Model Architecture

Input Video Frame

↓

**Grayscale Conversion
(cv2.cvtColor)**

↓

Gaussian Blur (cv2.GaussianBlur)

↓

**Adaptive Thresholding
(cv2.adaptiveThreshold) -> Detects
dynamic lighting conditions**

↓

Median Blur (cv2.medianBlur)

↓

Dilation (cv2.dilate)

↓

**Parking Slot Analysis (cv2.countNonZero
on cropped regions)**

↓

**Visualization with cv2.rectangle
+ cvzone text**