CHAPTER 6 CONCLUSION

Based on the results, it proves that applying the similar method of license plate detection system into chassis plates doesn't give satisfying results. It proves that there are many factors that contributes to the resulting accuracy of the prediction. Those factors can be noises, since some chassis plates are seen to have many dents in them or damaged, some color spots, or other noise like blurry image, that can increase the complexity within the feature image. Aside from noises, the similarity between characters (for example t and y) or the difference of fonts in each plates also contribute to the accuracy of the prediction.



Illustration 6. 1: noise

The illustration 6.1 shows the example of a noisy image, which shows a blurry image of a damaged plate. Which resulting in its feature to be hard to be extracted.





Illustration 6. 2: similarity

Illustration 6.2 shows the of the letter T and Y in the same plate,



Illustration 6. 3: different fonts

Illustration 6.3 shows that even some plates have a different font style for the same character, shows their lack of uniformity.

Despite the accuracy of the results, the use of fuzzy edge detection helps in gaining most of the image features, since even the features of the plate images with poor lightings can still be detected. This helps in obtaining more image samples for the dataset.

The use of neural network seems to be quite effective in recognizing various image samples. Although the accuracy depends on the complexity of the samples. And the complexity of chassis plate characters and numbers is really vast in each other. As a result, the recognition process becomes quite challenging as compared to license plate recognition systems.

In the future researches, in order to detect and recognize chassis plates, some additional steps may be needed to increase the accuracy of predictions. Such as noise reductions or dimensionality reduction to reduce the complexity of the images, or by using a larger collections of datasets so that the neural network predictions can be improved and more accurate.