Progress Report

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Timeline:

- **Day 1:** Collected and organized 150–200 images containing vehicles and pedestrians. Split into training (100 images) and test set (50 images).
- **Day 2:** Created a Labellerr project for training images. Annotated images using polygon masks.
- **Day 3:** Exported annotations from Labellerr, trained YOLOv8-seg model for ~100 epochs. Ran inference on test images.
- **Day 4:** Converted YOLOv8 results to Labellerr pre-annotation JSON format. Uploaded predictions to Labellerr test project.
- **Day 5:** Integrated YOLOv8-seg with ByteTrack for video tracking. Exported results in JSON.

Key Milestones:

1. Labellerr dataset creation and annotation
2. YOLOv8-seg training and evaluation
3. Conversion of predictions to Labellerr preannotations
4. Upload of preannotations to Labellerr
5. Video tracking demo with ByteTrack integration
6. JSON results export for tracked objects

Challenges:

- Understanding the Labellerr SDK preannotation upload format
- Converting YOLOv8 segmentation results into Labellerr-compatible JSON
- Handling polygon masks vs. bounding boxes for upload
- Integrating ByteTrack with YOLOv8-seg for real-time tracking

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Solutions Implemented:

- Wrote a conversion script to transform YOLOv8 masks into COCO-style preannotations
- Uploaded predictions using `upload_preannotation_by_project_id` function with correct arguments
- Built a simple Python script `track_video.py` to perform video tracking and save results