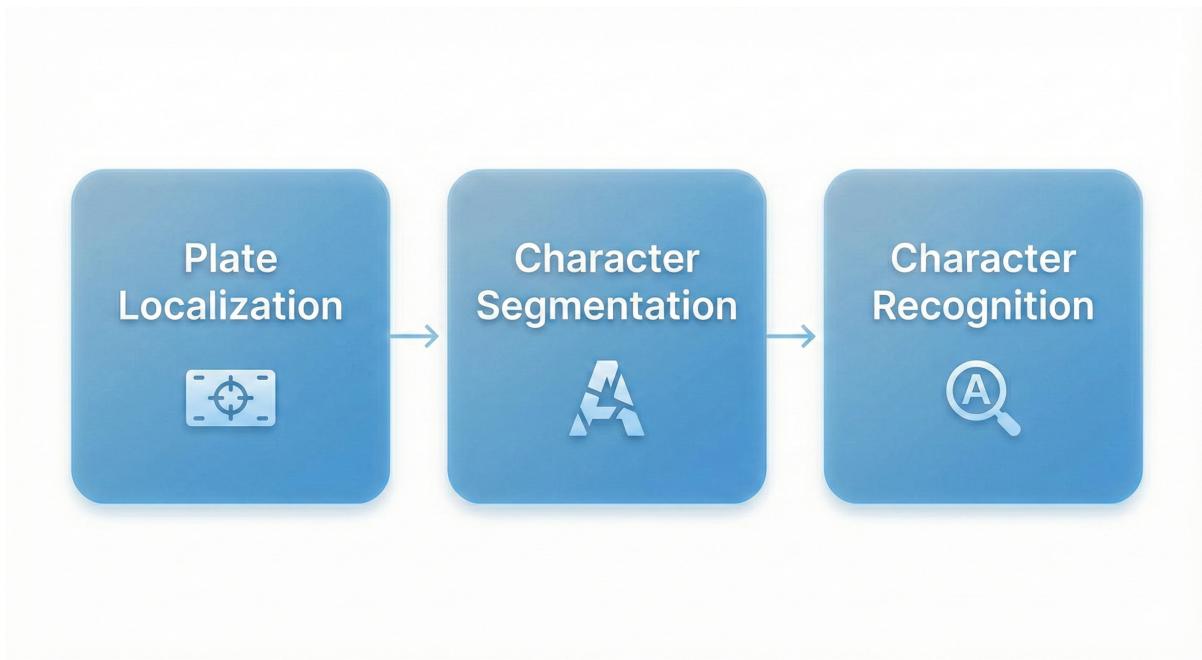


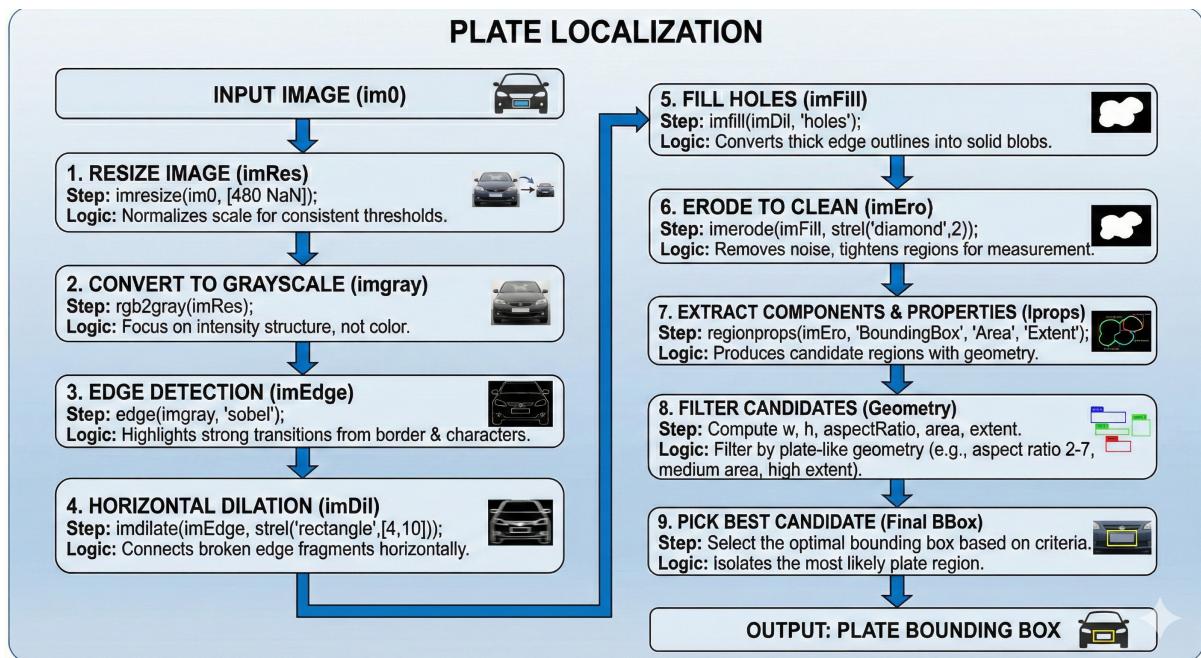
# License Plate Recognition: Visual Walkthrough (Examples 1–2)

## Overview

This document shows an ALPR pipeline visually: plate localization, character segmentation, and character recognition.



## Plate localization (Example-1)



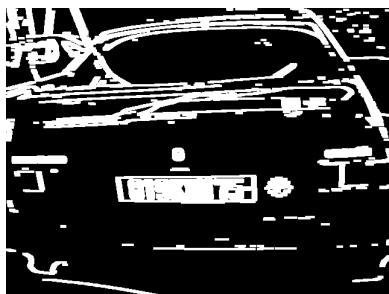
(a) Original (resized)



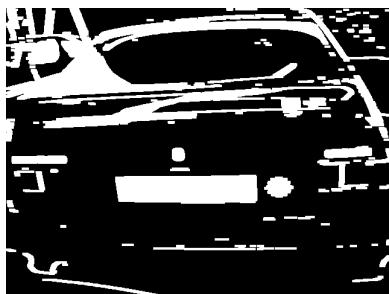
(b) Grayscale conversion



(c) Sobel edge detection



(a) Horizontal dilation



(b) Hole filling



(c) Erosion (diamond structuring element)



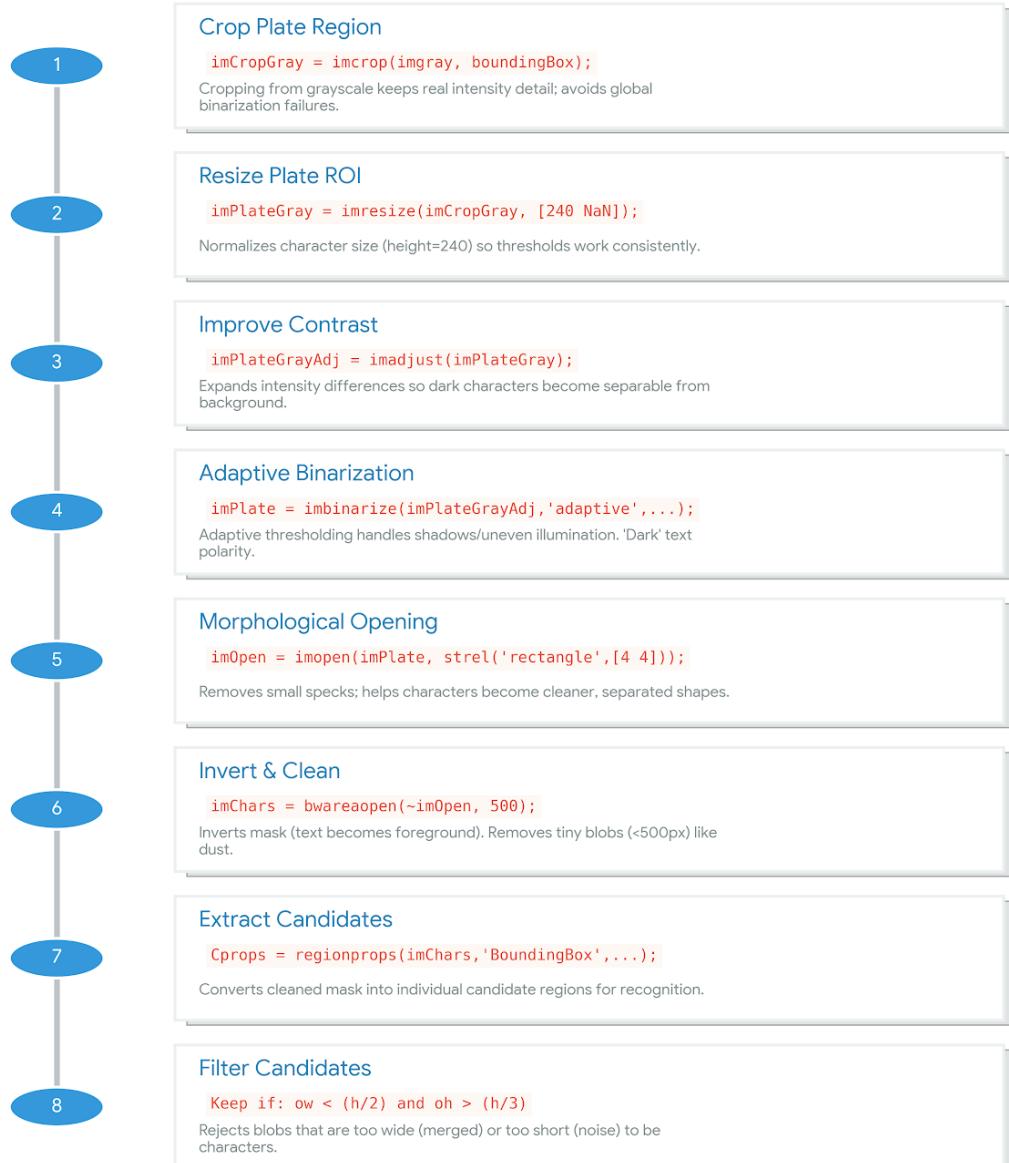
(a) Bounding box on original



(b) Plate cropped (from grayscale)

## Character segmentation (Example-1)

### Character Segmentation



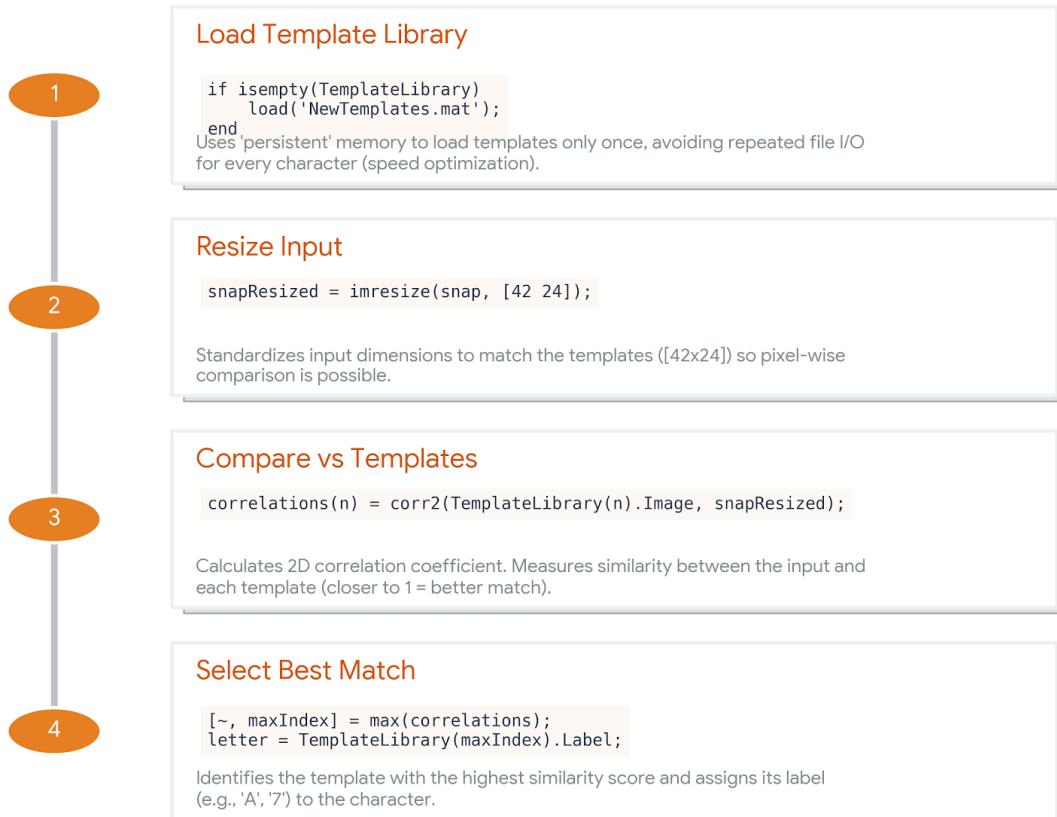
(a) Plate ROI (grayscale, resized) (b) Contrast adjustment (imadjust) (c) Binarization (from gray ROI)

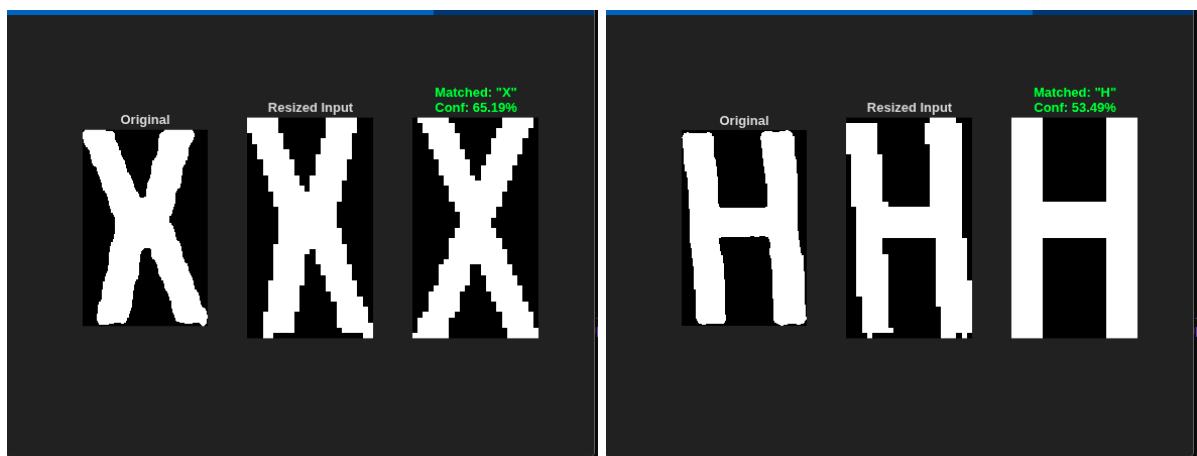
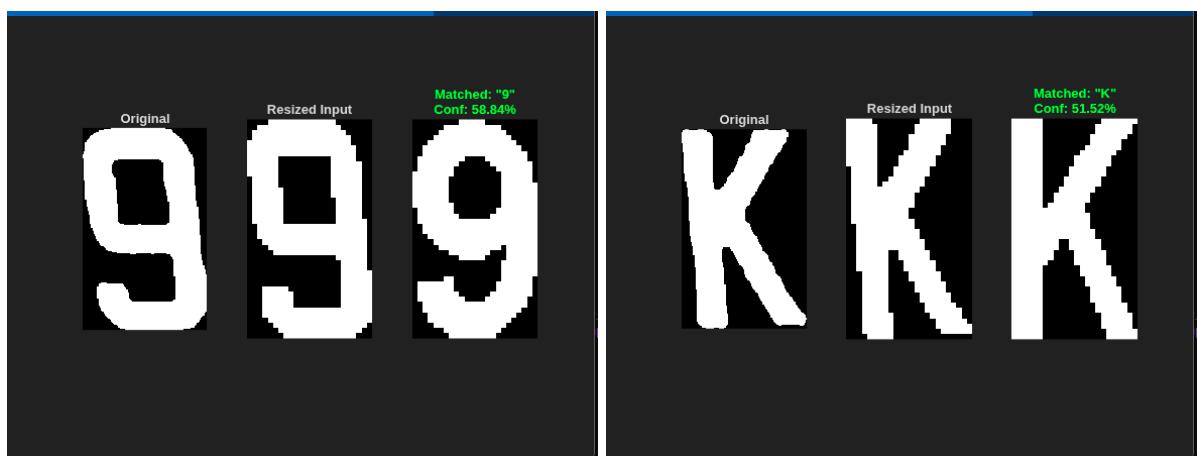
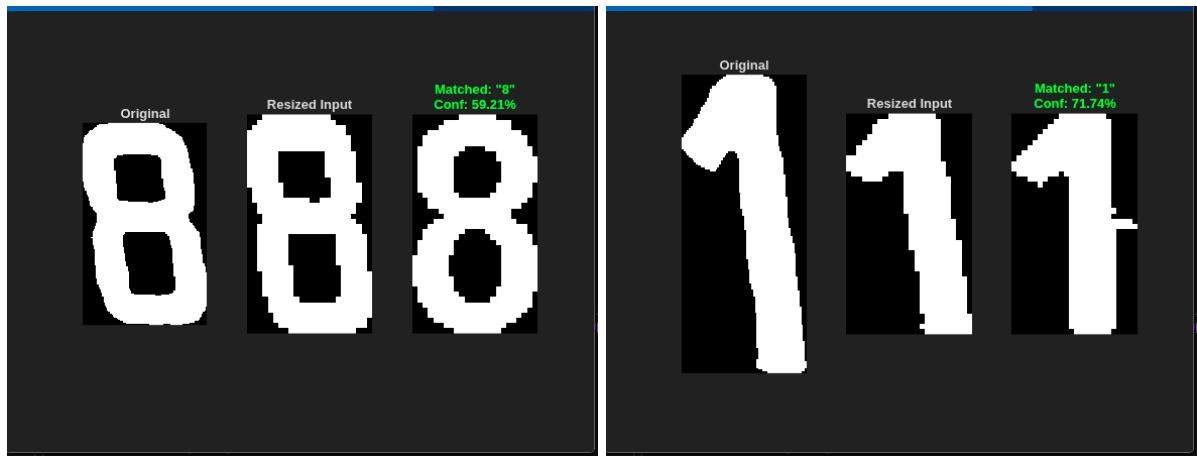


(a) Morphological opening (rect  
4 × 4) (b) Small component removal (bwareaopen, 500)  
(c) Character candidates (boxed)

## Character recognition (Example-1)

### Character Recognition







## Example-2: End-to-end (whole process)



(a) Original (resized)

(b) Grayscale conversion

(c) Sobel edge detection



(a) Horizontal dilation

(b) Hole filling

(c) Erosion (diamond structuring element)



(a) Bounding box on original

(b) Plate cropped (from grayscales)

(c) Plate ROI (grayscale, resized)

