

Project 3: Einstein Vision

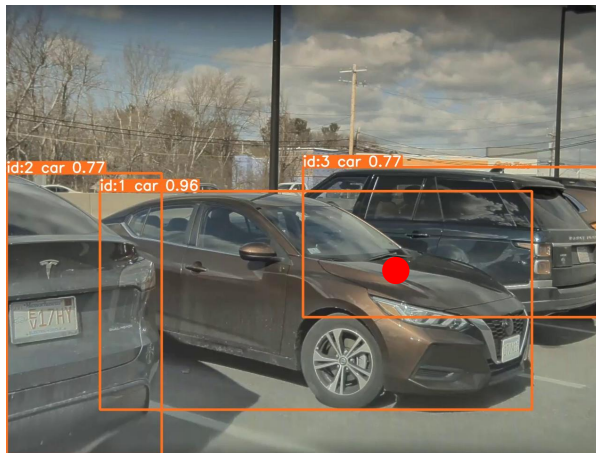
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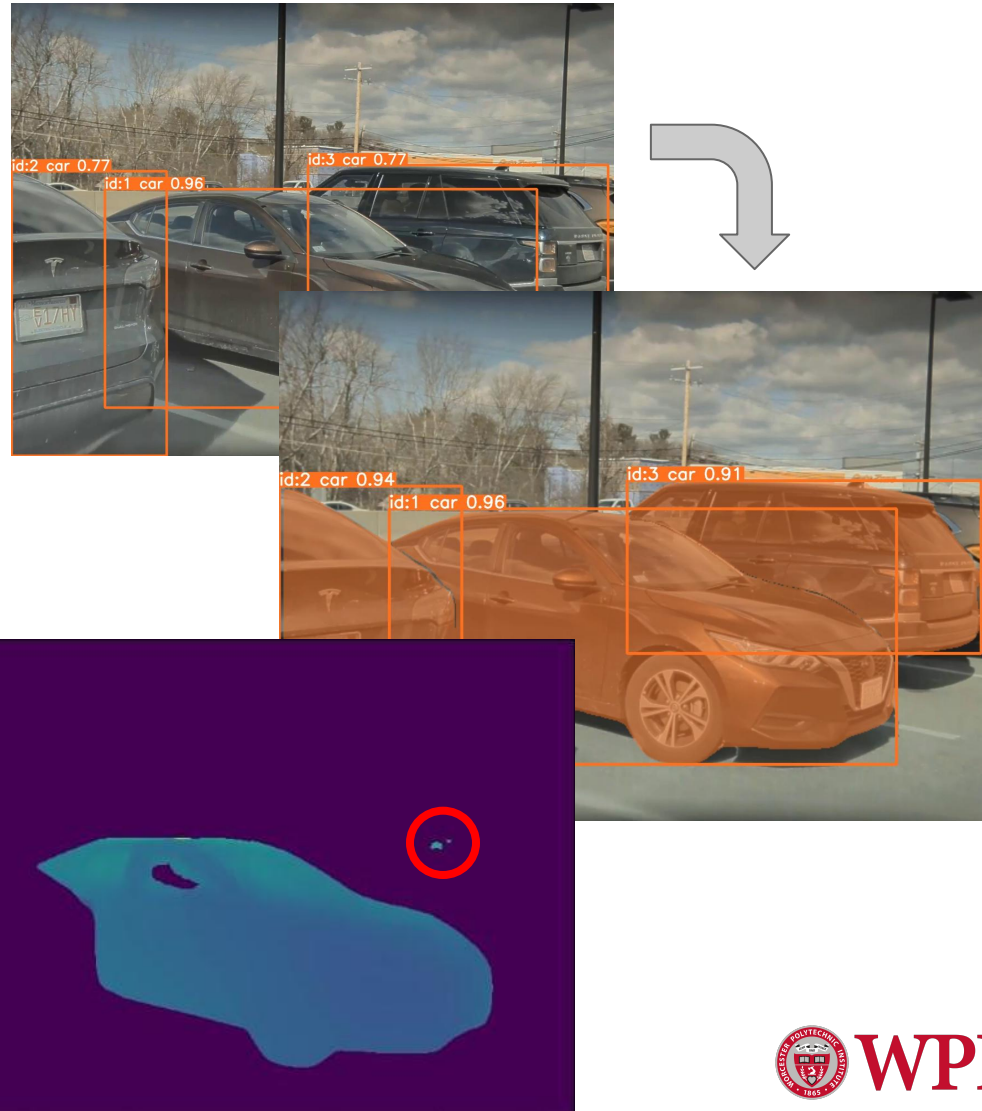
Object Localization: Technique

- YOLOv9 + ZoeDepth
- Project using pinhole
- Issues?



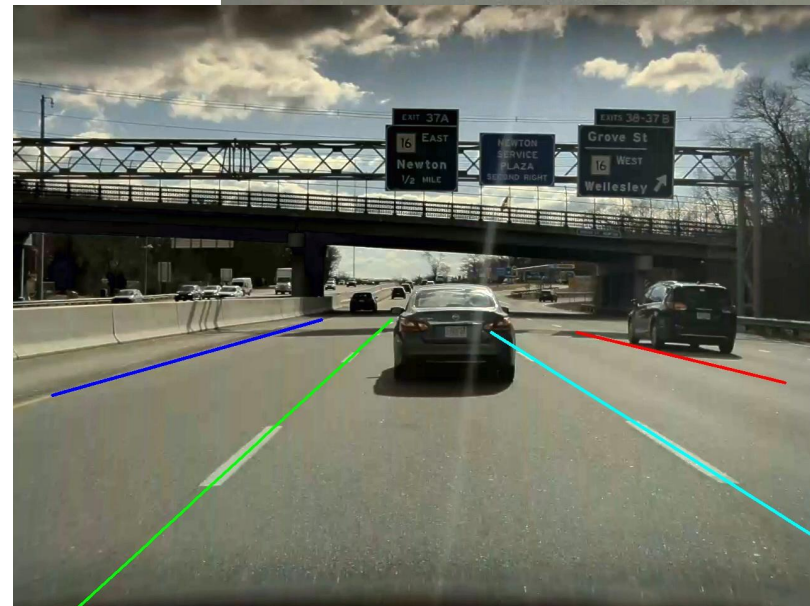
Object Localization: Solutions

- Add segmentation, use as mask for depth
- Take *median*, not mean



Lane Detection: Technique

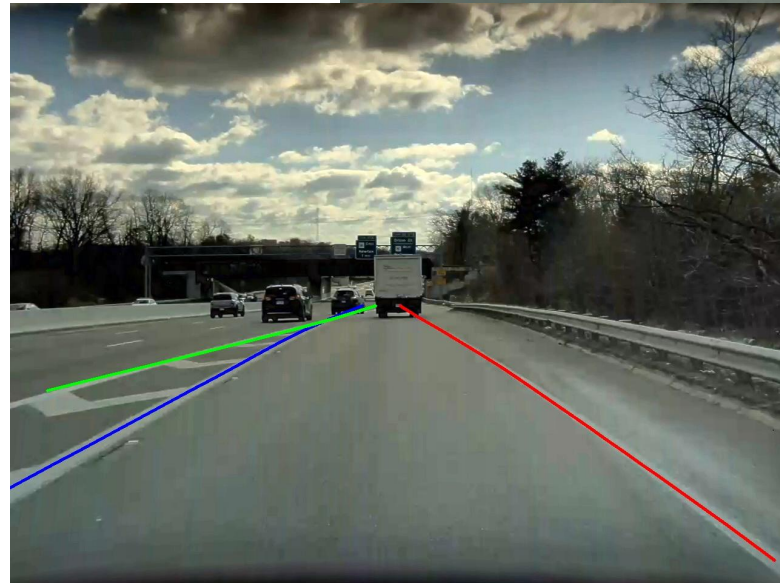
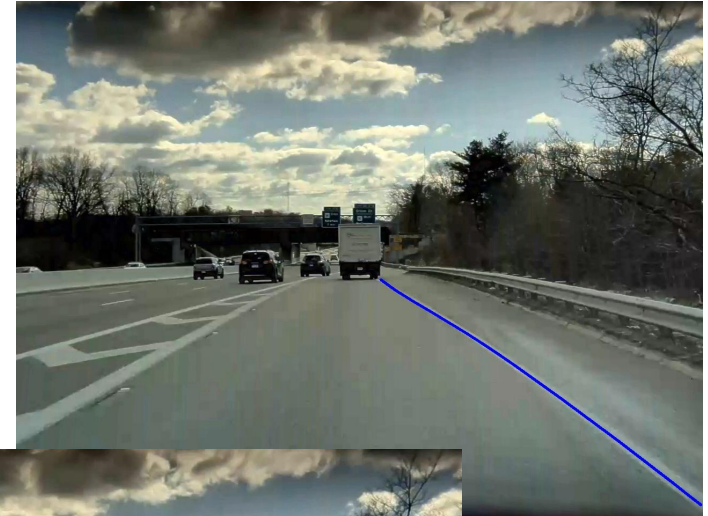
- CLRNNet - 2D lane prediction network
 - Reproject onto ground plane
- Shortcomings on test data
- Solution: Image preprocessing



Lane Detection: Dataset

- Prediction still suffered...
- Solution: Different training dataset

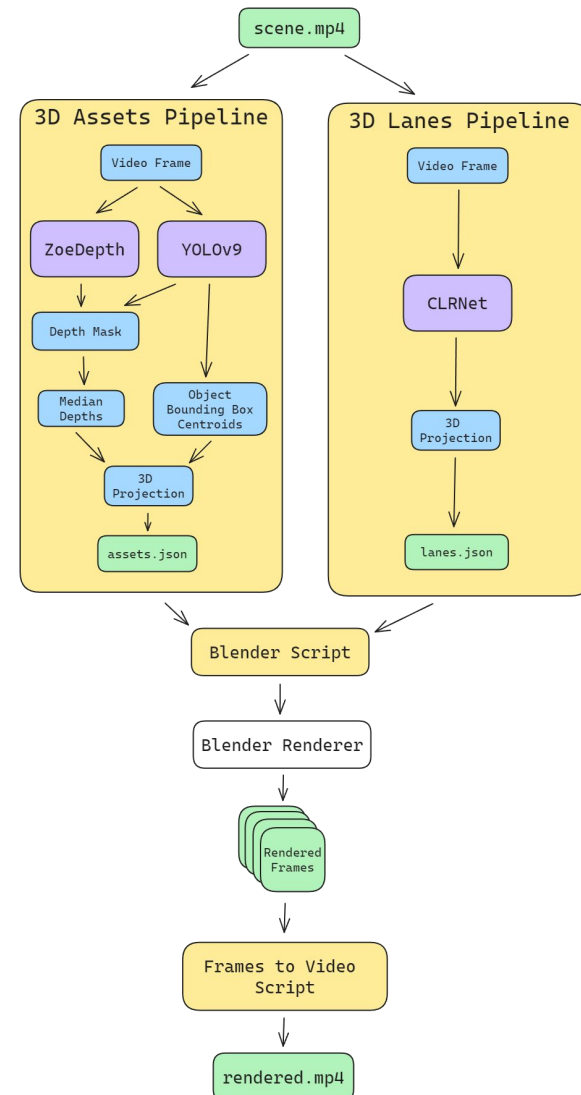
CULane



LLAMAS

Putting it All Together

- Different models need different environments
- Solution: Use intermediate outputs and merge



Thank you for
listening!