Abstract
We are trying to test a new clarity algorithm of making an image clearer. To test this we created a red light camera application. This takes a video as input and outputs a clear image of a license plate. With our final product you should be able to run our application using any kind of video, including ones taken with a smartphone camera.

Architecture
To get to the final clear image, we went through multiple phases within the application.
1. Separated video into a list of images
2. Located license plate within each of those images
3. Cropped the license plate and a few pixel around it to account for error
4. Performed our clarity algorithm in addition to other preexisting algorithms on the list of cropped images
This outputs a single clear image of the license plate within the video.

Impact
This project proves that our sponsor's algorithm works and can be implemented in a real world application.

We chose to create a red light camera because this would mean you could use this algorithm to find license plates of those who speed without the use of an expensive high speed camera. In addition, this is all post processing so you can use it on past cases as well if you have record of the video.

Results
Before

After

Summary
This new algorithm helps develop the future of image processing. By implementing this and various preexisting clarity algorithms, we have learned the history of image processing and the problems that go with it.