NAVER

DEBLURRING LICENSE PLATE IMAGE

Woosong University

Meet Our **Best Team**

Usmonkul Khakimov

Team leader. Skills - JavaScript, React, HTML, CSS, SQL, Bootstrap, SASS, Python

Shokhrukhbek Primkulov

Software Engineer. Skills - Python, SQL, Java, AWS, GCP, Web Development

Iskandar Gulyamov

Team member. Skills - Java, Python

About Project

The project was deblurring license plate images and recognizing characters of a deblurred license plate image. But, We only focused on the deblurring model rather than recognizing characters of the license plate. A deblurring license plate is very useful when it comes to finding road troublemakers. Although there are cameras everywhere, they could not take clear pictures, and takes motion blurred shots instead because of the high speed of vehicles. This condition makes the deblurring license plate project a more important topic to research, investigate, and use commercially.

NEXT

Our Goals

Deblurring

The main aim of the project is deblurring motion blurred license plate images.

Recognizing

if deblurred images are not clear to recognize with the human eye. Recognizing characters in the plate using a recognition model.

Finding road troublemakers

Using our project, find people who do illegal activities using their cars by finding their license plates.

MISSION

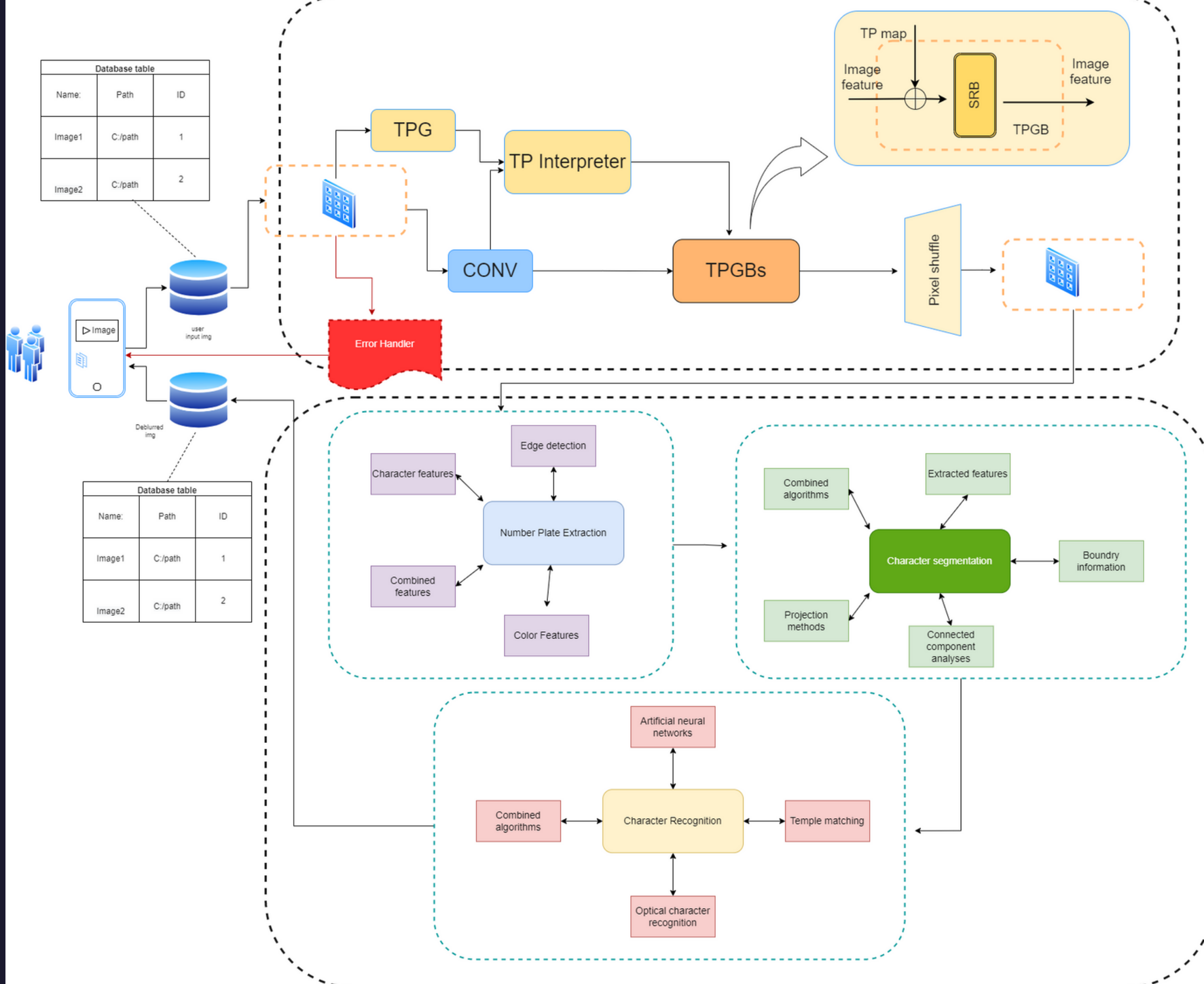
Our mission was to experience the real-life project from the first concept step to the last execution step. Moreover, improving our research skills, and using our machine learning and deep learning knowledge to build image deblurring models.

Project schedule

세부내용	수행기간(월)																비고
	3				4				5				6				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
1. Discussion&Proposal	–	–															
2. Architecture Building			–	–													
3. Make S/W diagramm& HID					–	–	–										
4. Make LLD& Coding								–	–	–							
5. Coding& Testing											–	–	–	–	–		
6. Presentation																–	

This was the planned project schedule. But We couldn't follow this schedule properly as there were issues like finding right dataset and using wrong module, algorithm to deblur mosion blured images. So that we needed to go back to each step again and again to understand the new dataset and algorithm.

LLD


Database table
Name:
Path
ID
Image1
C:/path
1
Image2
C:/path
2
TP map
Image feature
SRB
Image feature
TPGB
TPG
TP Interpreter
CONV
TPGBs
Pixel shuffle
Image
user input img
Error Handler
Deblurred img
Database table
Name:
Path
ID
Image1
C:/path
1
Image2
C:/path
2
Edge detection
Character features
Number Plate Extraction
Combined features
Color Features
Combined algorithms
Extracted features
Character segmentation
Boundry information
Projection methods
Connected component analyses
Artificial neural networks
Combined algorithms
Character Recognition
Temple matching
Optical character recognition

Problems & Solutions

01 Dataset

Although we find many free datasets, most of the pictures in the dataset were not license plates but images of nature, etc. We requested more datesets. but they were not what we want but at least we collect more car images than before

02 GPU Resource

We requested more datesets. but they were not what we want but at least we collect more car images than b

03 Wrong blur type

We chose the wrong blur type to deblur the image. We were trying to deblur Guassian blur but we needed to deblur motion blur. After getting lots of low result, we figured out that it was because of wrong blur type so that we then changed our algorithm to deblur mosion blured images.

Upload your photo here...

200MB Limit per file

JPG, PNG, JPEG supported

Run on localhost through browser

Upload your photo here...

Drag and drop file here

Limit 200MB per file • JPG, PNG, JPEG

Browse files

Screenshot 2022-06-13 233134.png 184.5KB

Before

After

Upload your photo here...

Drag and drop file here

Limit 200MB per file • JPG, PNG, JPEG

Browse files

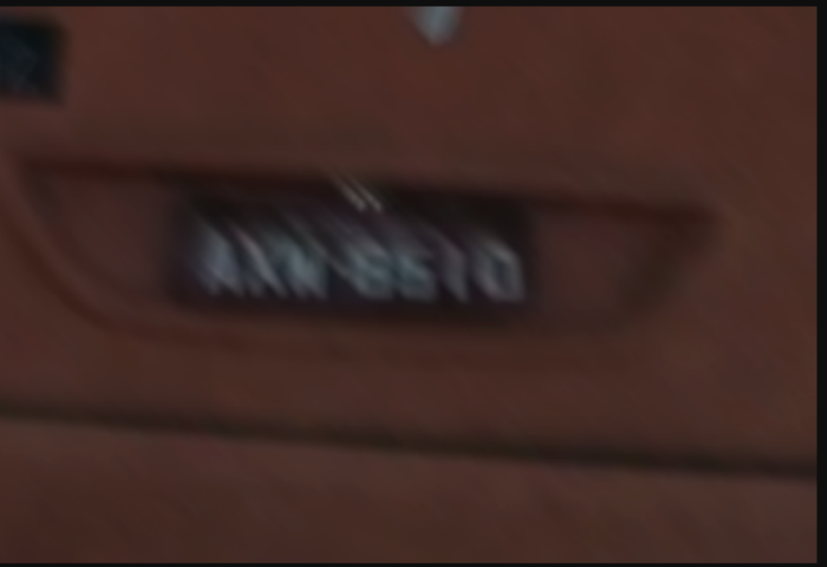
Screenshot 2022-06-13 233134.png 184.5KB

Before

After

RESULT

RESULT



RESULT

RESULT

RESULT

RESULT

PROJECT DONE

The project at the moment is able to deblur images with motion blur. And we have a pretty simple but user-friendly interface to interact and use the project.

NEXT PLAN

The next plan is to add more features to deblur different blurs like defocus and Gaussian. and being able to recognize license plates in rainy, dark, and other hard conditions.

PROJECT

The deblurring license plate images.

THANKS FOR WATCHING

Deblurring license plate image presentation

01028865636

usmonhakimov1999@gmail.com

Naver team