

A photograph of the Museum voor Schone Kunsten (MSK) in Ghent, Belgium. The building is a grand neoclassical structure with a prominent portico supported by tall columns. The pediment above the columns is decorated with various sculptures. On the roof, there are two large winged statues. The building is surrounded by trees with autumn foliage. The image has a warm, slightly hazy tone.

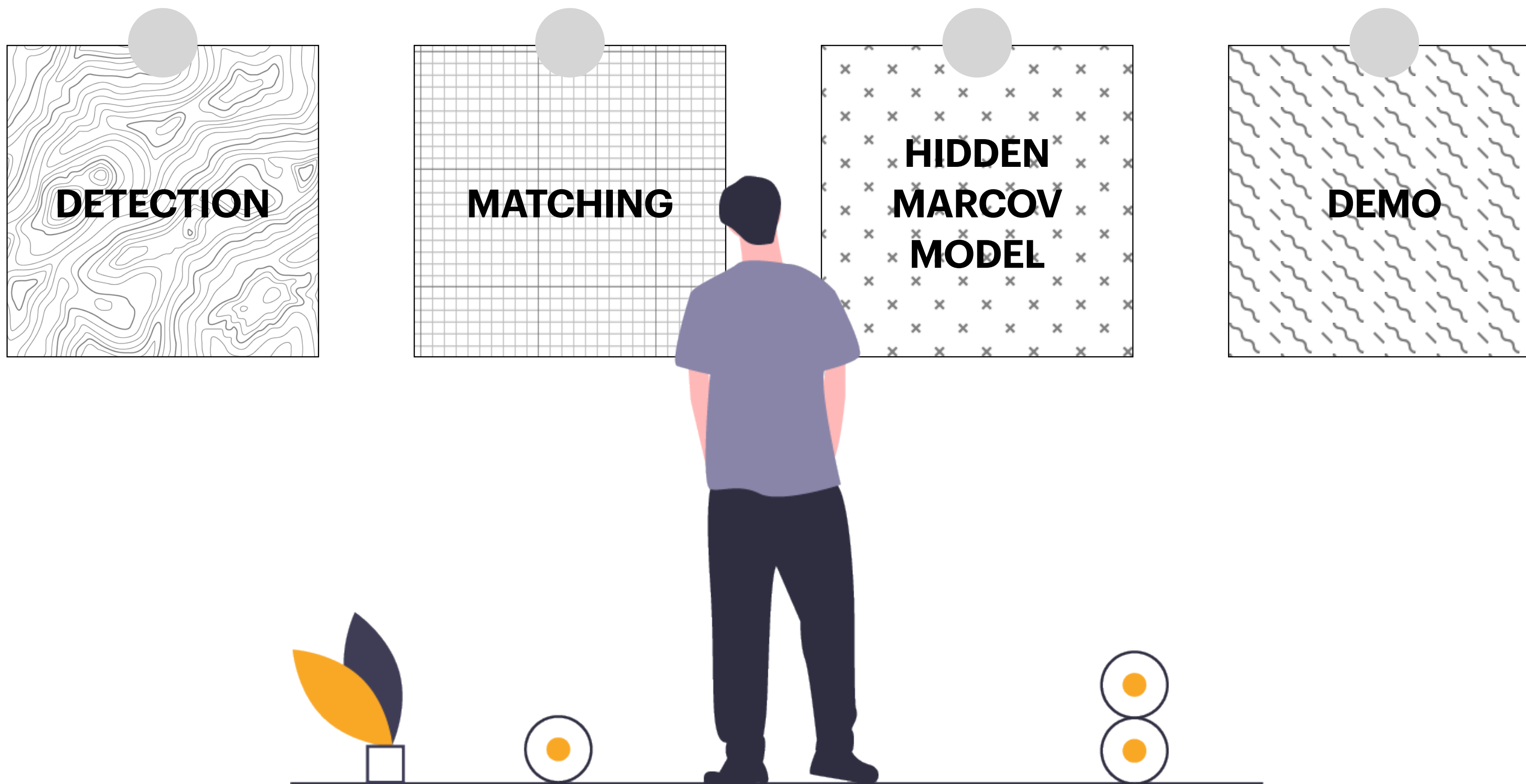
# An approach for continuous painting detection and room prediction

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# CONTENT



# DETECTION

Semi-supervised algorithm



# DETECTION

Unsupervised algorithm



Mean shift segmentation filter

Flood fill (keep largest mask)

Invert + erode

Median blur

Canny (with Otsu threshold)

Close lines

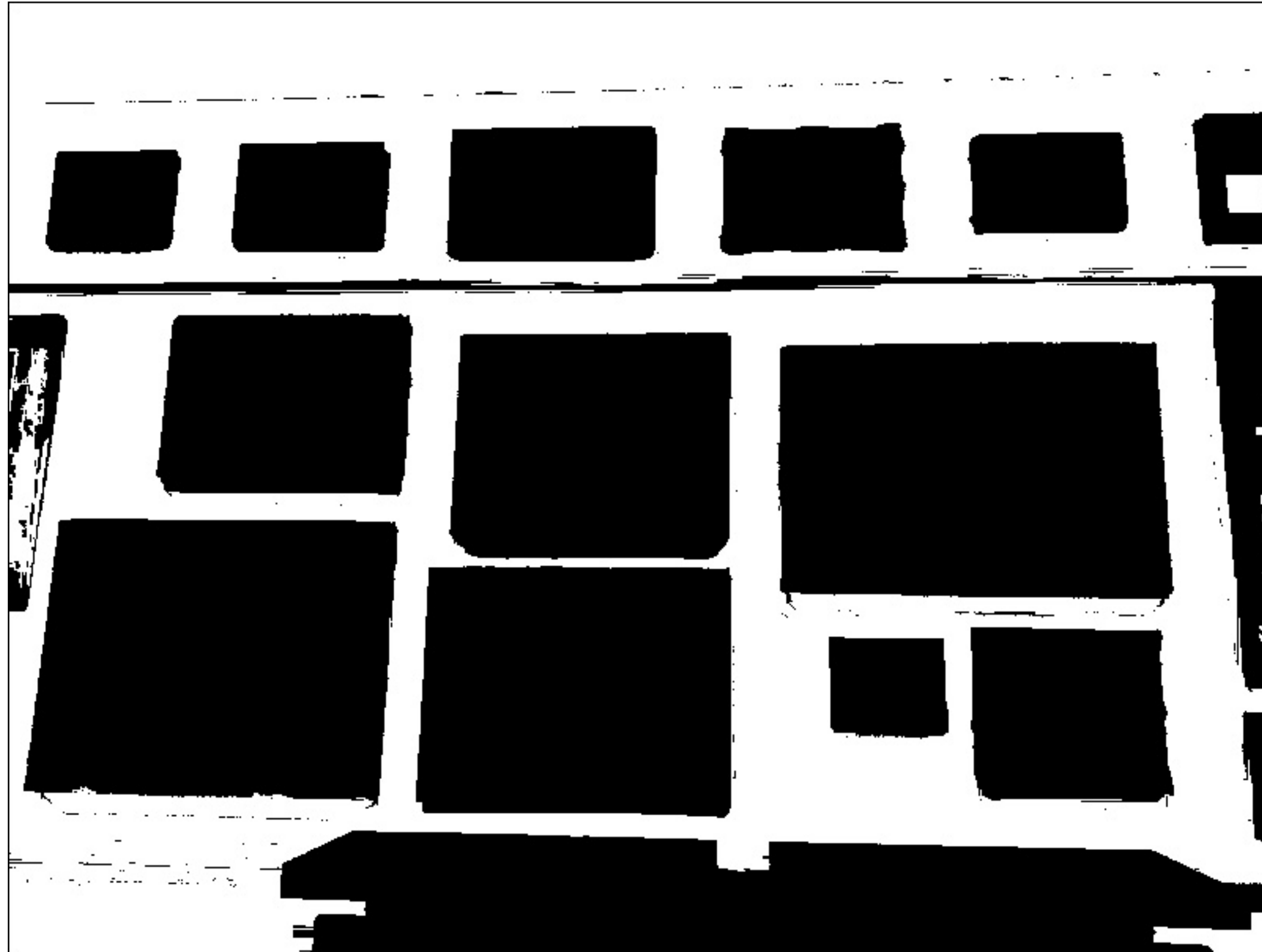
Find contours



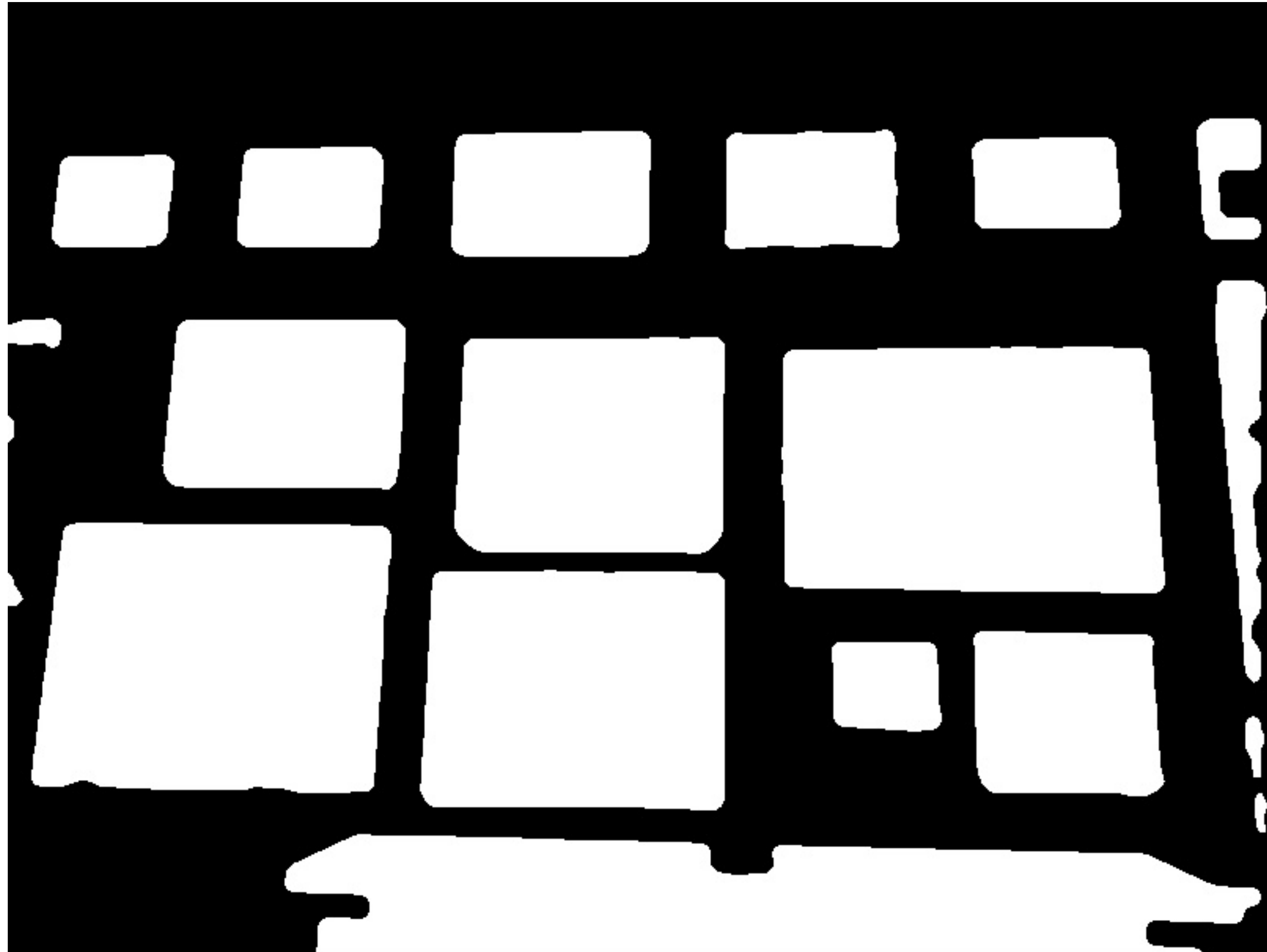
# 1 mean shift segmentation filtering



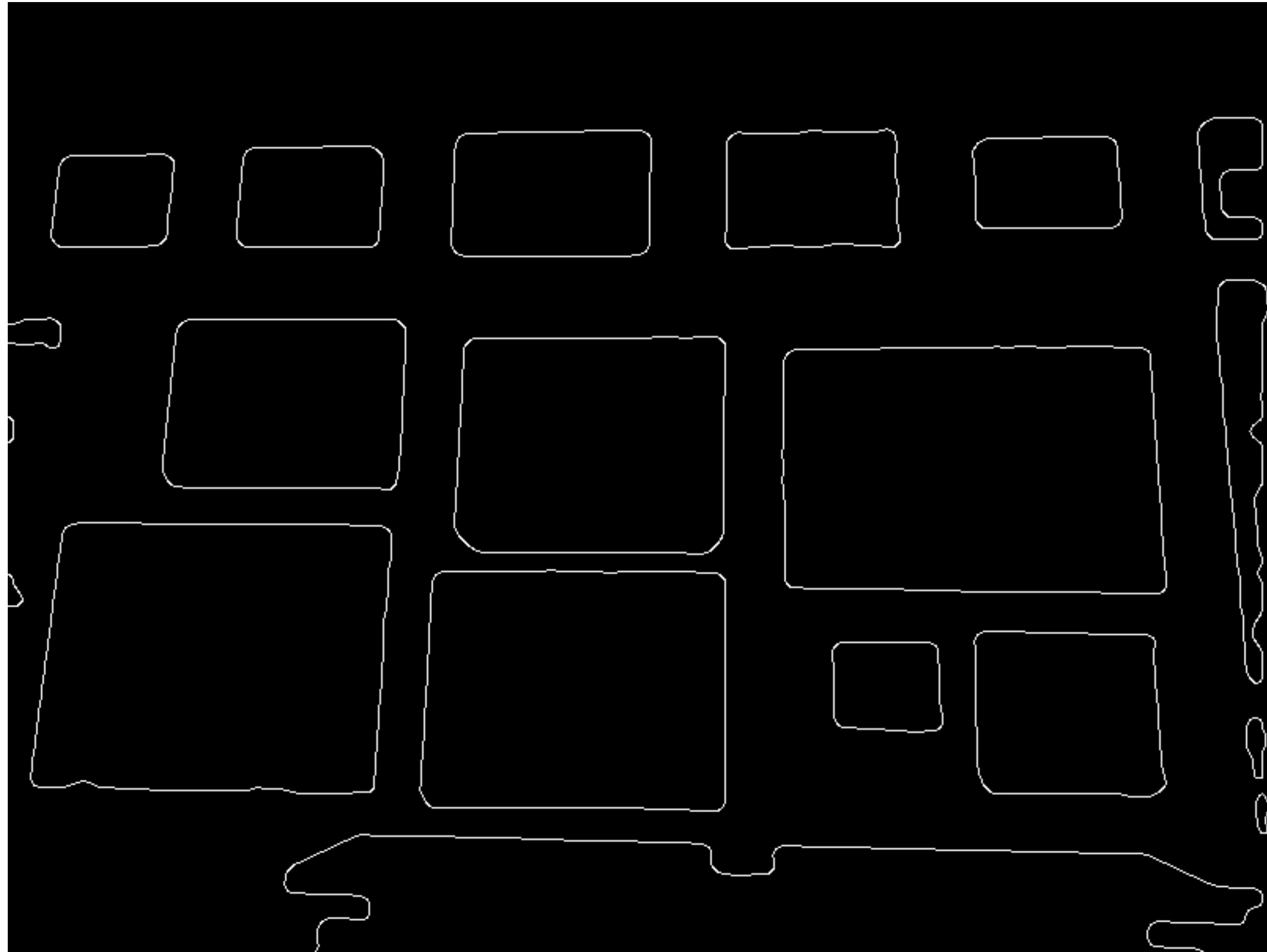
## 2 flood fill



### 3 invert + erode



## 4, 5 & 6 median blur, Canny & close lines



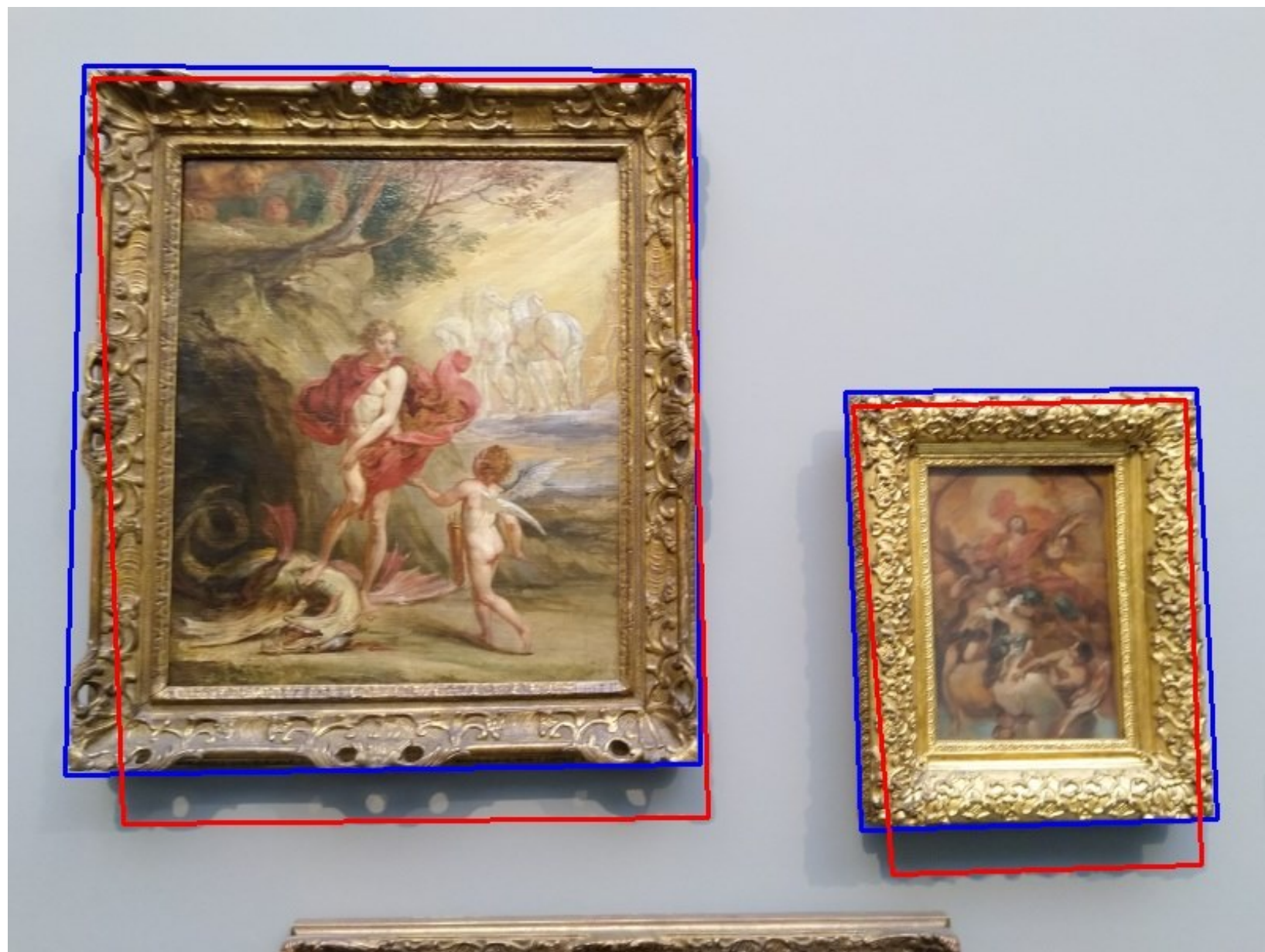


## 7 find contours





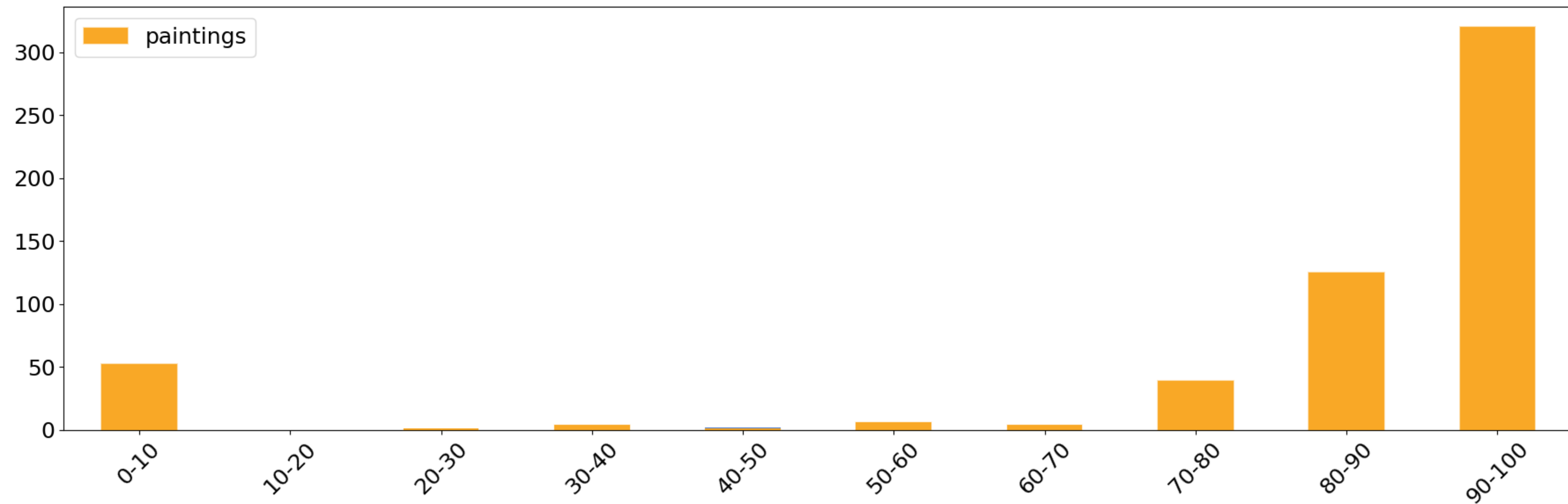
# SAMPLES





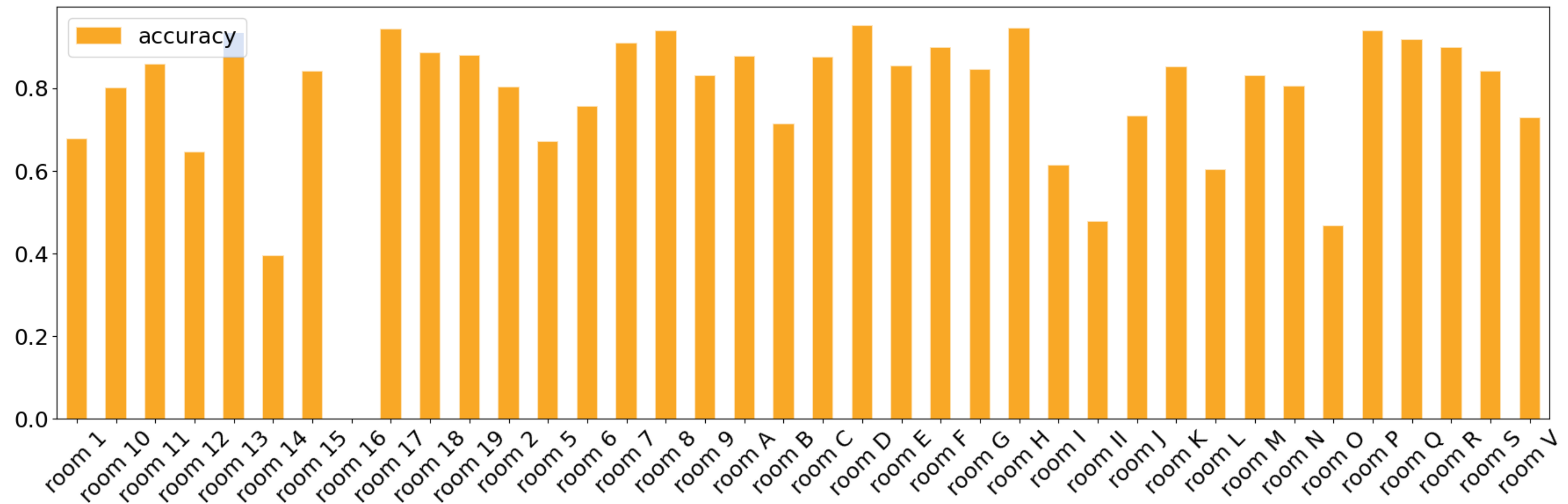
# DETECTION

Detection accuracy ranges for the dataset



# DETECTION

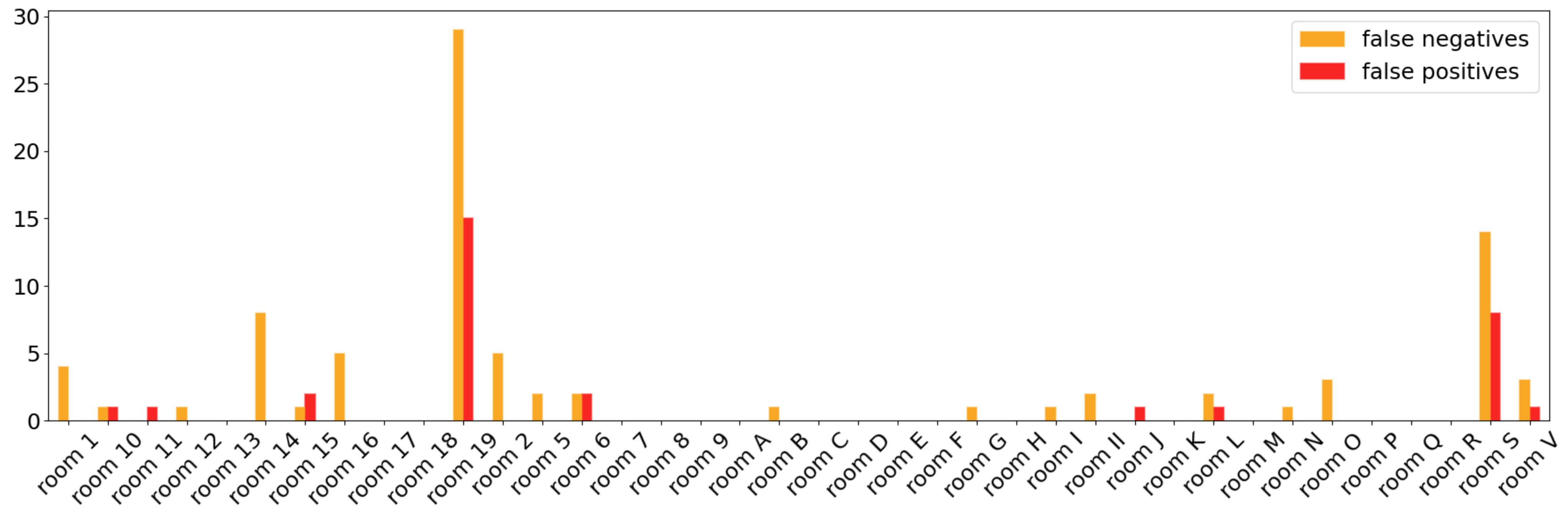
Average room detection accuracy





# DETECTION

False negatives and false positives per room



# MATCHING

## IDEAS

Histograms  
(block & full image)  
Local Binary Patterns

ORB  
Line segments

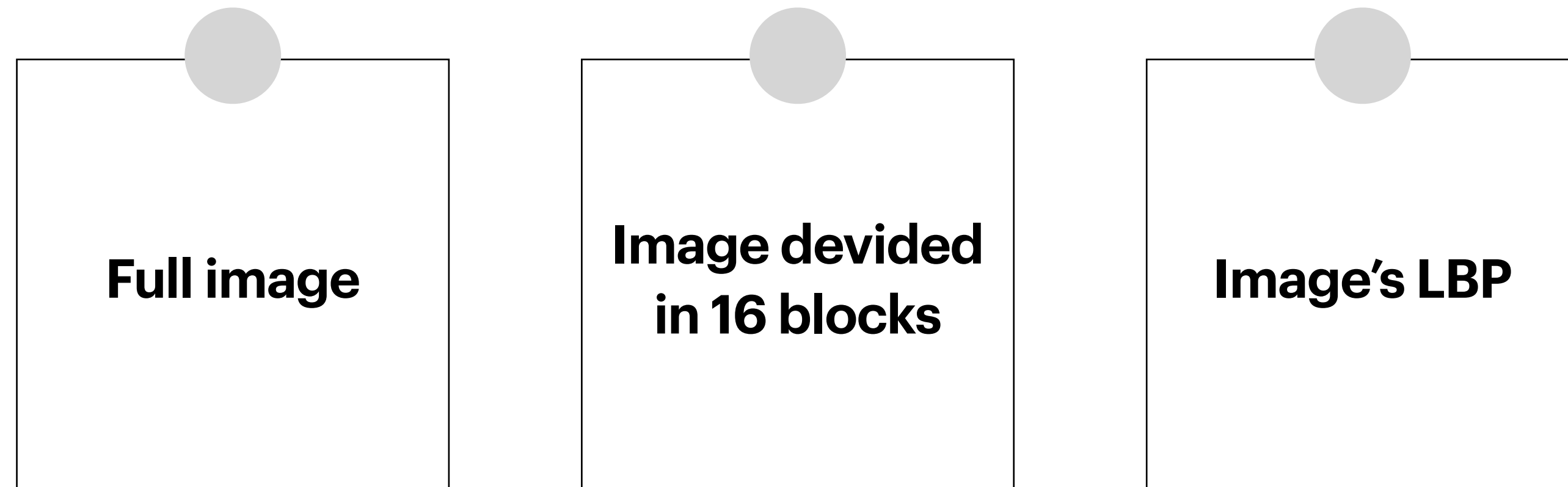




# MATCHING

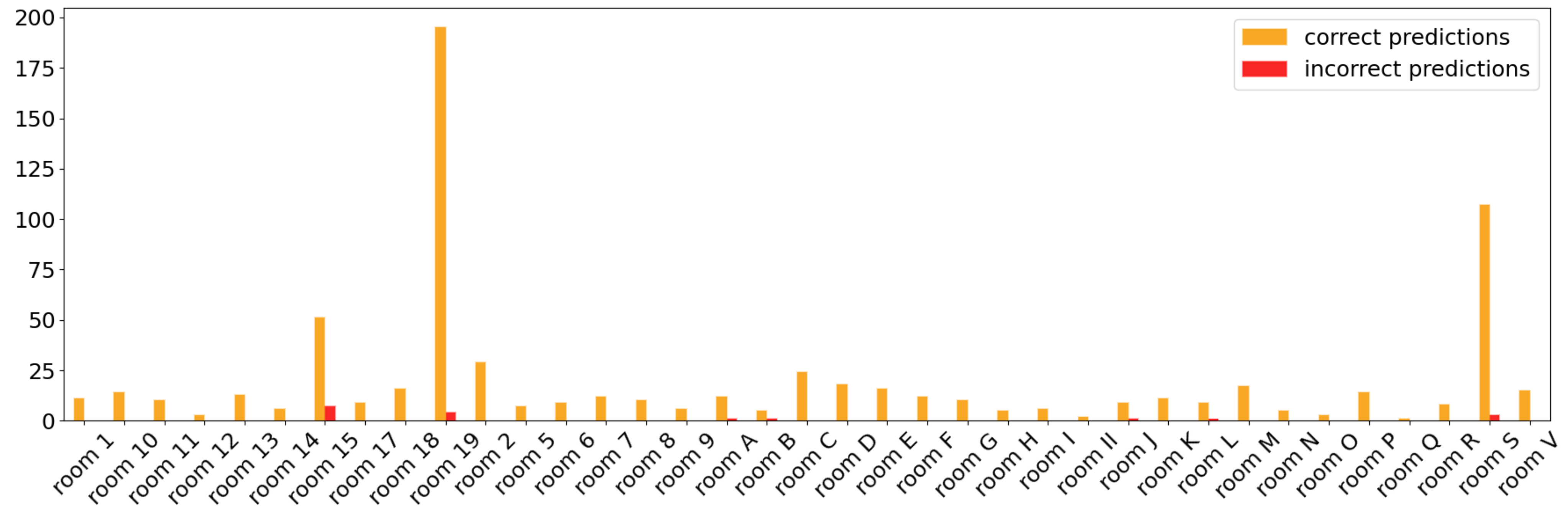
## FINAL CHOICE

Based on histograms of:



# MATCHING

Correct and incorrect painting predictions per room





# HIDDEN MARKOV MODEL



[ "19" , 0.456 ]  
[ "3" , 0.061 ]  
[ "19" , 0.320 ]  
[ "J" , 0.106 ]  
[ "19" , 0.764 ]



# DEMO

