

EXPECTED STRENGTHS

- Robustness: High accuracy in "angled/blurred/noisy conditions" due to the EDSR upscaling.
- Reliability: The Ensemble method catches errors where one engine might misread a specific Malaysian font character (e.g., 'D' vs '0').

WEAKNESS

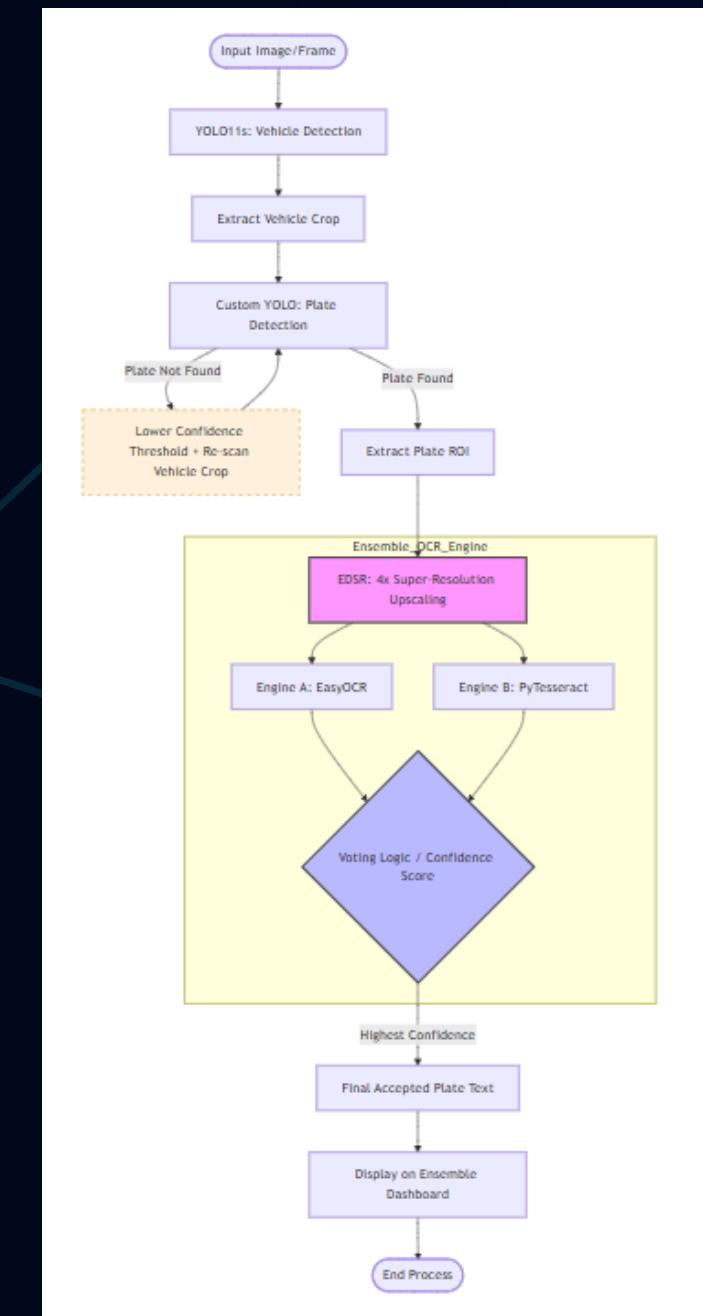
- Processing Speed: Running two OCR engines and a Super-Resolution model increases the inference time per frame compared to the baseline.
- Hardware Dependency: Requires a GPU for optimal performance of the EDSR and EasyOCR components.

<https://github.com/anasbdrz/MV-Group-Project.git>

DETECTION

A standard two-stage YOLO pipeline where yolol1s.pt detects vehicles and a custom-trained YOLO model locates the license plate.

PIPELINE



RESULTS



EasyOCR

Tesseract

Ensemble

FUTURE IMPROVEMENT

- Implementing a lightweight "Super-Resolution" model (like FSRCNN) to improve speed while maintaining accuracy.
- Adding a temporal tracking component to "smooth" OCR results over multiple video frames rather than processing static images

METHODOLOGY

RECOGNITION

A single OCR engine (EasyOCR) translates the plate crop into text without any prior image enhancement.

INNOVATION

- Super-Resolution Enhancement (EDSR)
- Ensemble OCR Strategy
- Recursive Vehicle-Crop Detection