

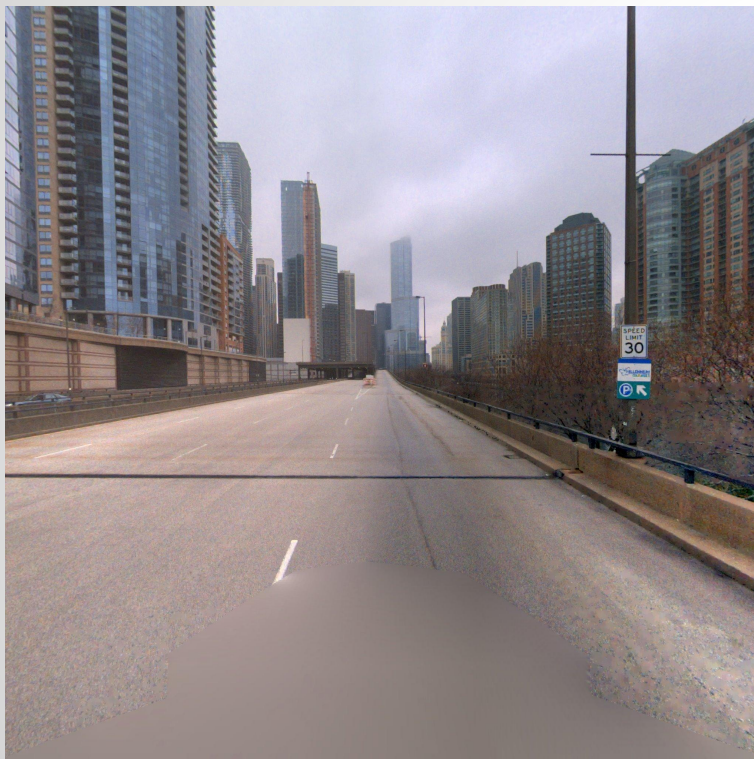
Speed Limit Sign Detection

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General Approach

- C++ ([Magick++](#) API)
- Smooth out the image and then locate the edges
- Using the modified image, detect connecting edges to locate speed limit sign

Intermediate Stages



Original Image

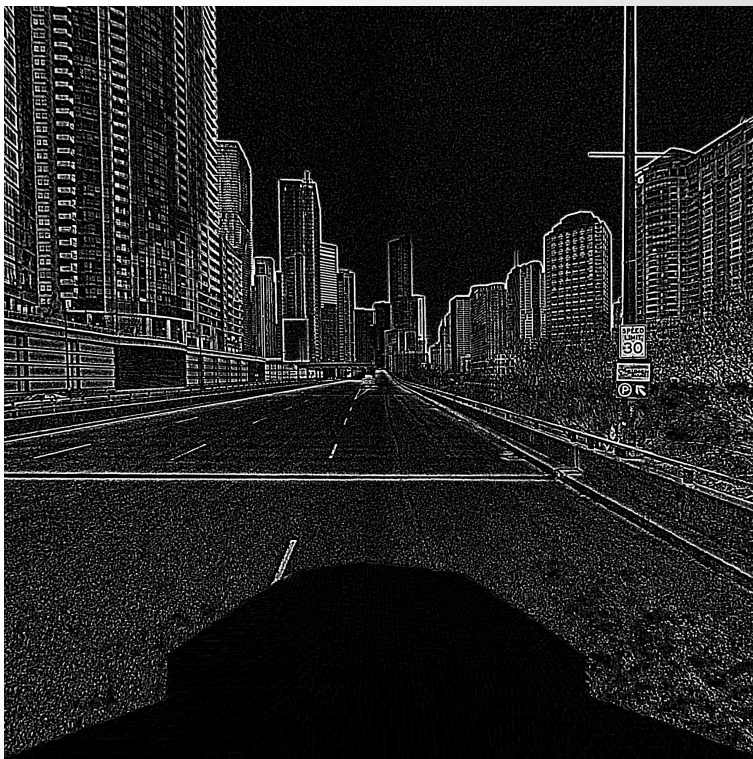


Grayscale Image

Intermediate Stages



Blur Applied



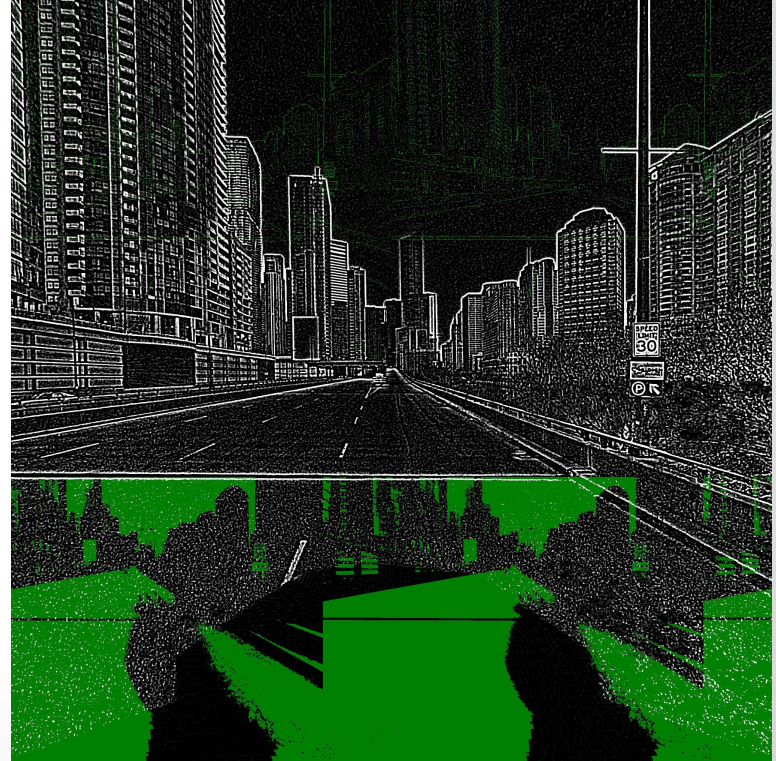
Edges

Current Stage

At this stage, I ran into difficulties when trying to locate the specific edges of the speed limit sign.

To do this, I was examining pixels and their surroundings, comparing pixel intensities.

I was seeing duplicate outlines and in the wrong locations, making it difficult to focus the search mechanism to the frame of a speed limit sign.



Challenges

1. My initial approach to finding the speed limit sign has a brute force aspect, meaning tests can take a little while, which slowed my progress
2. In actually analyzing the pixels, I clearly ran into some issues. Part of this was a lack of understanding of the API I was working with, as the documentation was not particularly clear.

Future Steps

1. Troubleshoot current issues, so that edges that are specifically outlined line up with the original image/edges
2. Finish specializing the program to locate the rectangular form of a speed limit sign
3. Quick final touches (returning appropriate textual information, taking an entire folder of photos as input, etc)