Report 15-09

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1 Recognize Shelves

Methods for shelf recognition

- Hough Lines Transform (see Figure 1)

    1. Regural (cv2 Library)
    2. Probabilistic (cv2 & skimage Library)

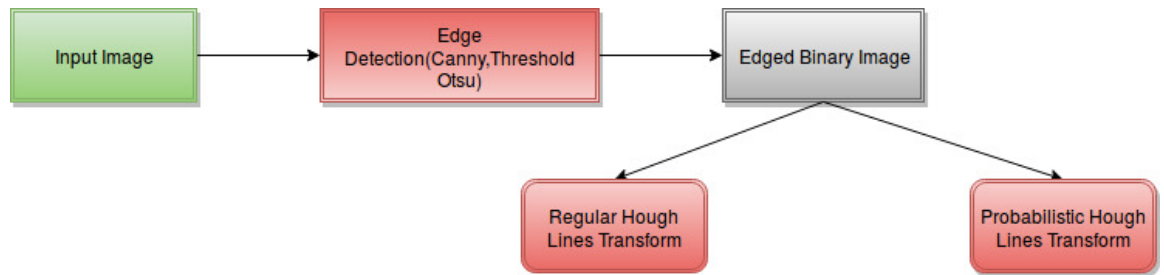- Special Morphology Filters(dilation,erosion,opening,closing) applied on the image (see Figure 2)
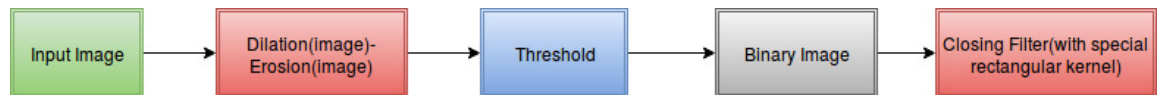

Figure 1: Hough Lines

Figure 2: Morphology Filters

2 Detect Objects

Contour-Based Methods

- Reject Small-Area Regions (see Figure 3)

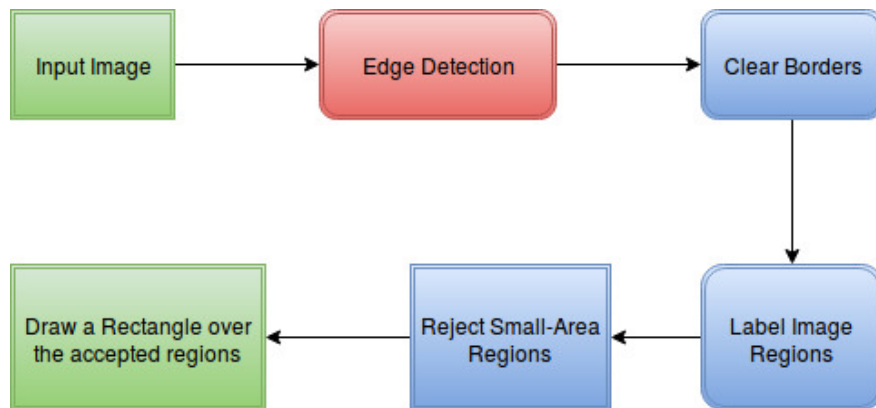- Apply filters(opening,closing) that separate contours (see Figure 4)
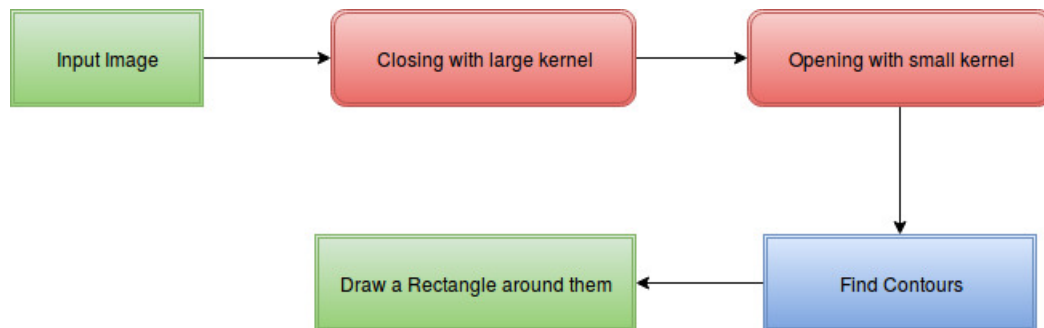
Figure 3: Reject Small-Area Regions

Figure 4: Special Filters

3   Tensorflow Android

It's possible to load a Tensorflow model in an android application project. We found an implemented tutorial in the link above:

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https://omid.al/posts/2017-02-20-Tutorial-Build-Your-First-Tensorflow-Android-App.
html
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