

# Robust Door Detection

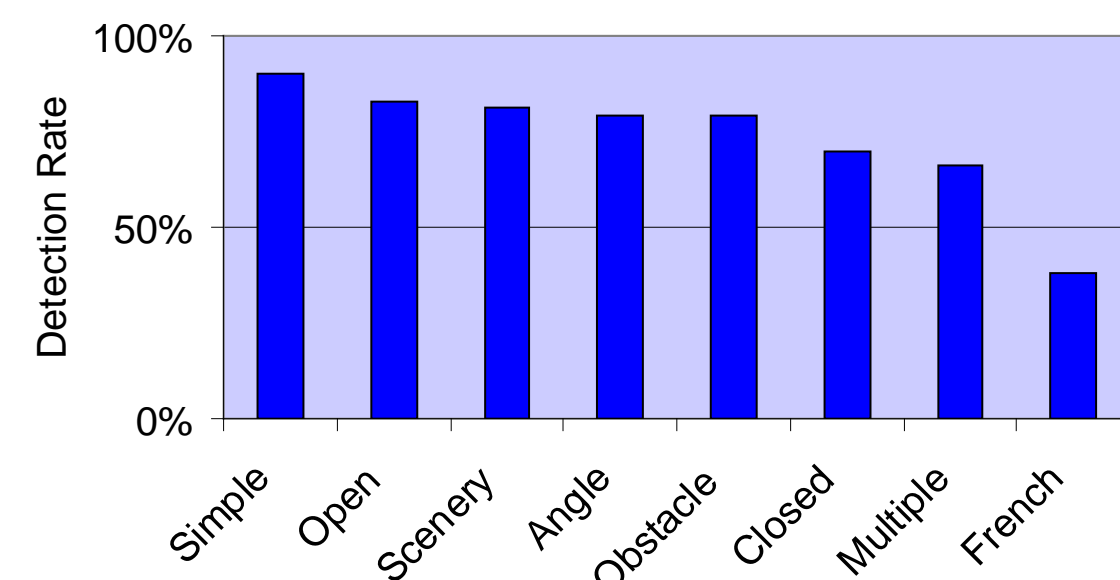
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## Motivation

This door detection algorithm was inspired by a desire to help the visually handicapped navigate the world around them. Door detection was one part of a conceived automatic navigation system.

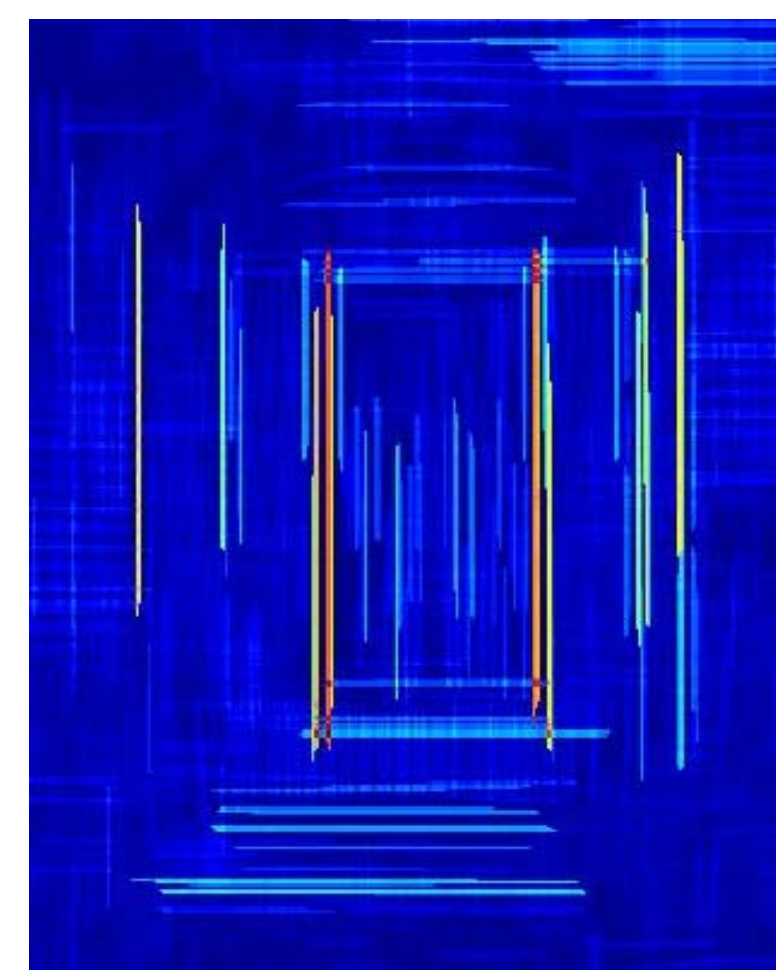
## Experimental Results

The door detection algorithm successfully detects 90% of rectangular, closed doors and correctly detects different types of doors in a variety of different situations.

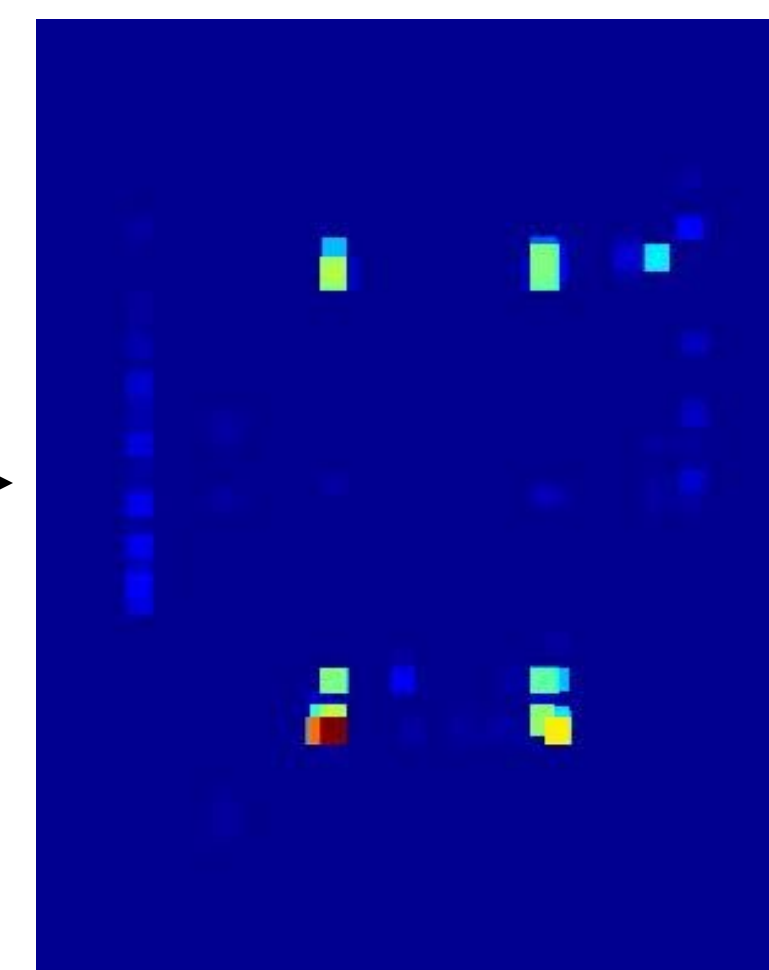


## Region of Interest (ROI) Selection

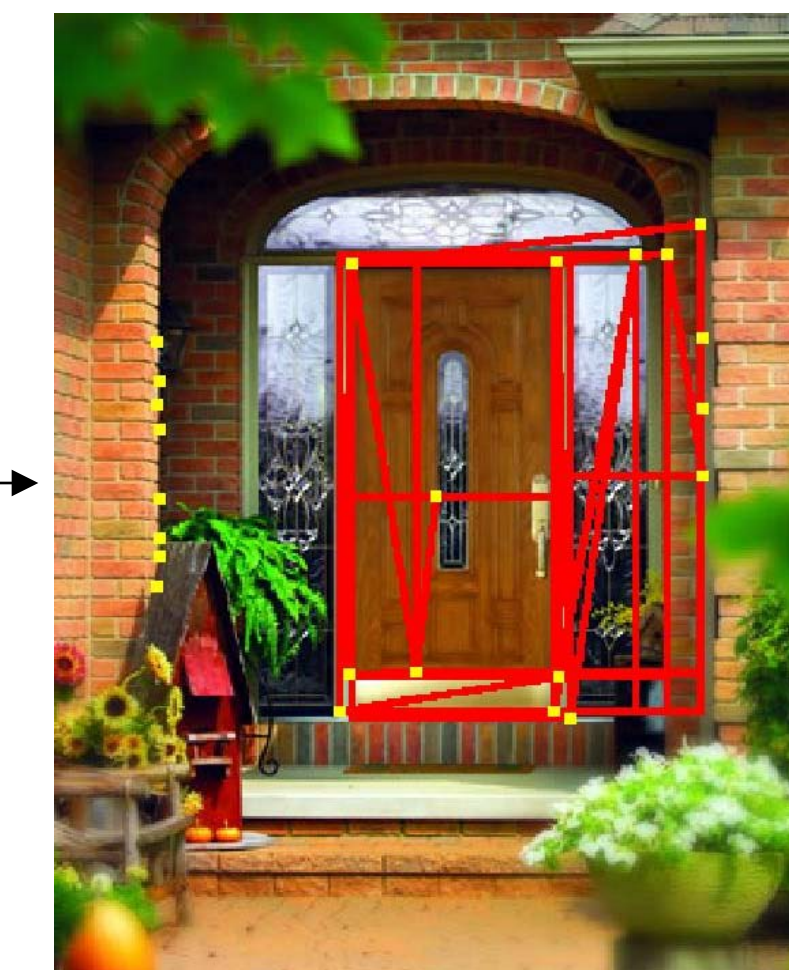
Edge Extraction



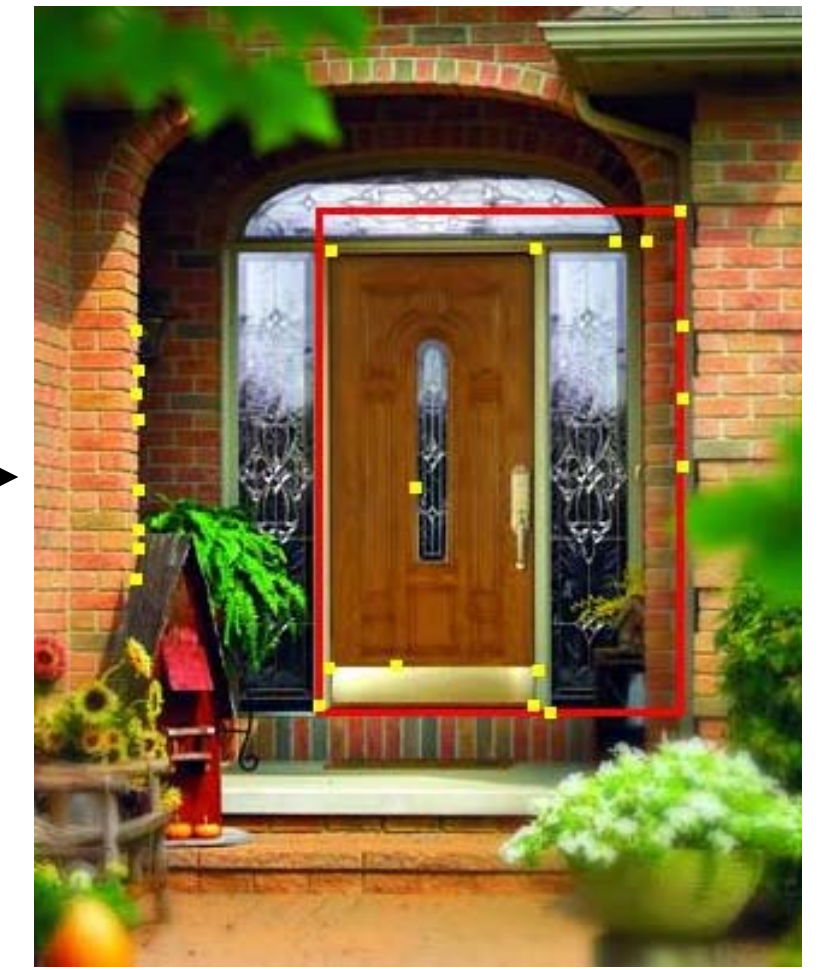
Corner Detection



Quadrilateral Detection

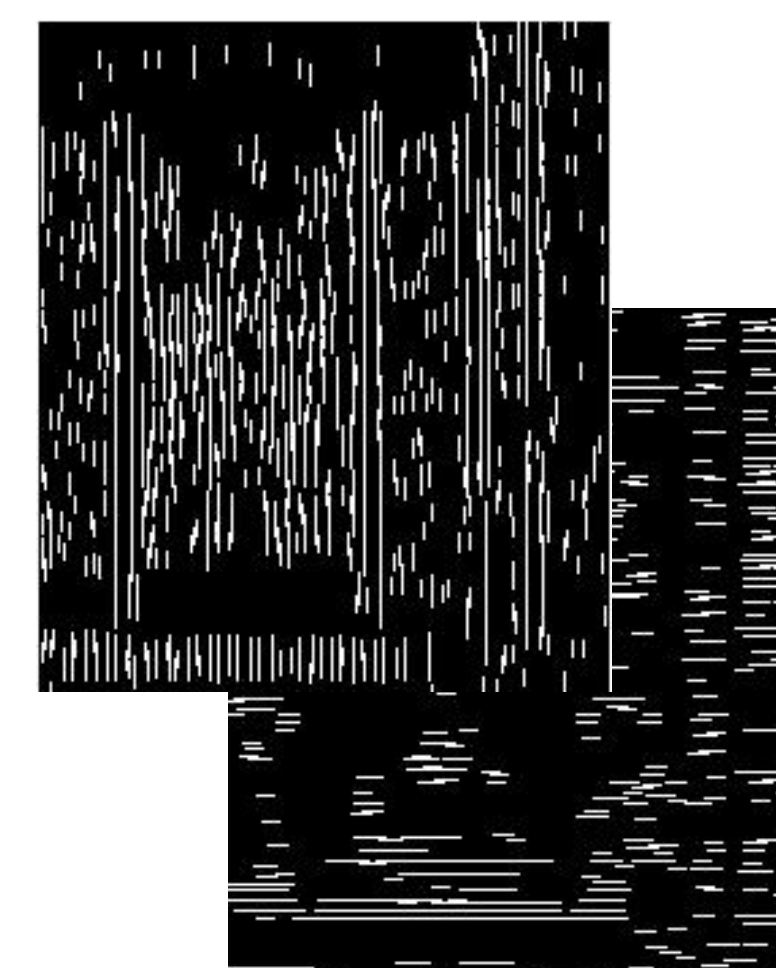


Quadrilateral Merge

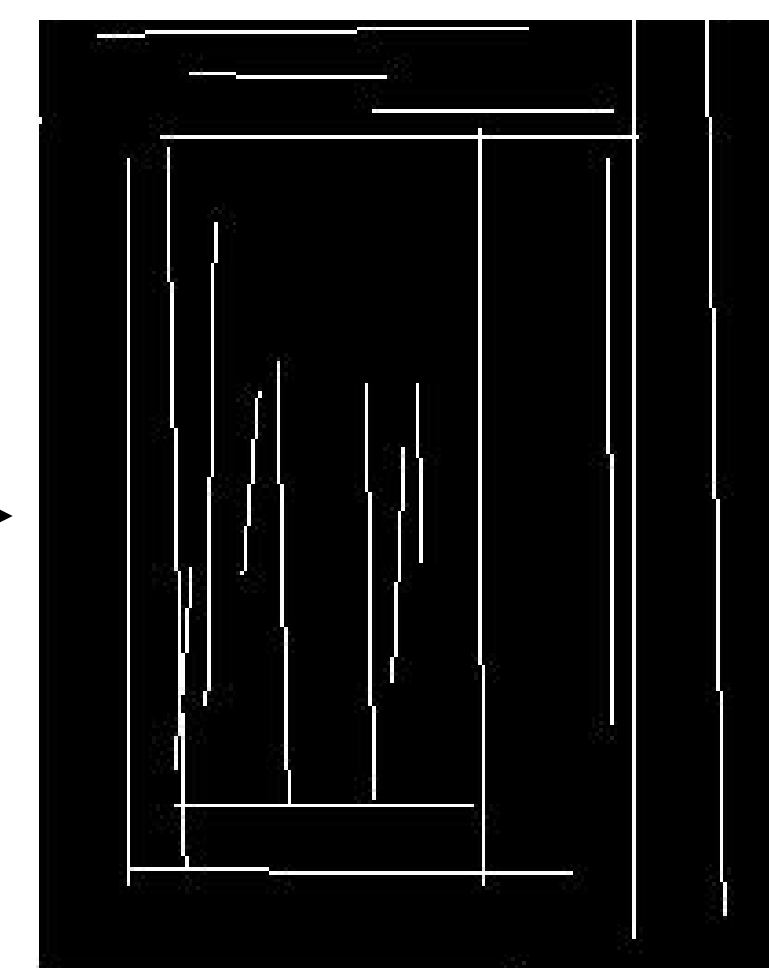


## Door Line and Feature Extraction

Line Extraction



Line Selection



Blob Detection



Door Detection

