

Try to make detection to a picture not video.

Main Components

1. Dependencies:

- **YOLOv8** for **vehicle**/plate detection (Remove vehicle detection and tracking)
- **SORT** algorithm for object tracking (don't track, only make detection for each frame)
- **OpenCV** for video processing
- **Tesseract OCR** for text recognition
- Special handling for Turkish license plate formats

Take 3 frames a second, and if the 3 numbers match it's correct, if not, continue by checking the next frame.

2. Features:

- Vehicle detection and tracking (no need)
- License plate detection and OCR
- Turkish plate format validation
- Real-time visualization with FPS counter

3. Functions

- **OCR Correction System** (correct_character()):
 1. Handles common OCR misreads: 'x' O' → '0', 'l' → '1', 'Z' → '2', etc.
- **Turkish Plate Validation** (expected_turkish_plate_structure()):
 1. Validates format: ## ABC 1234 (2 digits + letters + digits)
 2. Province code check (01-81)(no need for these)
- **Image Preprocessing** (preprocess_plate_image()):
- Uses 4 techniques for OCR optimization:
 1. Grayscale conversion (no need)
 2. Adaptive thresholding
 3. CLAHE contrast enhancement
 4. Otsu's binarization