

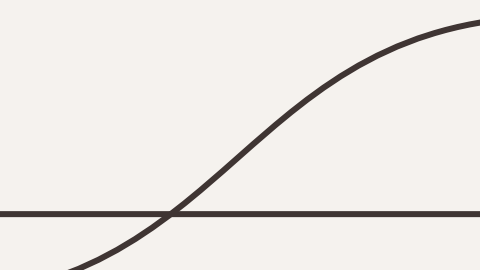


VehID – Milestone Evaluation

Members: Remington Greko, Spencer Hirsch, Thomas Johnson, and Alexis Nagle

Faculty Advisor: Dr. Silaghi

Client: Clayton Levins





Milestone 5

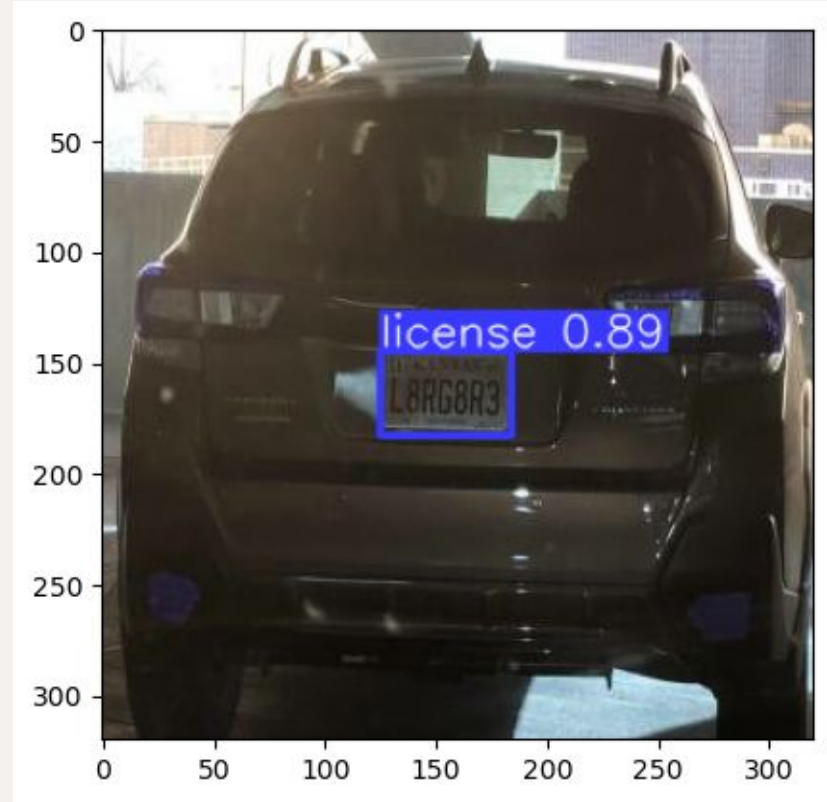
Milestone 5 Progress Matrix

Task	Completion %	Remington	Spencer	Thomas	Alexis	To-do
Construct Web Application	100%	50%	0%	50%	0%	NA
Implement License Plate Recognition Model	100%	0%	50%	0%	50%	NA
Hyper-parameter tuning	100%	0%	50%	0%	50%	NA
Data preprocessing	100%	0%	50%	0%	50%	NA
Implement Video Processing	100%	0%	50%	0%	50%	NA
Split Dataset	100%	0%	50%	0%	50%	NA
Create Poster and Ebook for Senior Design Showcase	100%	25%	25%	25%	25%	NA
Sprint Planning	100%	25%	25%	25%	25%	NA
Milestone Evaluation	100%	25%	25%	25%	25%	NA

Plate Detection Model

- YOLOv8n model
- Epochs = 30
- Patience = 5

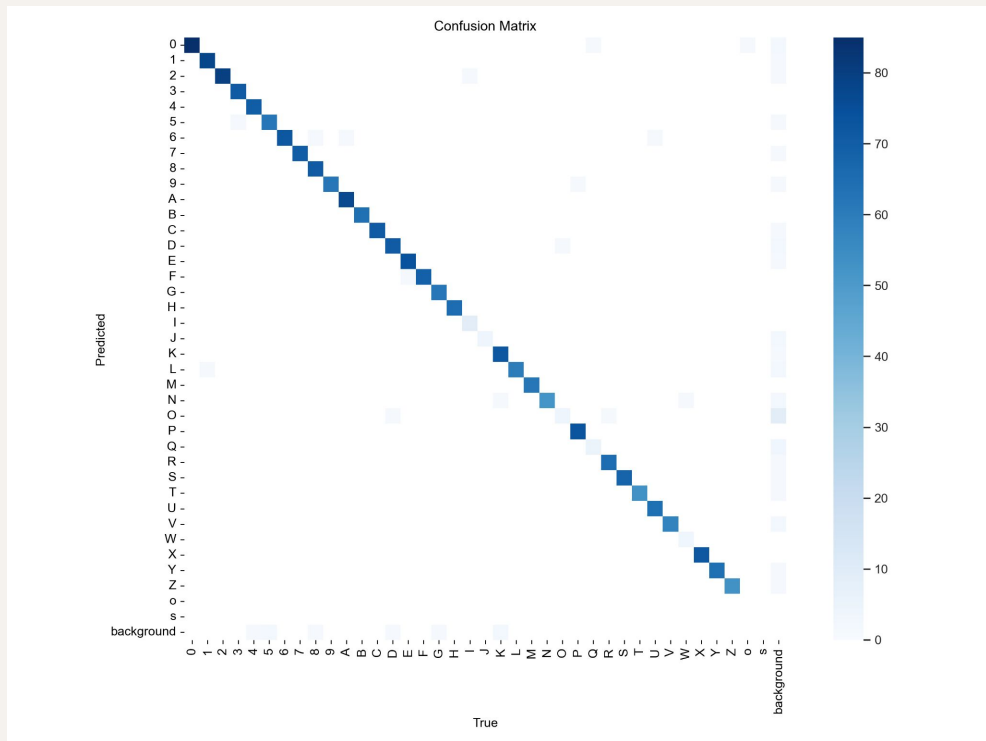
- Accuracy:
 - mAP50: 0.95



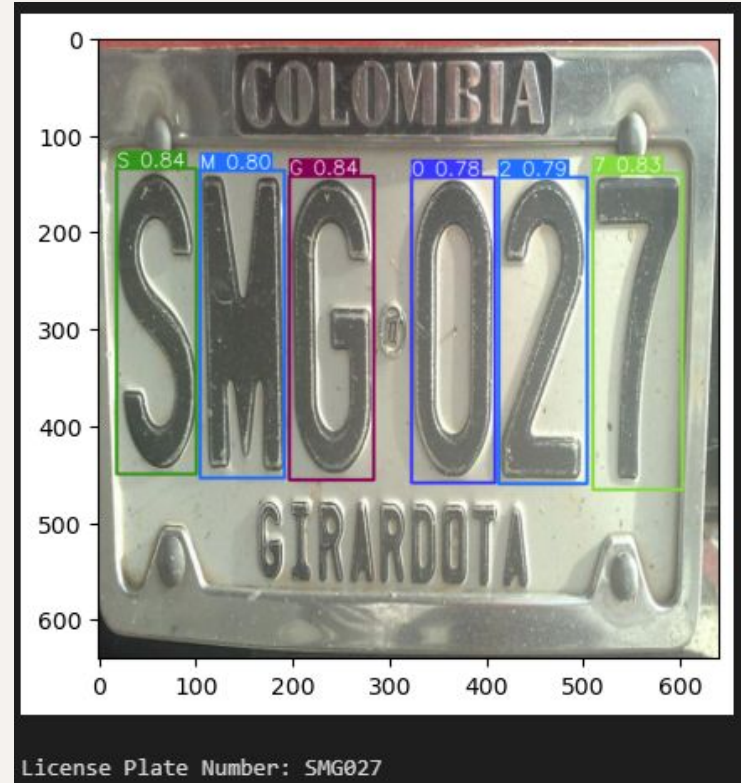
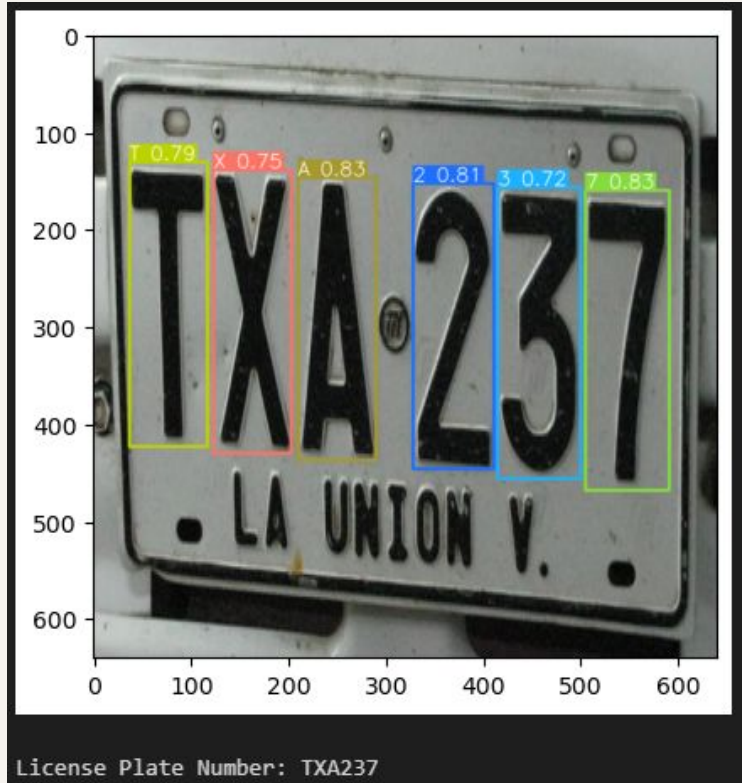
Character Detection Model

- Yolov8s model
- Epochs = 10
- Patience = 3

- Accuracy:
 - mAP50:0.99




Character Detection Model Example



Video Processing Demo

MainWindow

Frame #1



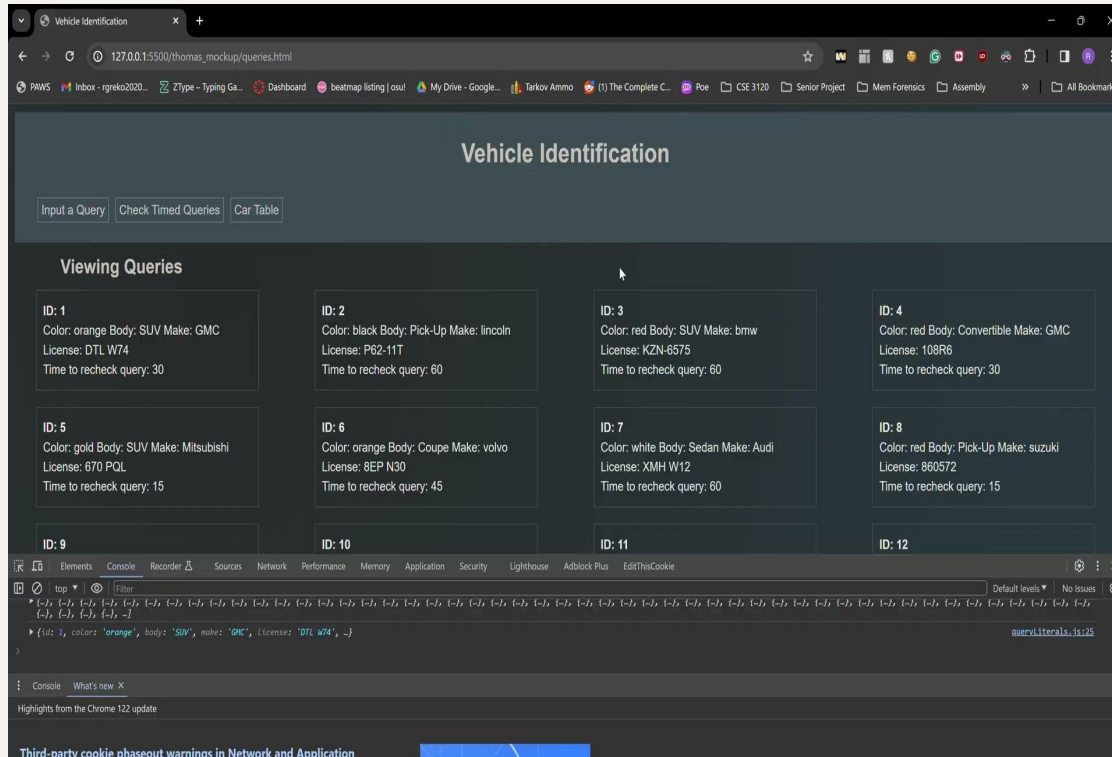
Vehicle #

Path:
Camera:
Timestamp:

Color:
Body Type:
Make:
License Plate:

The image shows a street scene with a white utility vehicle on the left, a yellow sign with a black arrow pointing left in the foreground, and a building in the background. The vehicle is positioned on a paved road with a crosswalk. The sign is mounted on a metal pole. The background features a large, multi-story building with a red section, surrounded by greenery and palm trees under a cloudy sky.

Web Application



Database

- JSON data outputted from models stored to be passed to the web application.
 - Also stores user queries which will execute to perform searches at set intervals.
 - Users may interact with the database via the web application to perform CRUD (create, read, update, delete) operations.
-



Poster

Client Feedback - Clayton Levins

- Demonstrated our software to our client.
 - Very pleased with our progress.
 - Impressed with what we have been able to accomplish.
 - Continues to be impressed with our efficiency and the amount of work that we have been able to accomplish.
 - Offered us feedback on what he believes the next steps would be if we had time to continue.
-

Advisor Feedback – Dr. Silaghi

Construct Web Application - Pleased with the progress that had been made on the web application.

Construct Plate/Character Recognition Model - Made some comments about image quality with regards to testing this feature.

Implement Video Processing - Offered some feedback on the image quality of our demonstration, need to collect some new data.

Data Collection - Changing some of the default color settings may better help with quality.

Advisor Feedback Continued

Create Poster and Ebook - Need to make some changes to our poster.

Sprint Planning – Seems pleased with the way we have been dividing up work and the amount of work we have completed.

Milestone Evaluation – Appears happy with how the project is wrapping up, no comments on the milestone evaluation contents.



Milestone 6

Milestone 6 Tasks

Test the entire system - Continue collecting live data and testing our system on the data.

Conduct evaluation and analyze results - Analyze the functionality of our entire system and set a metric for evaluating the systems performance.

Create user/developer manual - Create document according to the specifications provided.

Milestone 6 Tasks

Create demo video - Create demo videos of both the video processing portion and the web app to use at the showcase.

Sprint Planning – Discuss work necessary in effectively completing the tasks laid out for this milestone.

Milestone Evaluation – Document our progress for this Milestone.

Task Matrix - Milestone 6

Task	Remington	Spencer	Thomas	Alexis
Test/demo of the entire system	50%	0%	50%	0%
Conduct evaluation and analyze results	0%	50%	0%	50%
Create user/developer manual	50%	0%	50%	0%
Create demo video	0%	50%	0%	50%
Sprint Planning	25%	25%	25%	25%
Milestone Evaluation	25%	25%	25%	25%

The image features two horizontal lines, one at the top and one at the bottom. Each line has a smooth, curved end on the left and right sides, creating a frame-like effect. The text 'Questions?' is centered between these lines.

Questions?