Enhancing licence plate numeric character detection and extraction using Super Resolution

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Keywords—super-resolution, srcnn, srgan, licence plate detection, ocr

# Introduction

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# Background

## Super-resolution (SR)

First,

#### SRCNN: Place

#### SRGAN: Place

## Image detection

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## OCR

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# Dataset

In this study, the datasets were collected from 2 sources. According to the hypothesis that the super resolution technique can enhance the performance such as an accuracy of license plate numeric character detection and extraction, the first dataset has to be collected as the high resolution images for evaluating the test result compared with known license plate numbers. The second dataset was collected from the real world to show the result from super resolution and OCR techniques. Therefore, the license plate number in this dataset may be blurred and unreadable.

## Train/Test dataset

The dataset for training and testing has to be collected with high resolution and have clear license plate numbers. The images were collected by using a smartphone camera when the cars were stationary in the daytime. Approximately, 50 images were collected from an military base entrance in Thailand. An example of the images is shown in Fig. 1

A person standing next to a car

Description automatically generated with medium confidence

Fig. a train/test image

## Real world datset

The real world dataset was collected by using a car camera attached to the front window inside a car. The images were taken while the car was both stationary and moving. Fig. 2 is an example of real world images.

A group of cars on a road

Description automatically generated with low confidence

Fig. a train/test image

# Methodoloyg

## Super-resolution (SR)

First,

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#### SRGAN: Place

## Image detection

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## OCR

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# Result and Discussion

After

# Conclusion

# Future work

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