

# License Plate Recognition

Jirawat & Chanat

WHY  
WE  
WANT  
IT ?



# 3 FACT ABOUT CAR ACCIDENT



**1.3 Million**

Approximately 1.3 million people die each year as a result of road traffic crashes.



**5-29 years**

Road traffic injuries are the leading cause of death for children and young adults aged 5-29 years.



**3% Of GDP**

Road traffic crashes cost most countries 3% of their gross domestic product

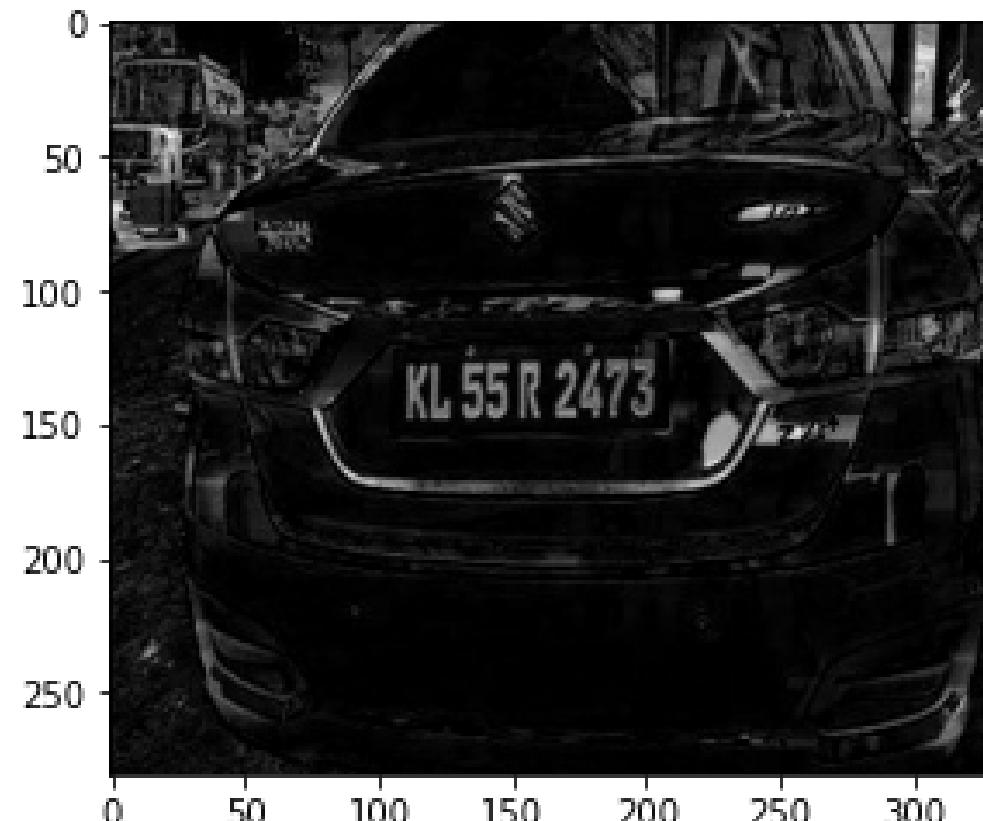


**"The safety of the people  
shall be the highest law"**

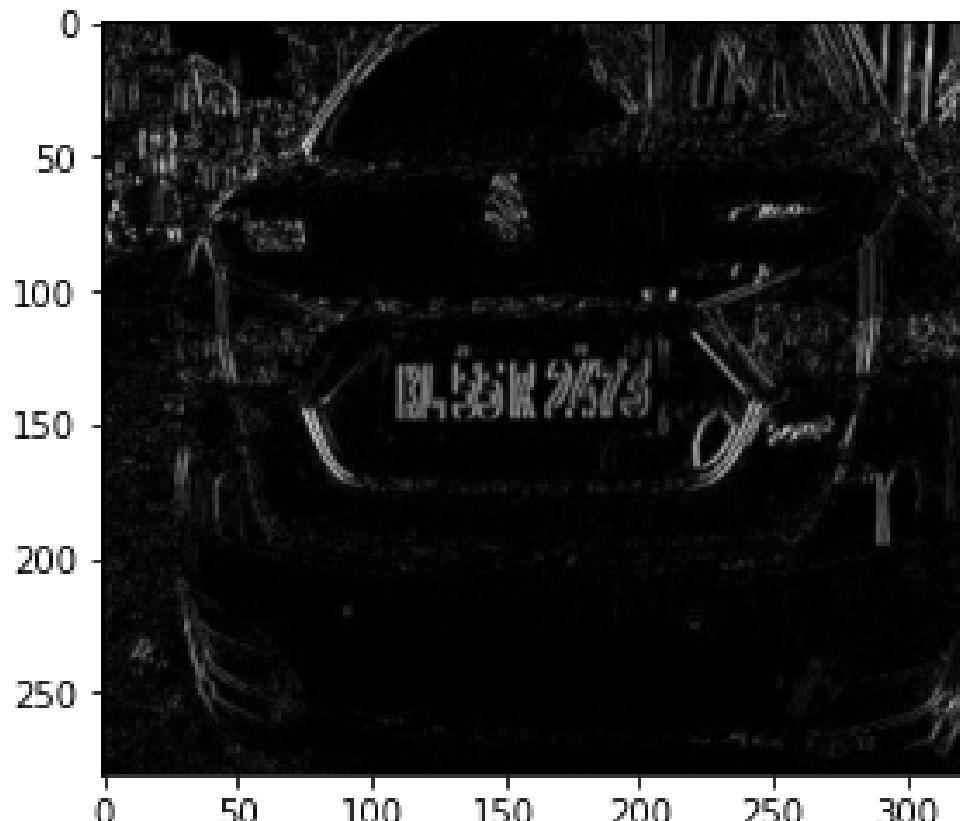
Marcus Tullius Cicero

# CONCEPTS & TECHNIQUES

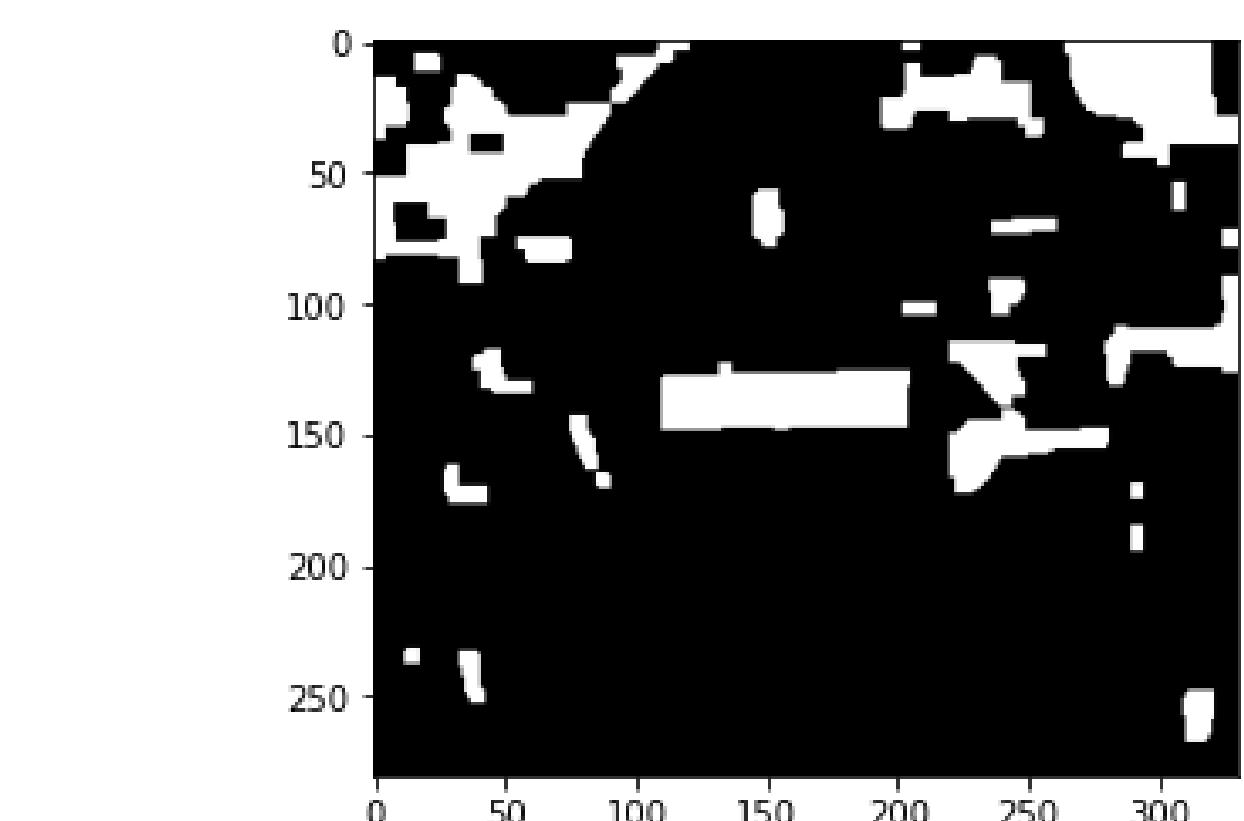
1) Regions that may have characters



Blackhat  
(closing minus  
original img)



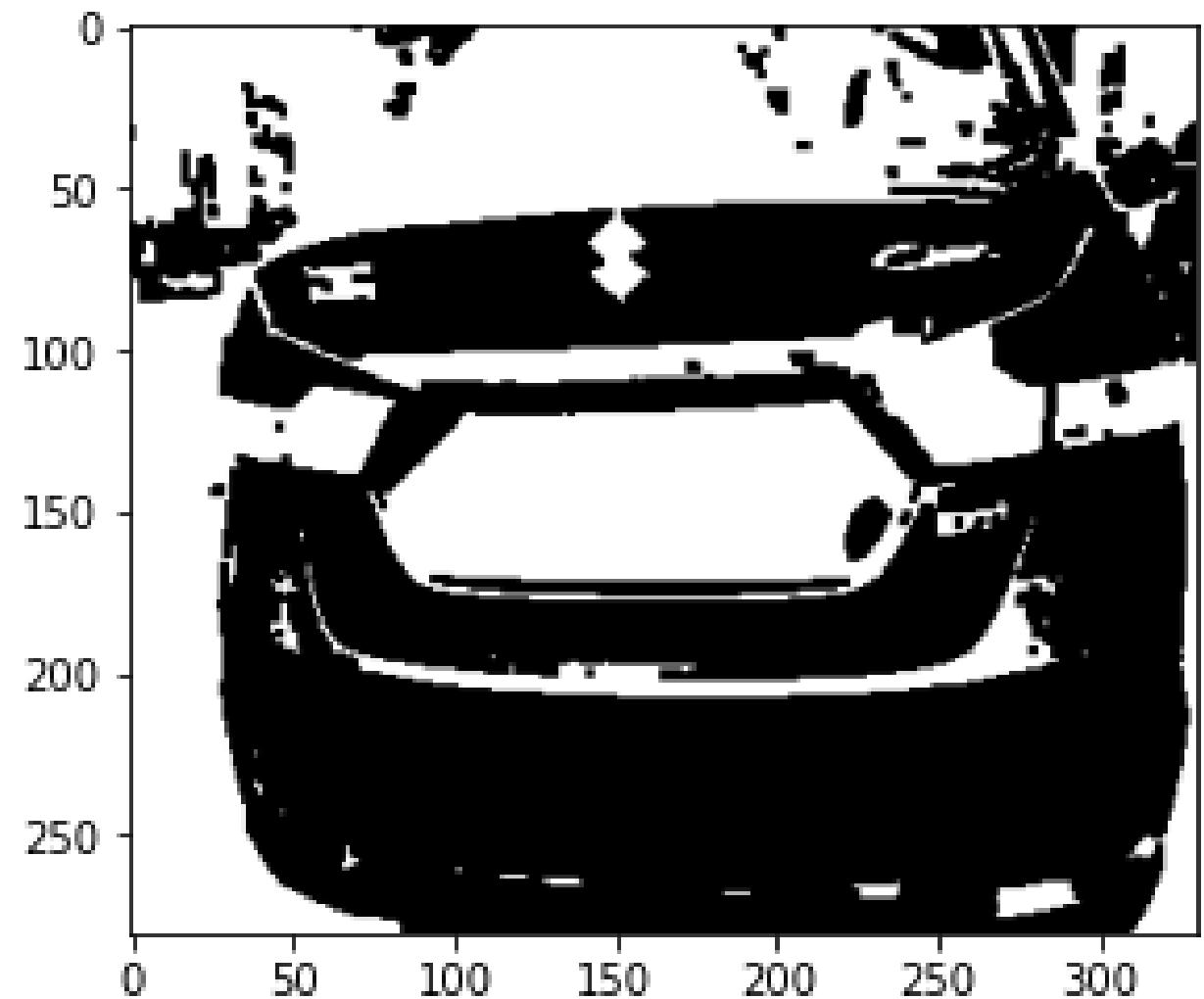
Sobel (for edges  
of characters)



Closing

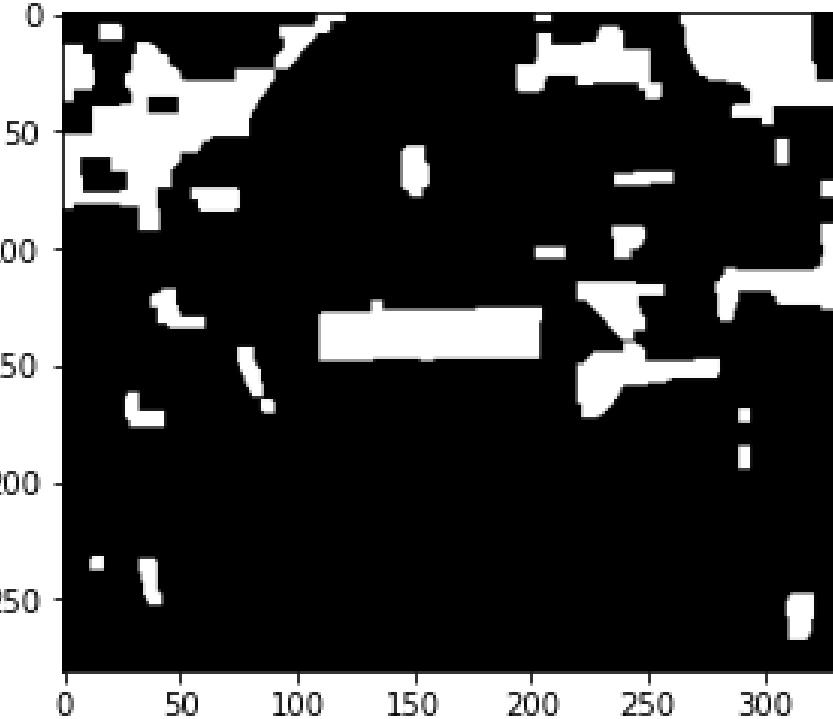
# CONCEPTS & TECHNIQUES

## 2) Light regions



Closing

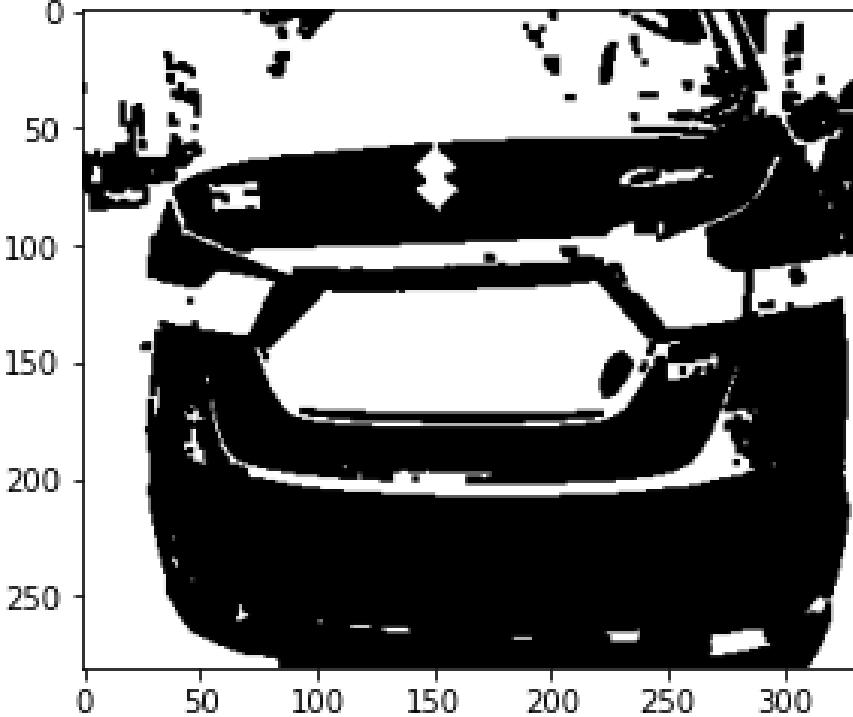
# CONCEPTS & TECHNIQUES



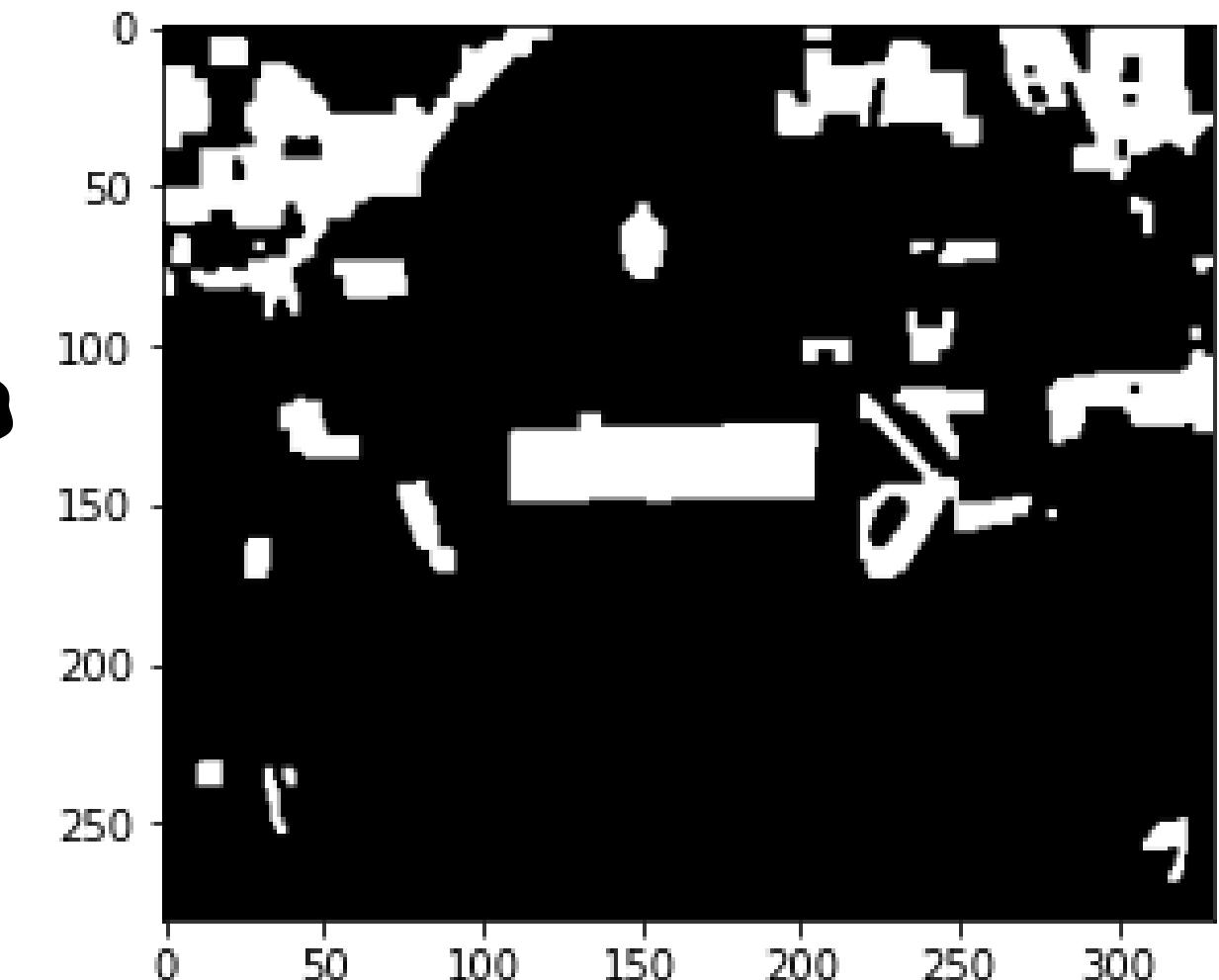
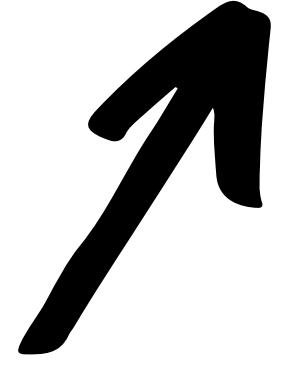
Regions  
that  
may  
have  
charact  
ers



bitwise\_and

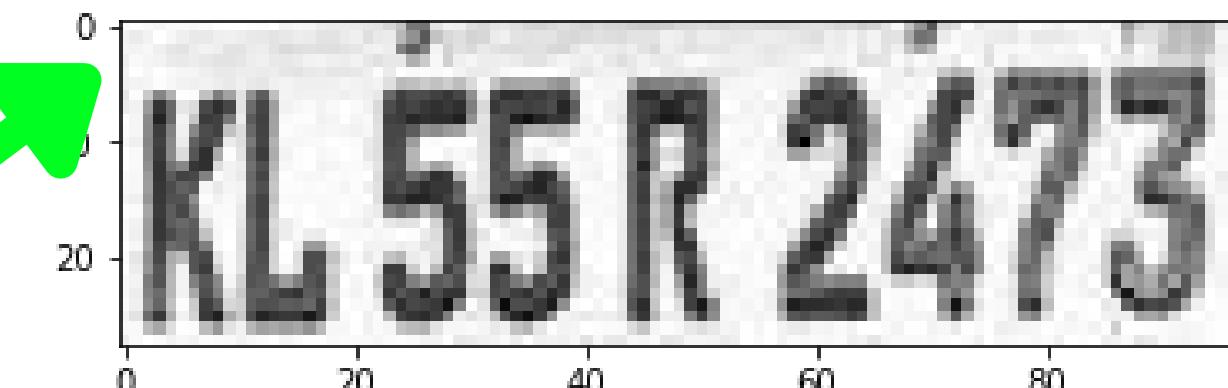
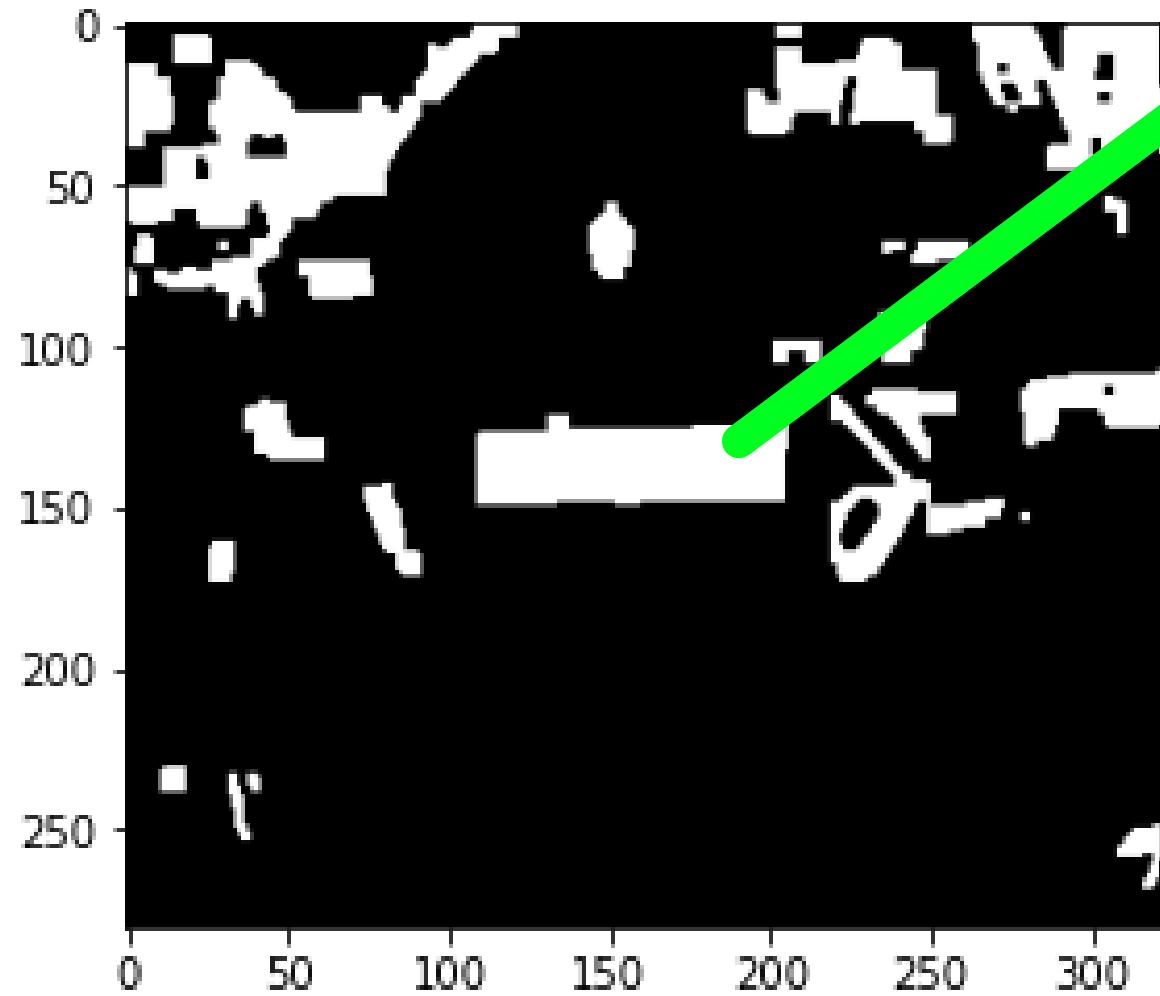


Light  
Regions



# CONCEPTS & TECHNIQUES

Find contour frame that has aspect ratio of license plate and crop it



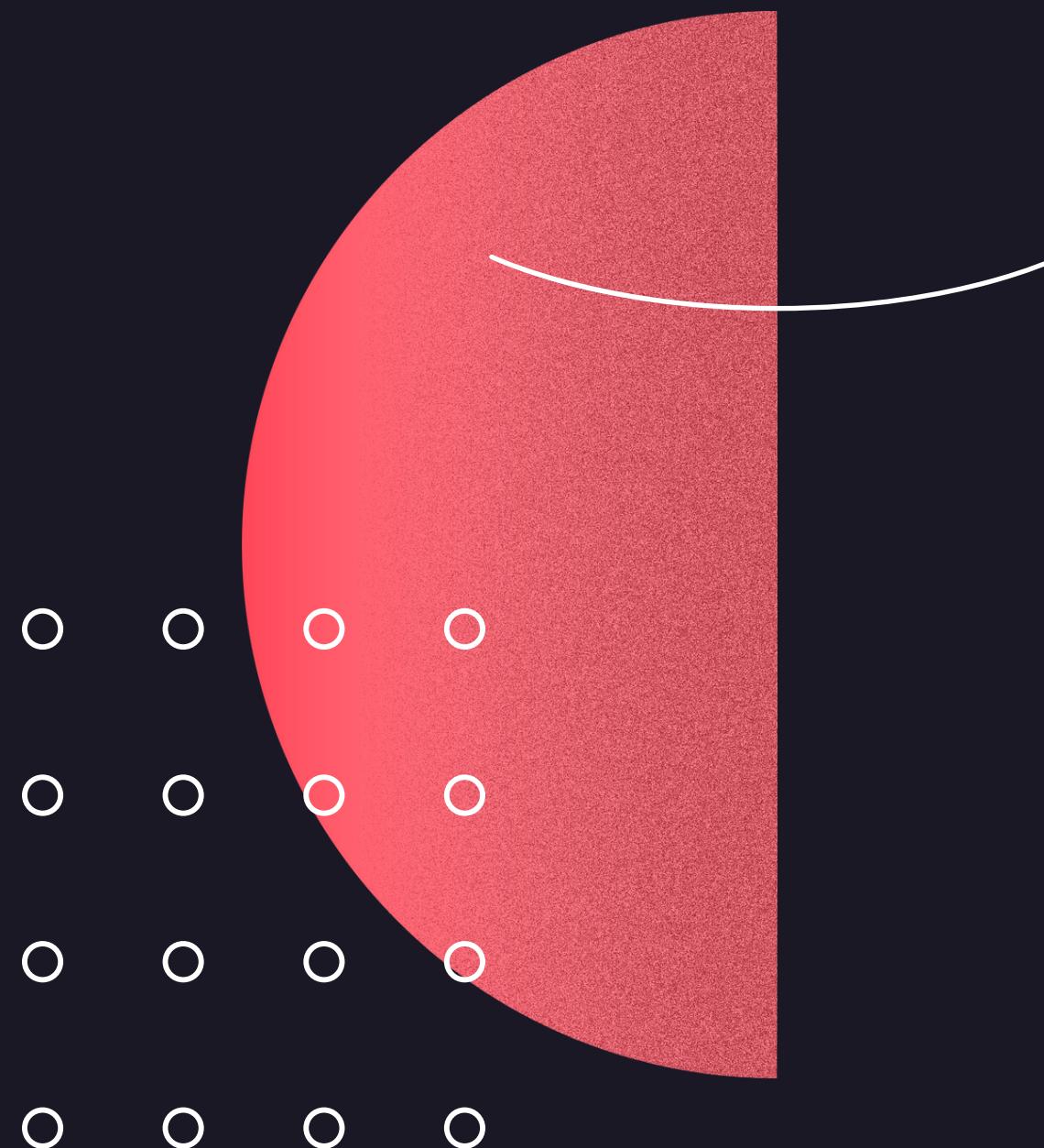
Tesseract Optical Character Recognition

```
import pytesseract
pytesseract.pytesseract.tesseract_cmd = 'C:/Program Files/Tesseract-OCR/tesseract.exe'
Cropped=licensePlate.copy()
text = pytesseract.image_to_string(Cropped, config='--psm 11')
print("Detected license plate Number is:",text)
```

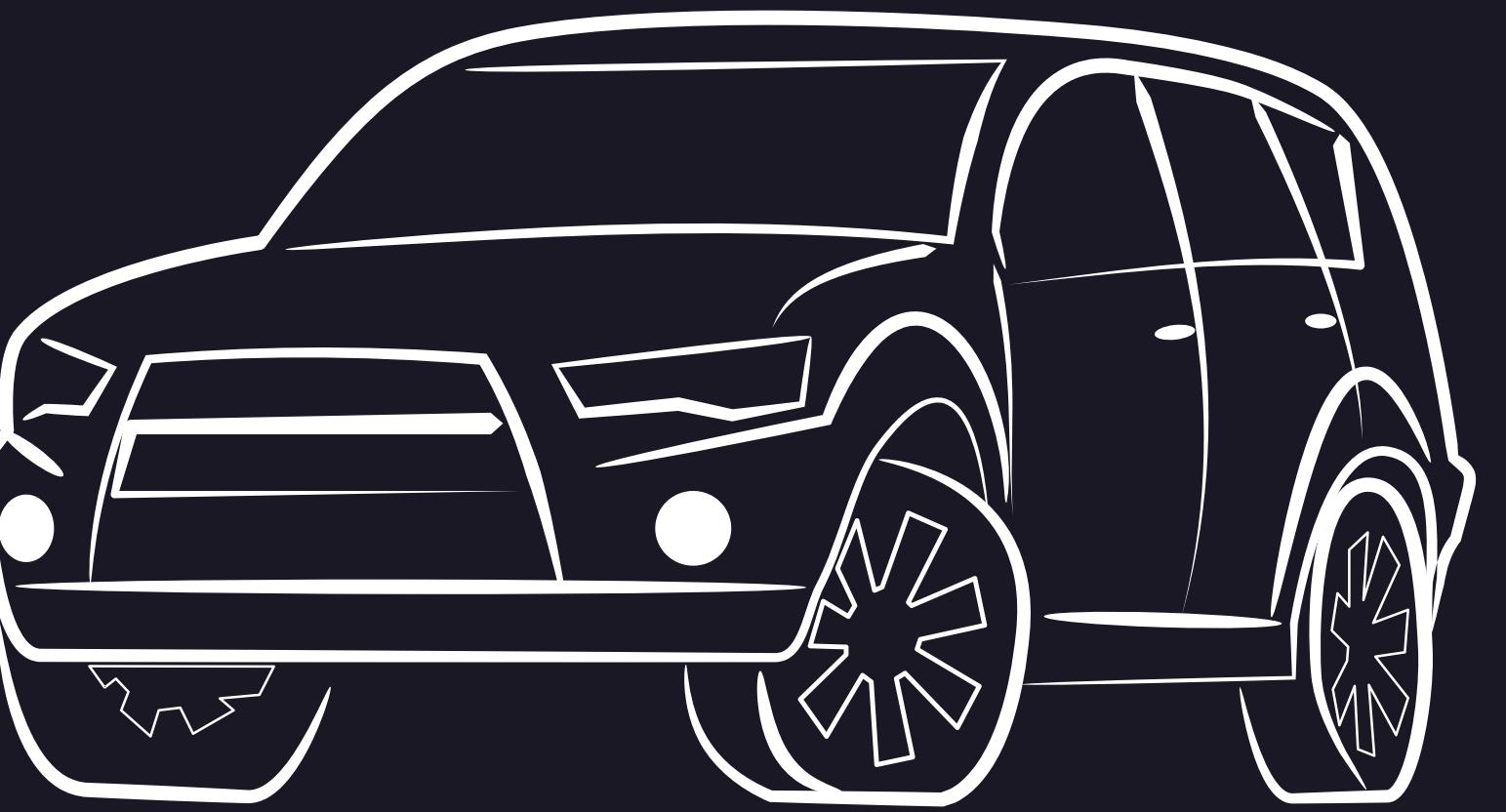
✓ 0.4s

Detected license plate Number is: KL 552 2473

03



# RESULT & ANALYZE

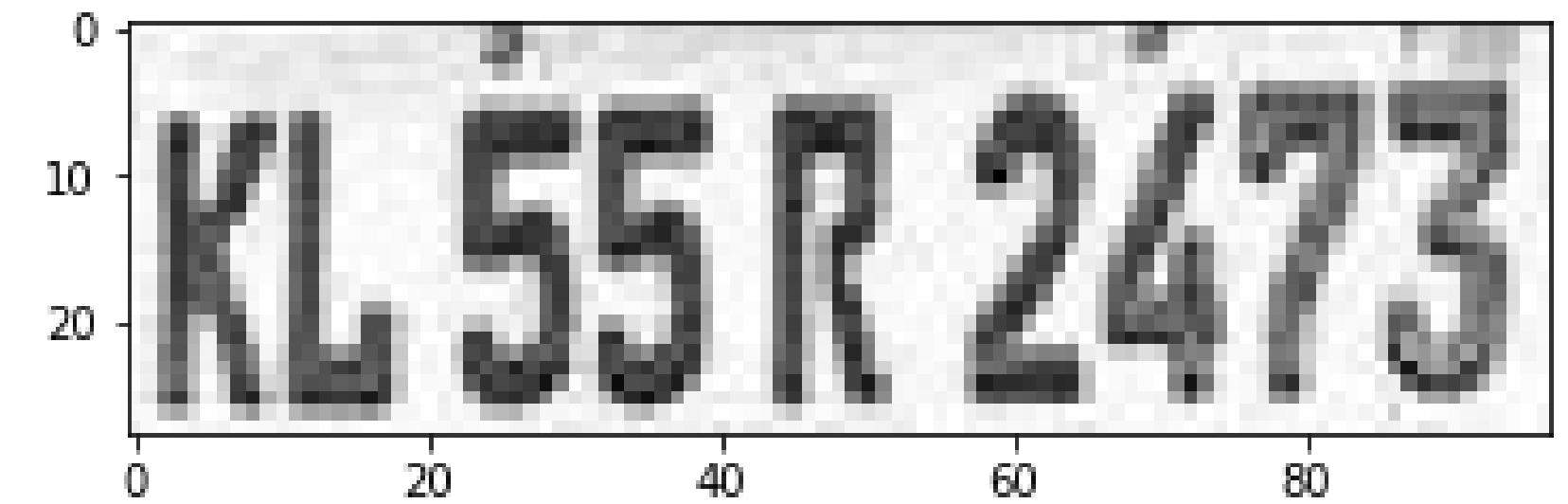


รถสี่เข้าม

**before**



**After**

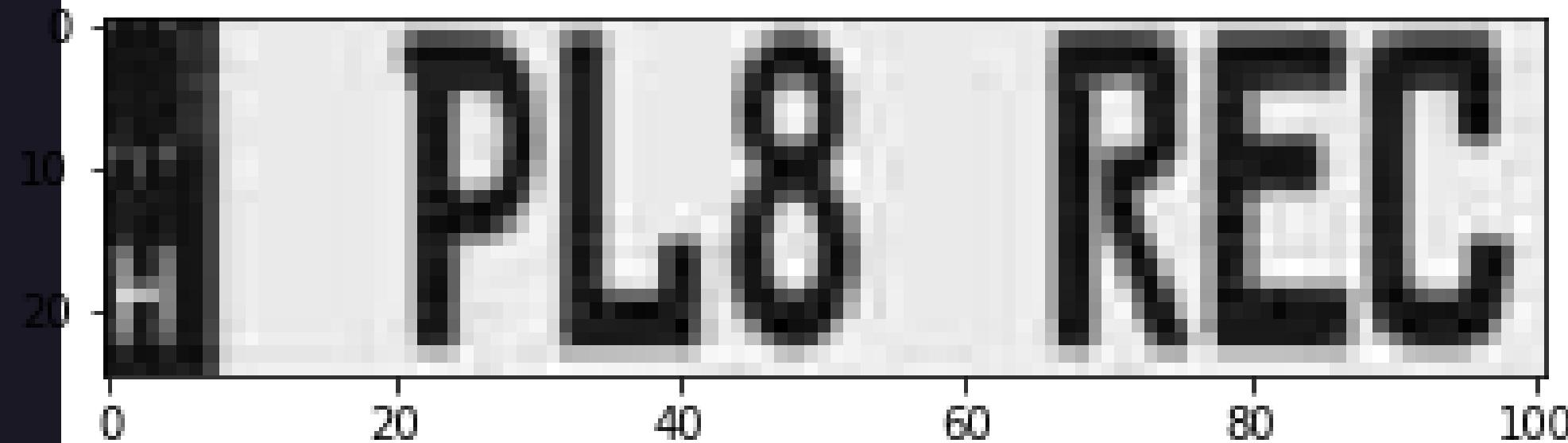


Detected license plate  
Number is: KL 552 2473

**before**



**After**

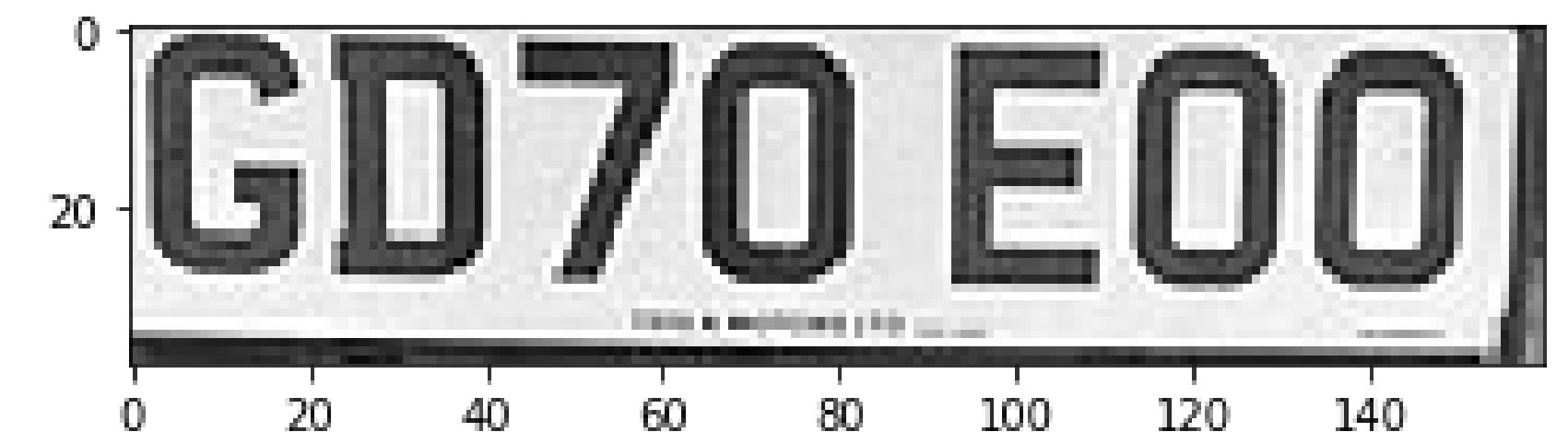


**Detected license plate  
Number is: PL8 REC**

before



After

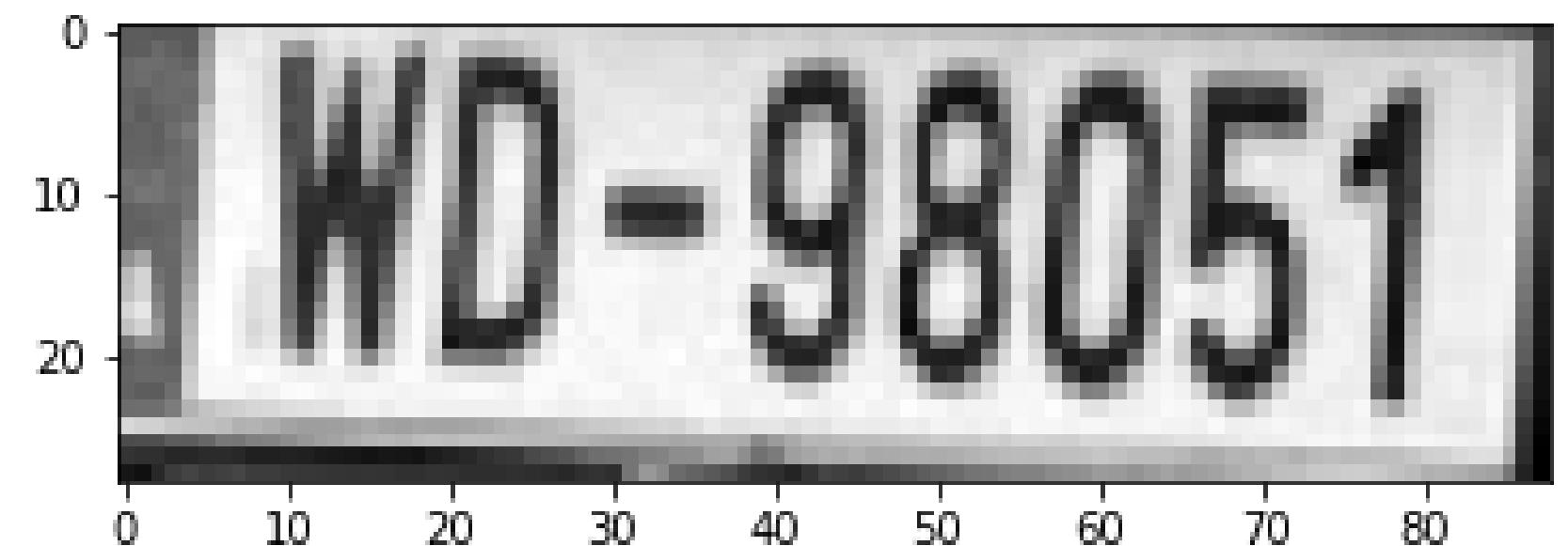


Detected license plate  
Number is: GD70 E00

# before



# After

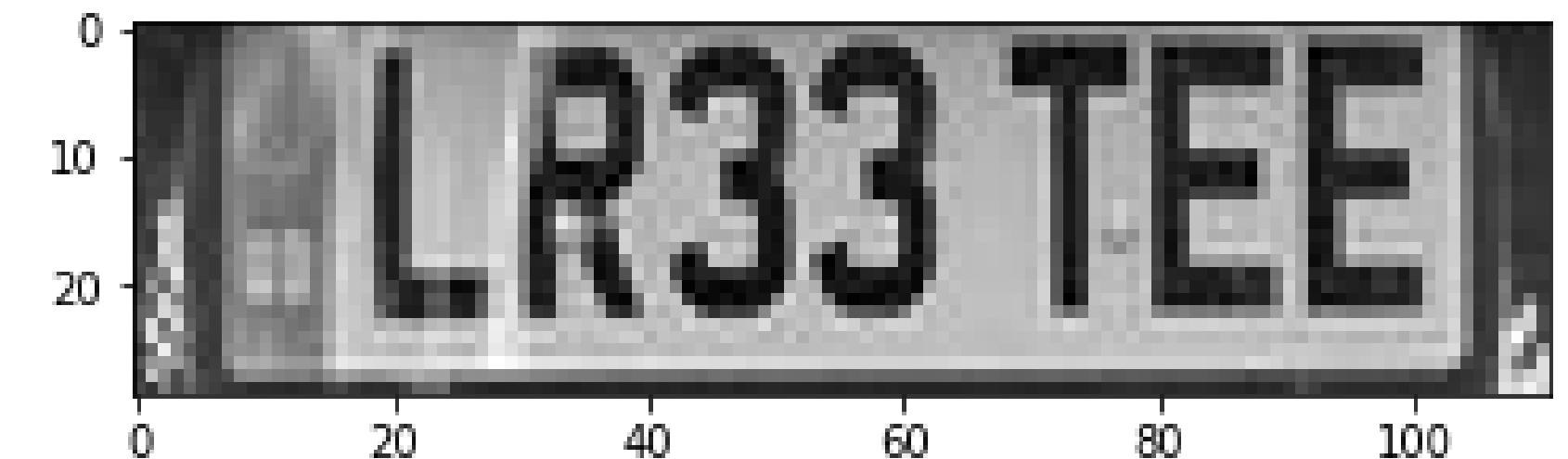


Detected license plate  
Number is: | W0-98051,

**before**



**After**



**Detected license plate  
Number is: WLR33 TEER**

**before**



**After**

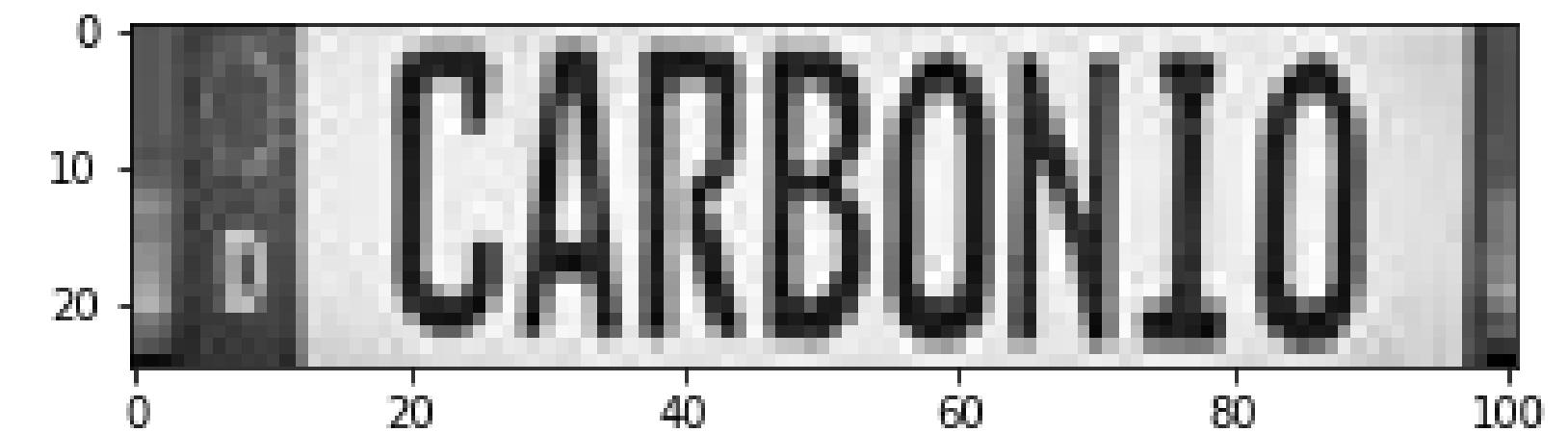


Detected license plate  
Number is: JeMH20DV23661\:

# before



# After



Detected license plate  
Number is: % CARBONIO !

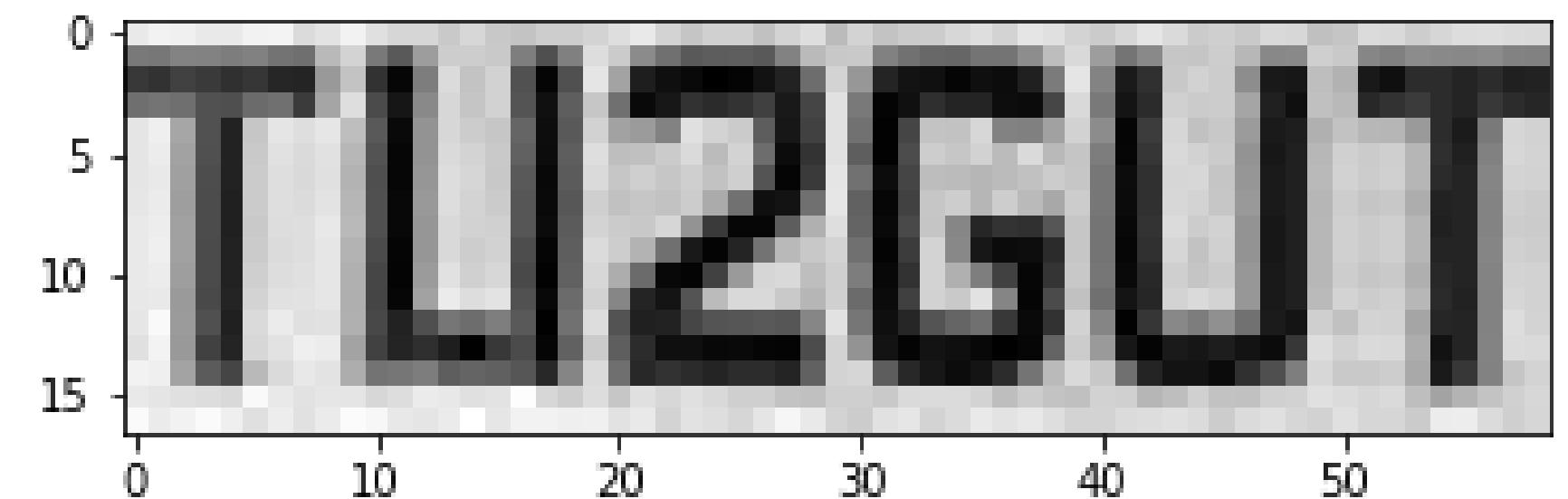
 CARBONIO

BMW No-Drill Front License Plate Mount  
worldwide design works with all license plates

# before



# After

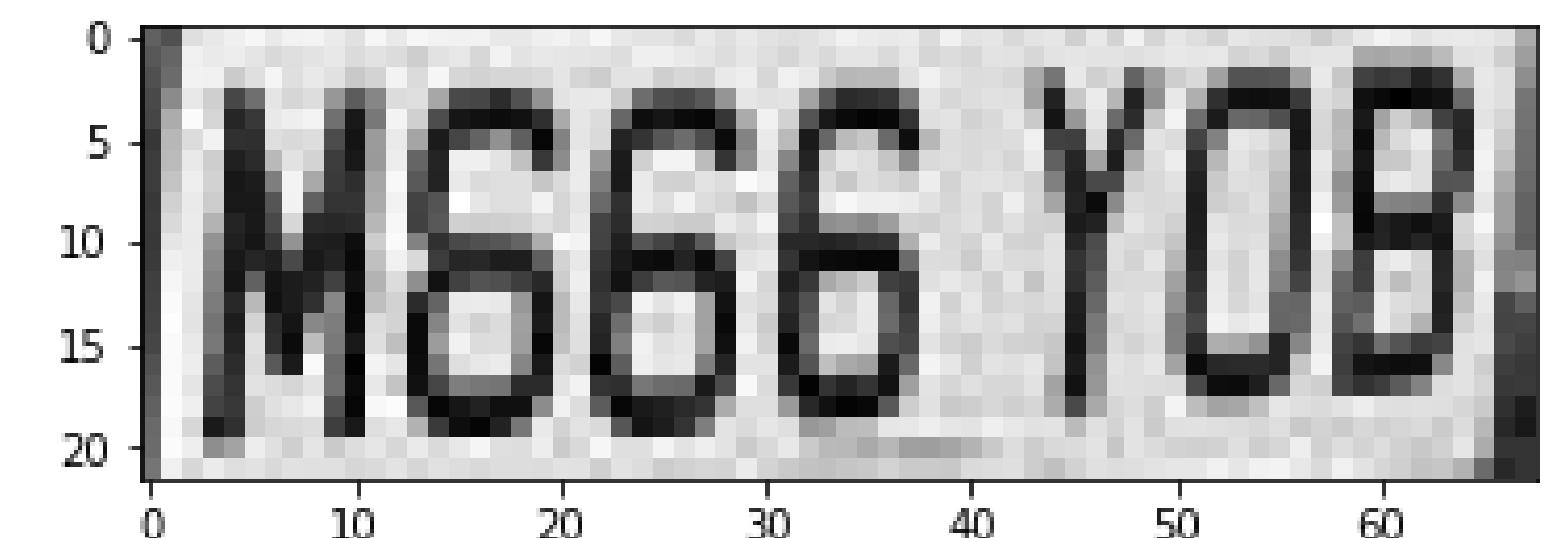


Detected license plate  
Number is: TUZGUT

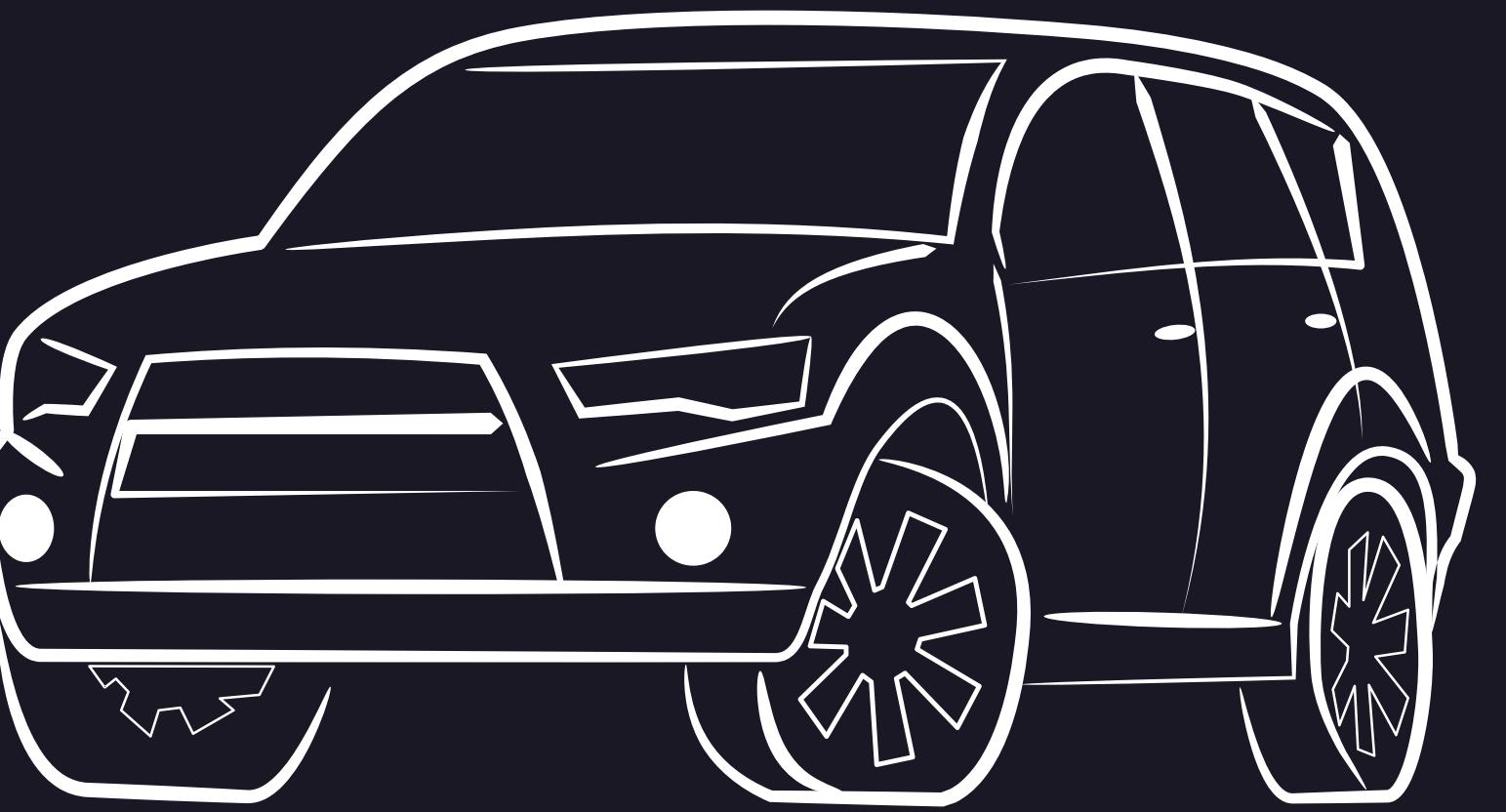
# before



# After



Detected license plate  
Number is: MS66 YO;

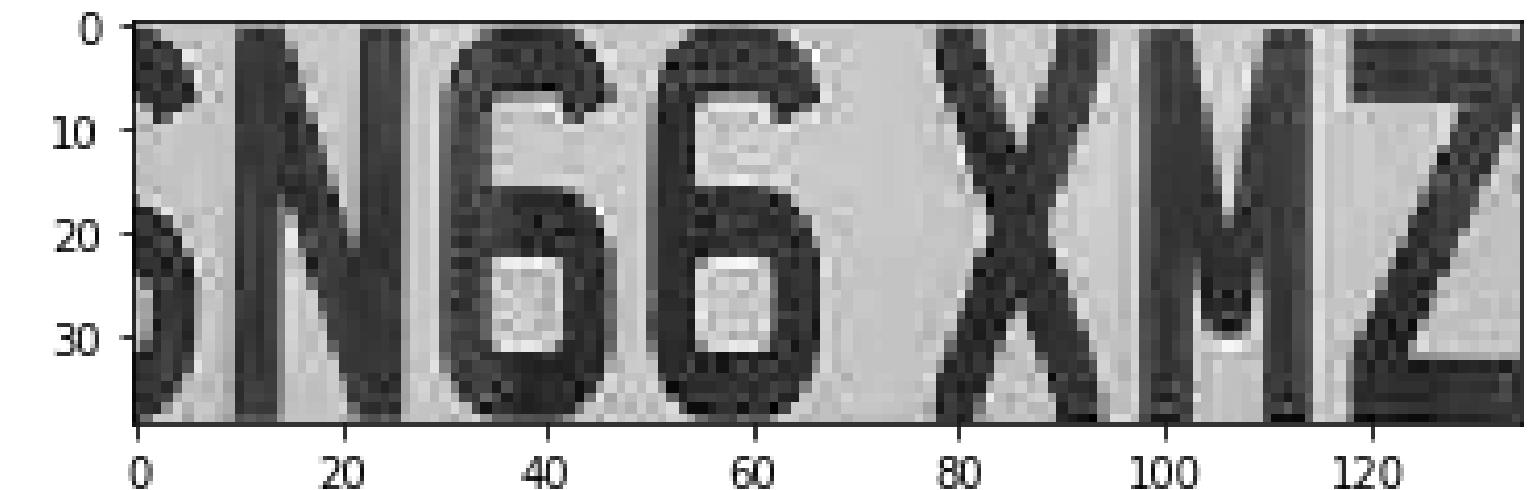


รถสีอ่อน

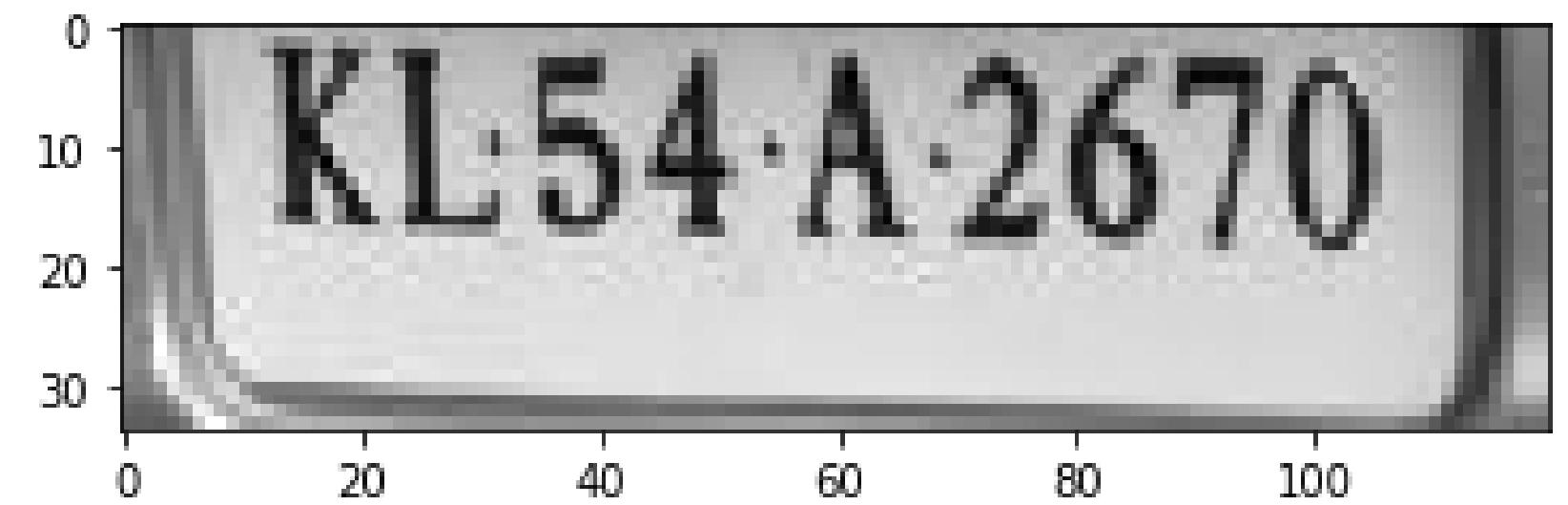
# before

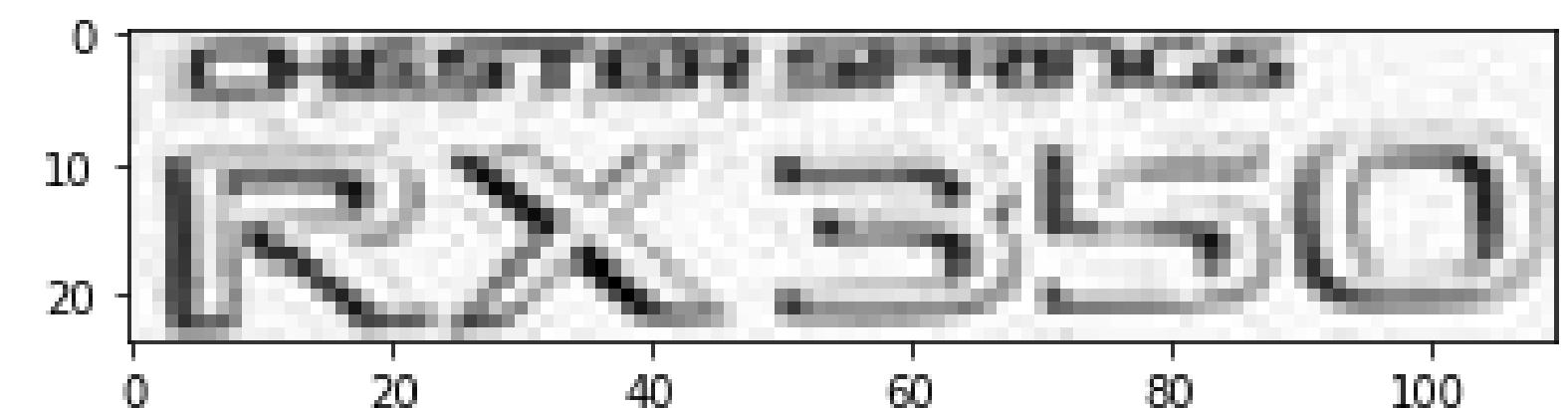


# After



Detected license plate  
Number is: N65 XMZ

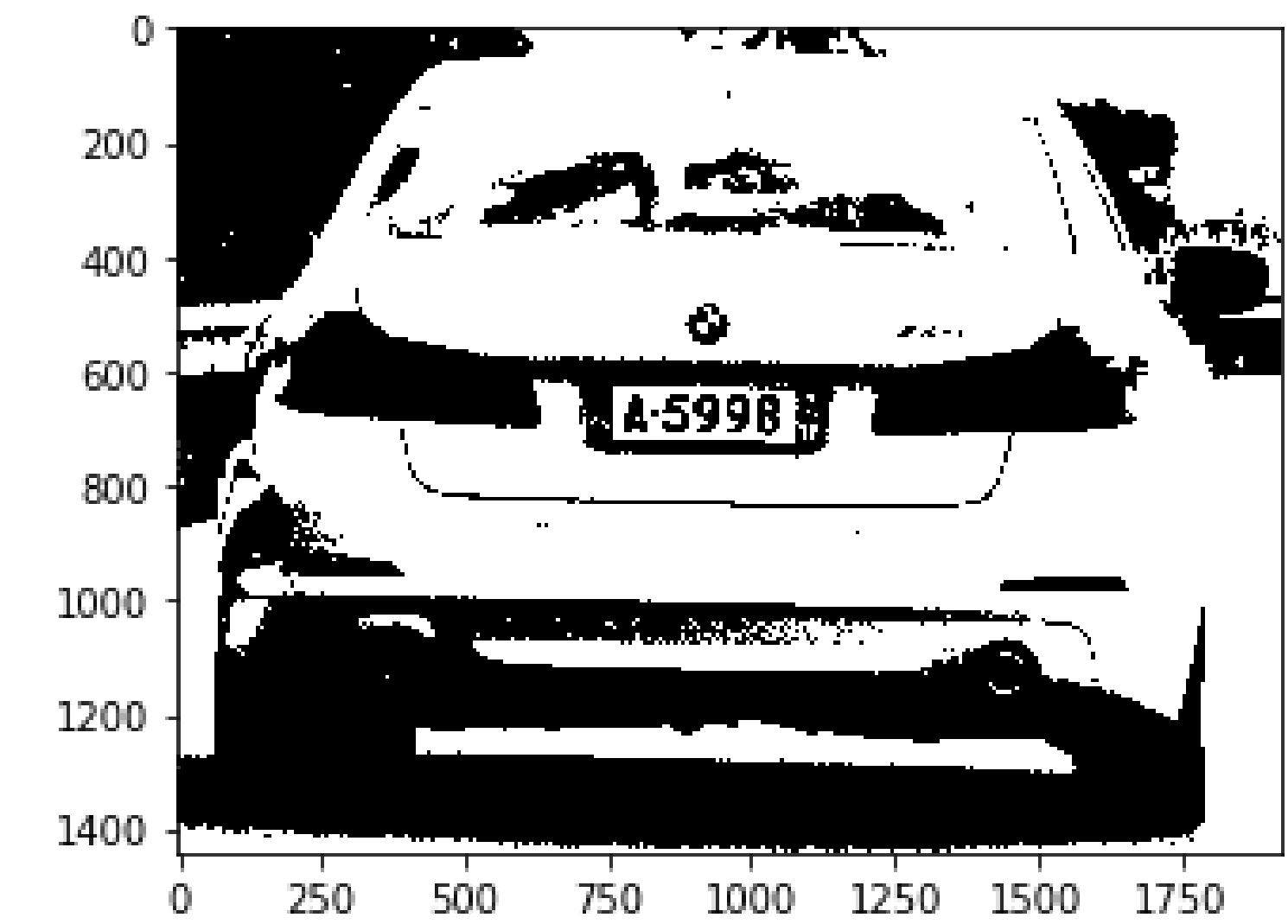






02





# RESULT

DATA SET

รถสีเข้ม 9 คัน

รถสีอ่อน 9 คัน

ผลลัพธ์

(อ่านถูกต้อง/แปลงอักษรผิด/จับผิดพลาด)

รถสีเข้ม 3/6/0

รถสีอ่อน 0/1/8





Thank  
you



THANK  
YOU

