Messing around with OpenCV to create a

#### License Plate Reader

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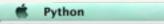
### **DEMO**

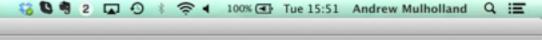
(result so far)

# Initial Image



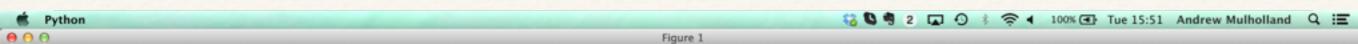
### Sobel Filter

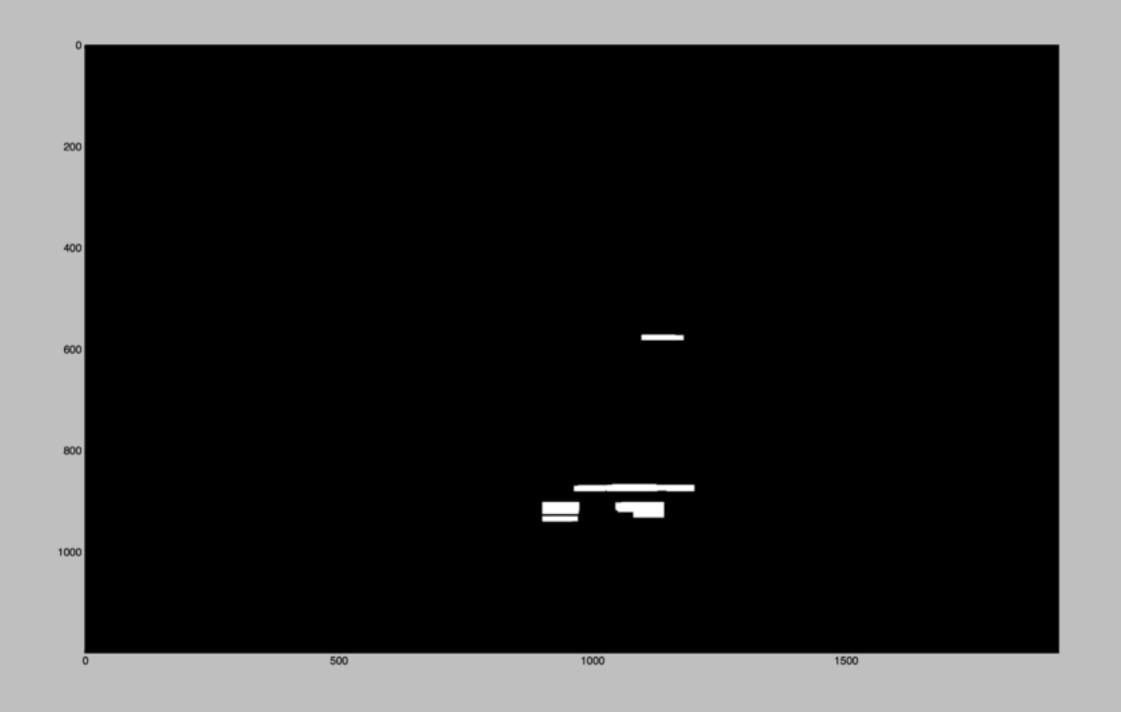






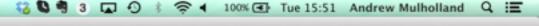
## Morph - fill in the gaps





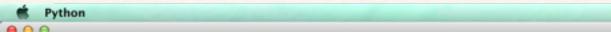
# Overlay mask

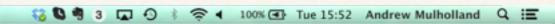


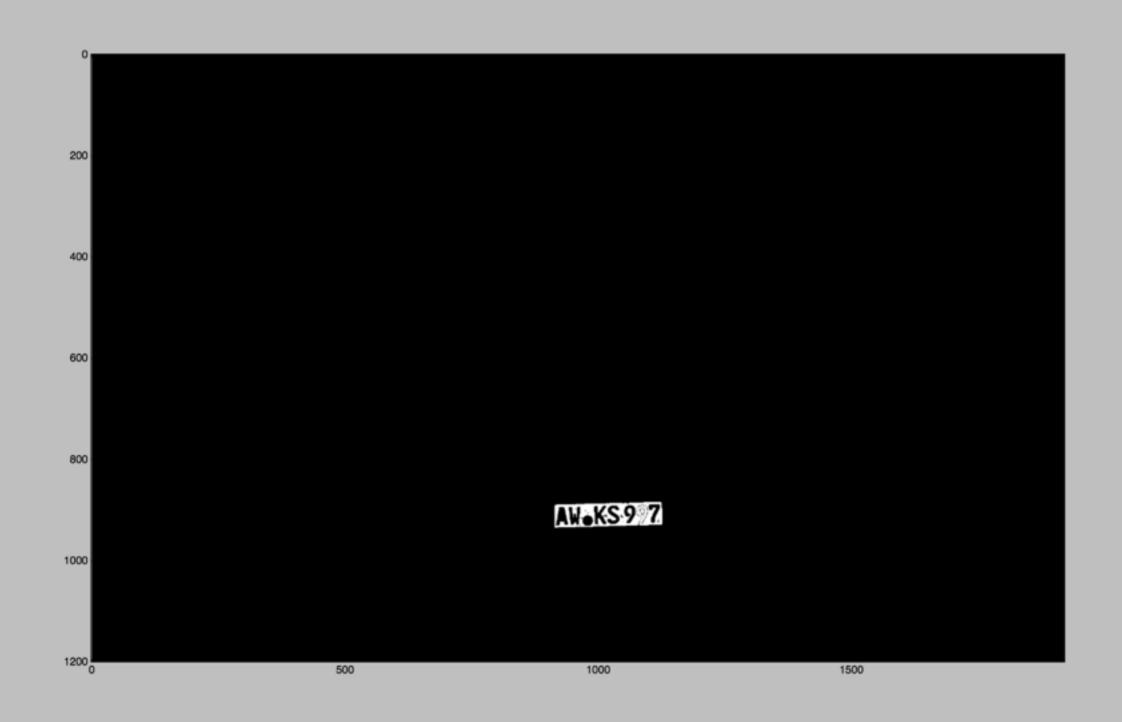




### Flood Fill

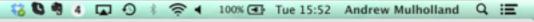


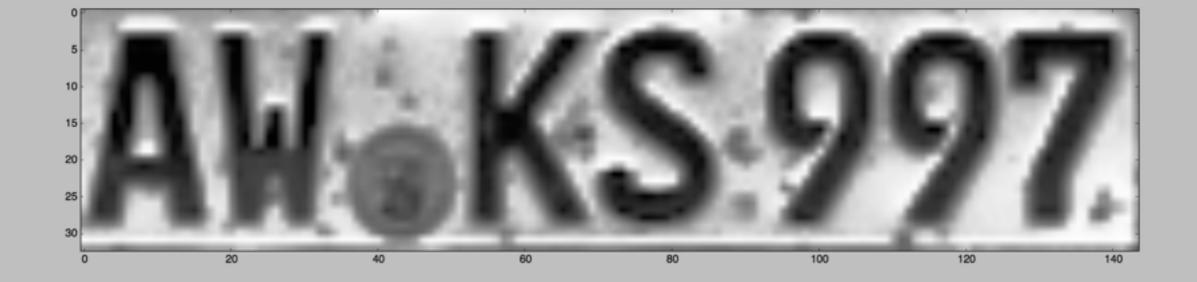




# Extract the plate





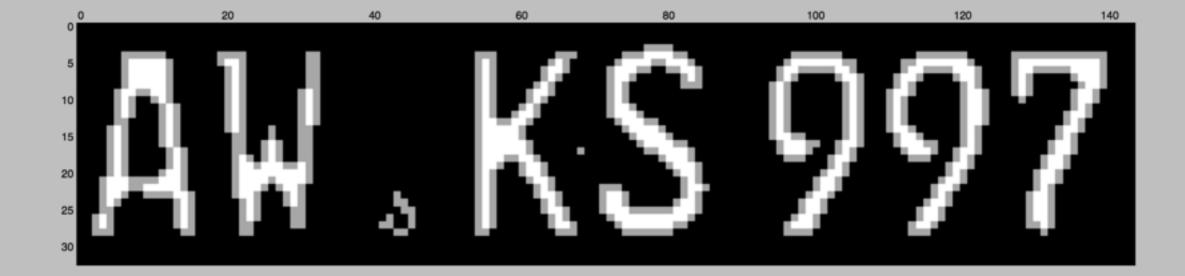


## Image processing on the plate



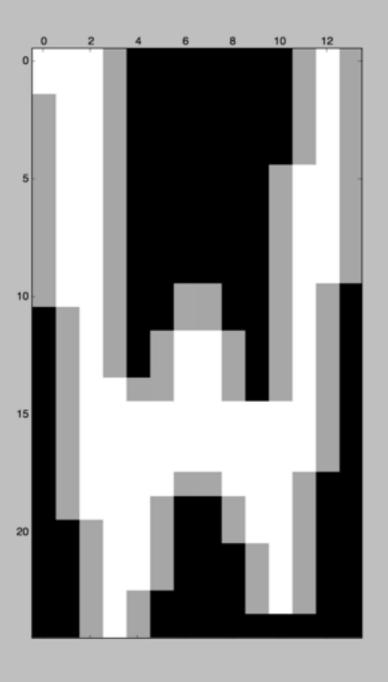






#### Which Letter is this?

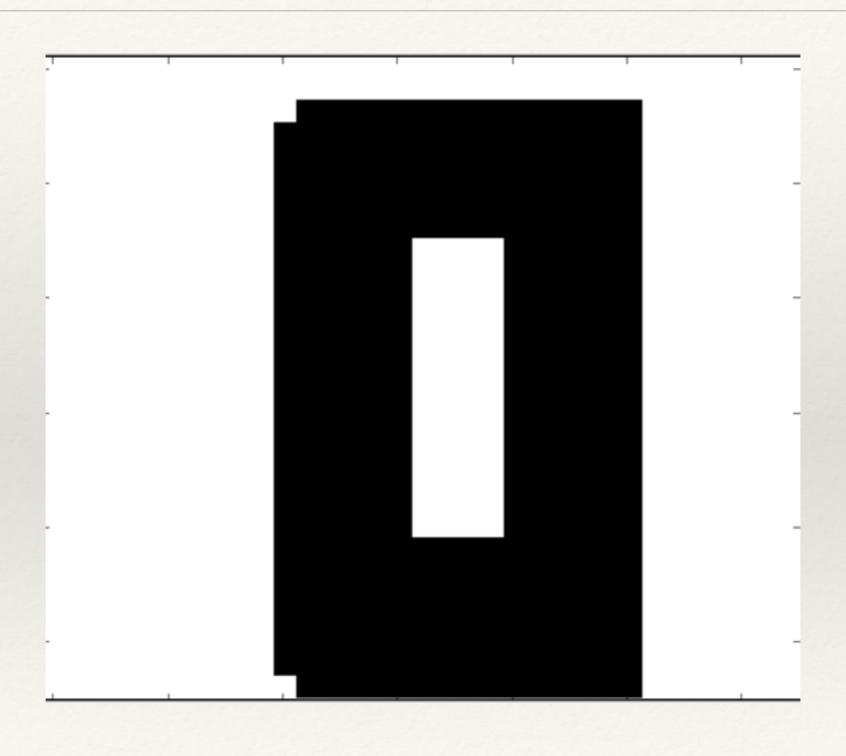




## What is the 3rd Char from right?



#### This is how we send to Tesseract



#### Results

- \* Speed: under 5 seconds per image without optimisation
  - \* Possible to take this down to 0.5 seconds with reduced accuracy, and by tuning parameters.
- \* Accuracy: Letter by letter over 60% lots of ideas for improvement.

### Further improvements

- Training set, would boost accuracy
- Tesseract interaction is perf bottleneck
- Looking for other text on cars (Sponsor logos, race numbers)

# Thank you

