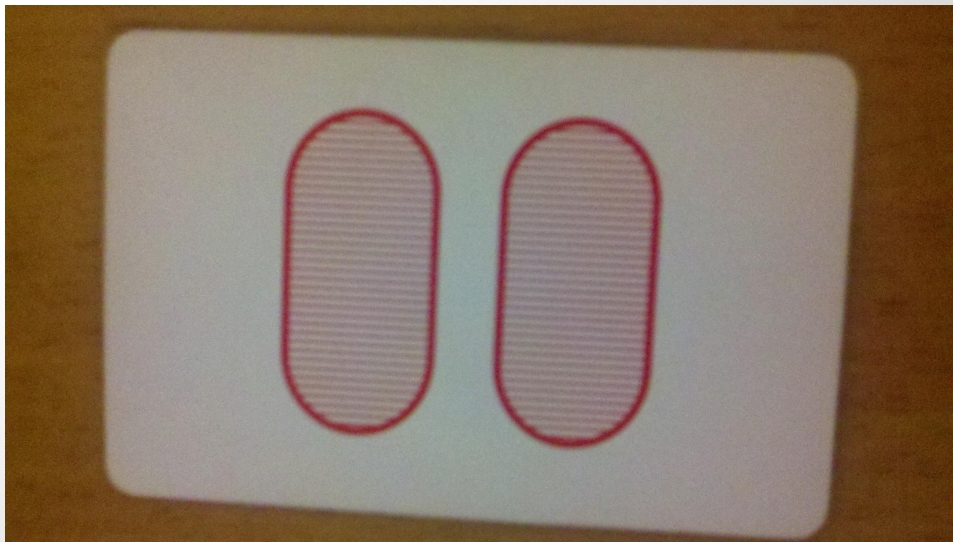
% Non-White



Labeled Data

Bayes Classifier

Global vs Multiple Classifiers



Validation

Machine Learning

Labeled images split for training & evaluation

Segmentation accuracy

False Positives & Negatives

(based on overlap)

Classification accuracy

Individual vs Global classifier

Speed