

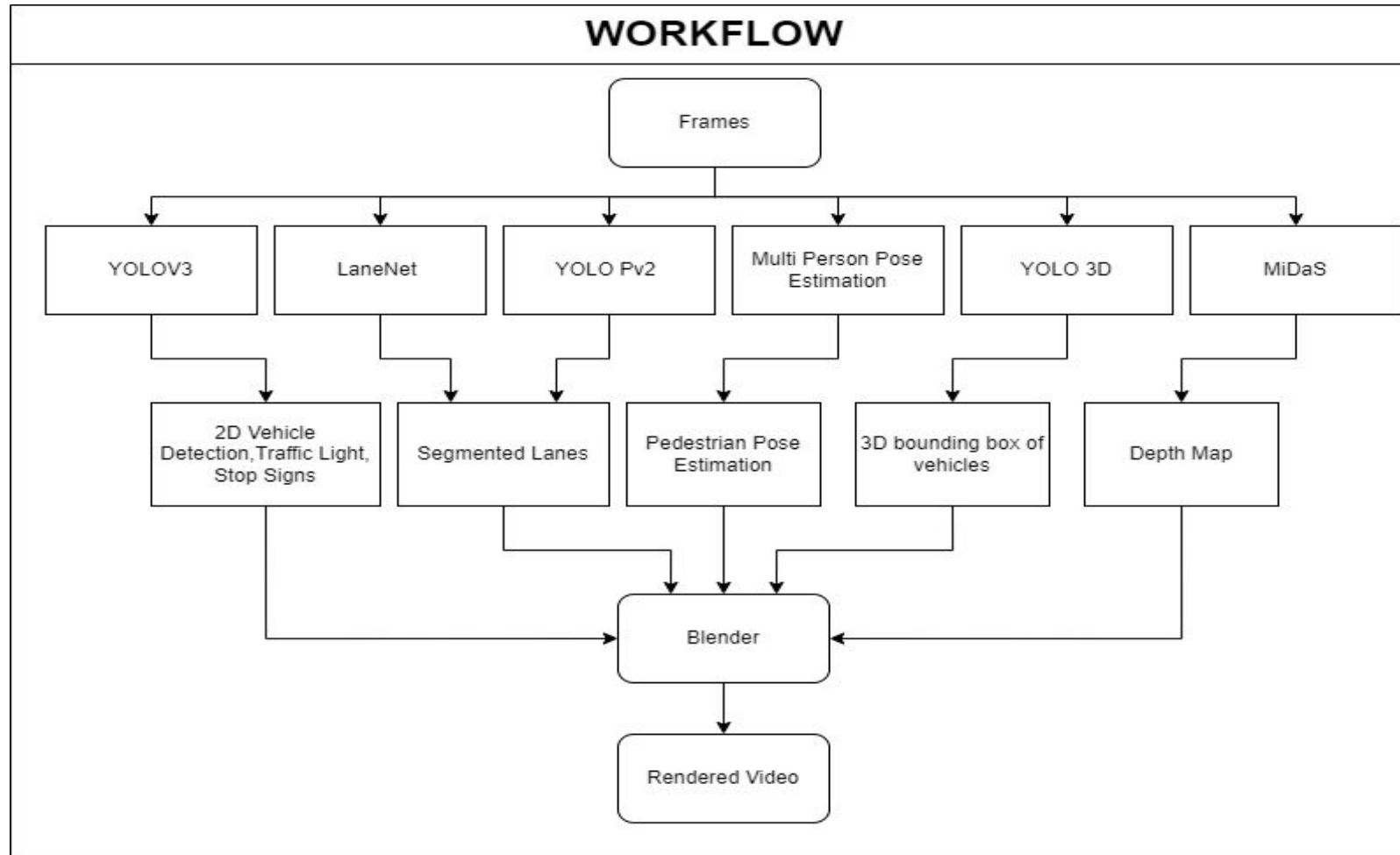
WPI

P3-Einstein Vision

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Workflow



Lanes- LaneNet and YoloPv2

- LaneNet - Lane Instance Segmentation
- YoloPv2 - Lane Detection Algorithm
- Take clean lane points from YoloPv2, and segment it using segmentation.

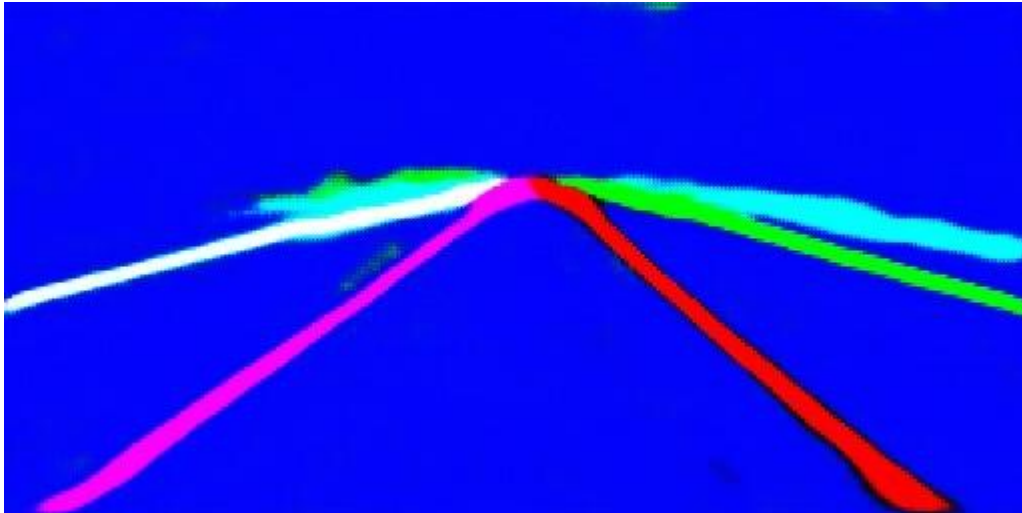


Fig. 1. LaneNet Lane Detection

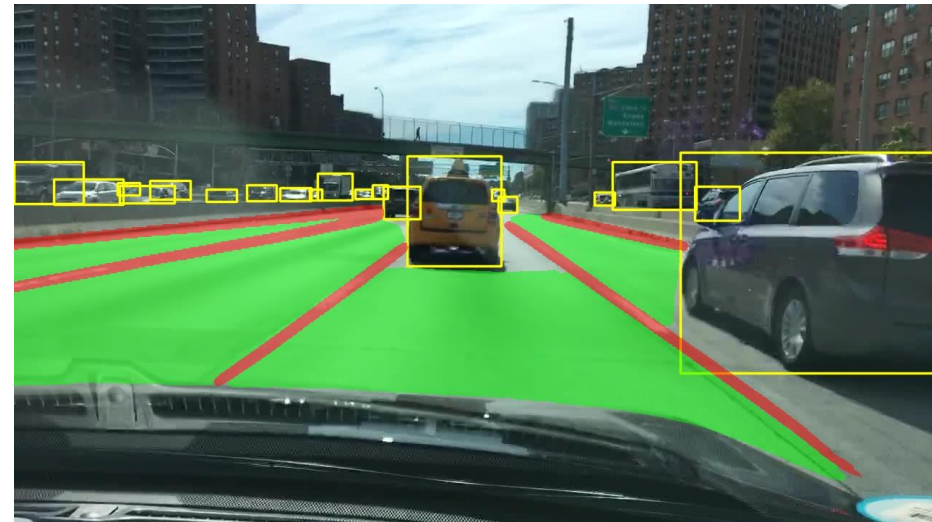


Fig. 2. YoloPv2 Lane Detection

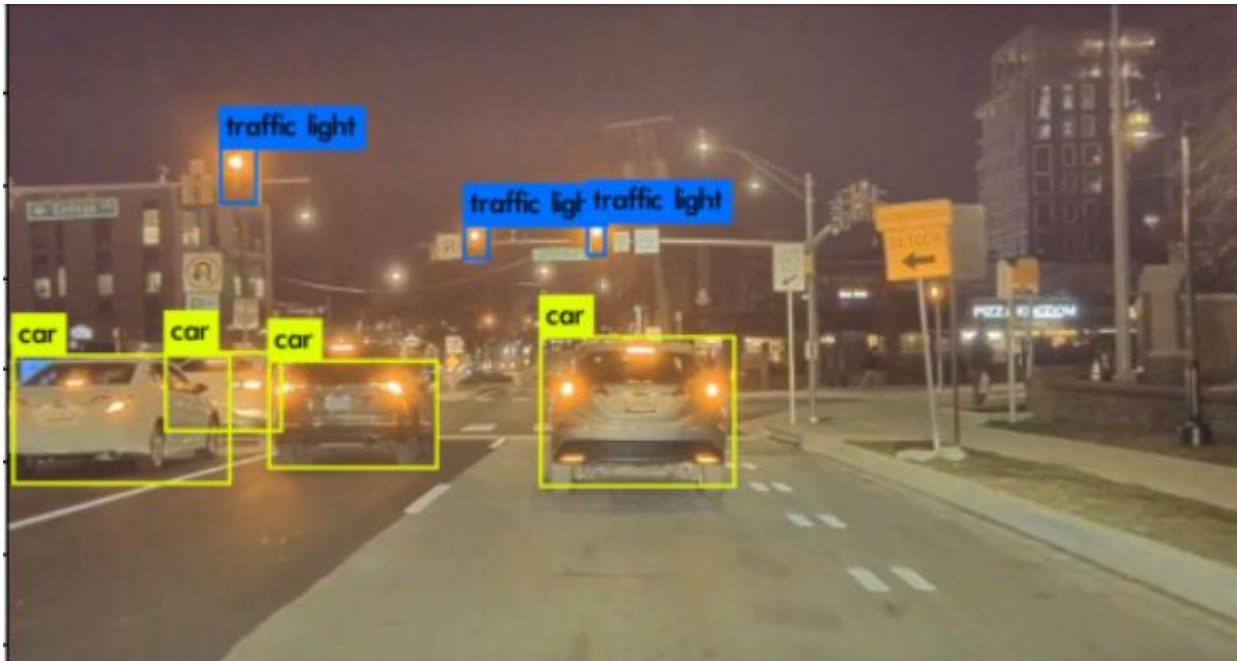
Vehicle Detection and Classification

- Vehicle Detection and Pose Estimation-Yolo 3D model
- Classification - Classical Approximation based on dimensions
- Yaw value is considered more important than the scale shift parameters of distance.



Traffic Light Detection

- Detection - YOLO
- Crop bounding box → Color Thresholding



Human Pose Estimation

- Real-Time Multi Person Pose estimation → keypoints on the body parts of each pedestrian.
- The given pedestrian model has been rigged with the armature feature provided by blender. The bone structure is made so as to replicate the keypoint structure of the output of the model.
- But this process is still work in progress.





Thank You!