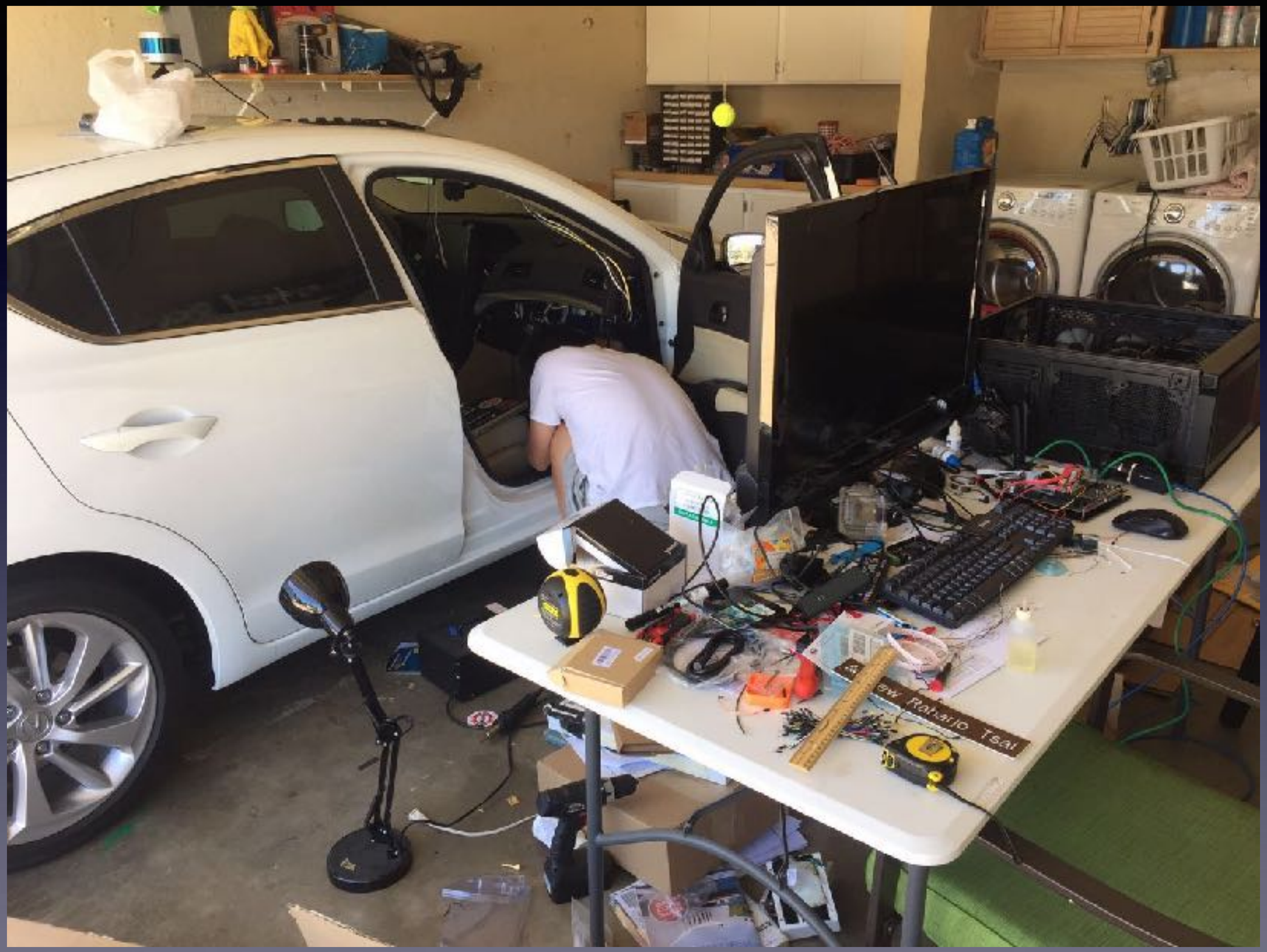
Vector.ai

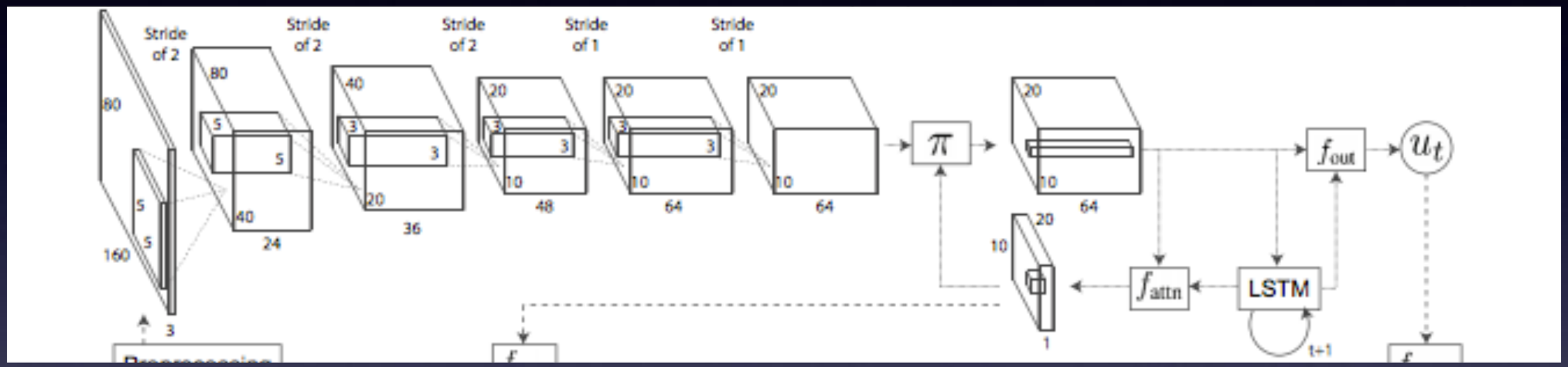
Background

Start From Zero



Get the Control quickly

LSTM and Segmentation

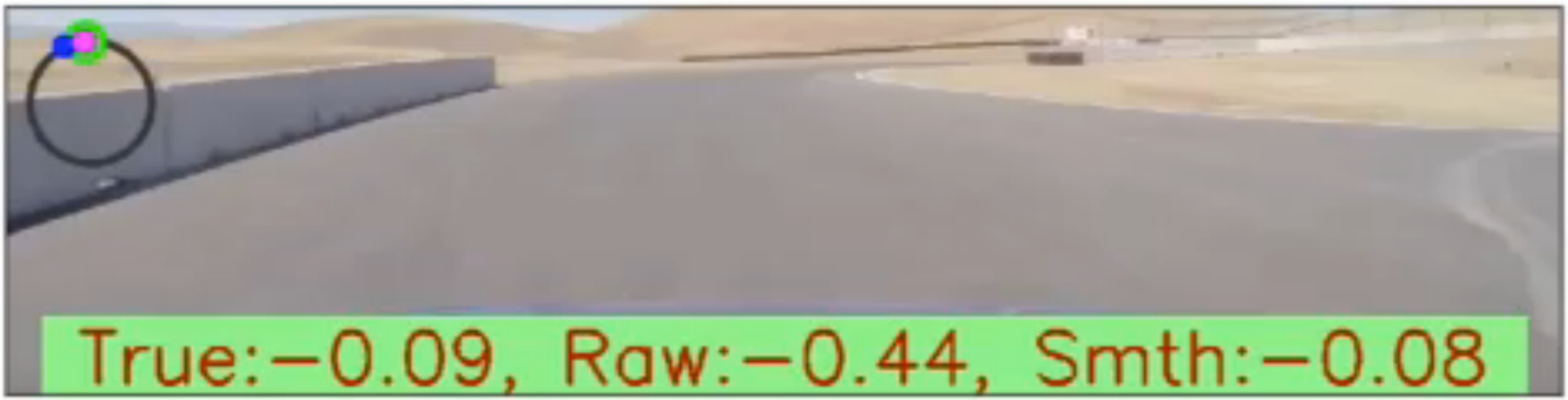


Encoder

Coarse Grained Decoder

Fine Grained Decoder

Result



Begin Testing

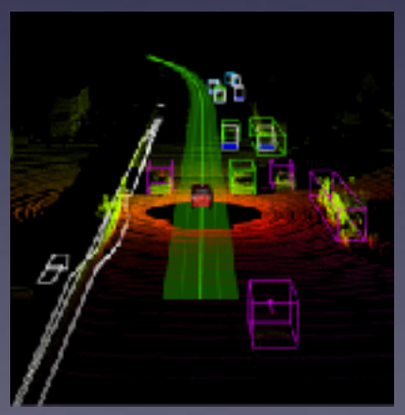
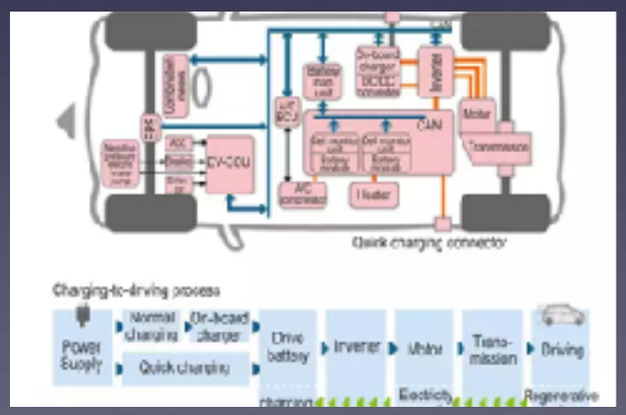
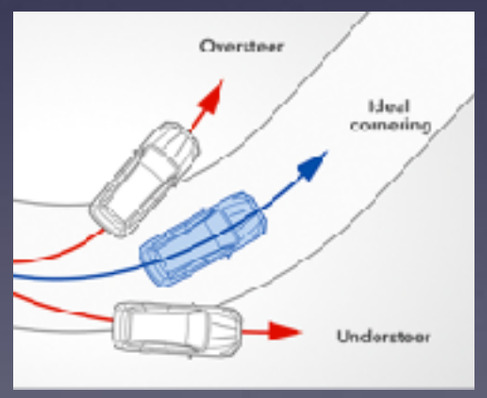
Two Known Approaches to Develop Self-Driving Car

Robotics/ DARPA

Deep Learning Approach

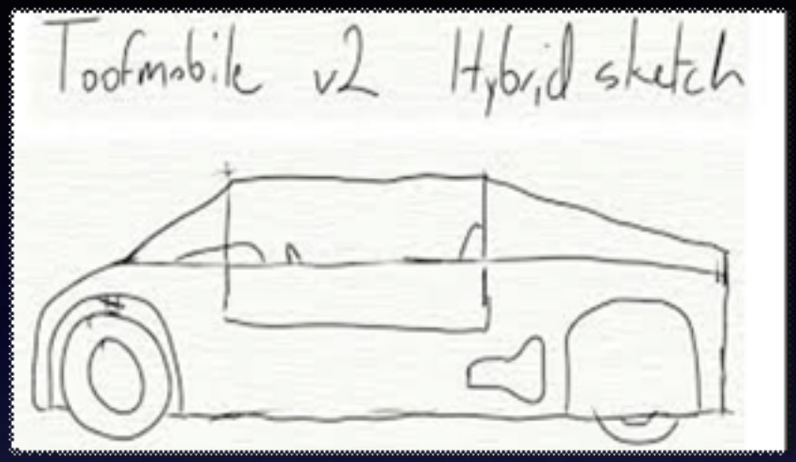
Why don’t we have both ?
Deep Learning and Robotics

Self-Driving Car Matrix

Software	TensorRT 	Computer Vision 	Infrastructure 
Hardware	 Sensor Fusion	 Vehicle Networks	 Vehicle Dynamics

What kind of work ?

What OE's think I do



What my parents think I do

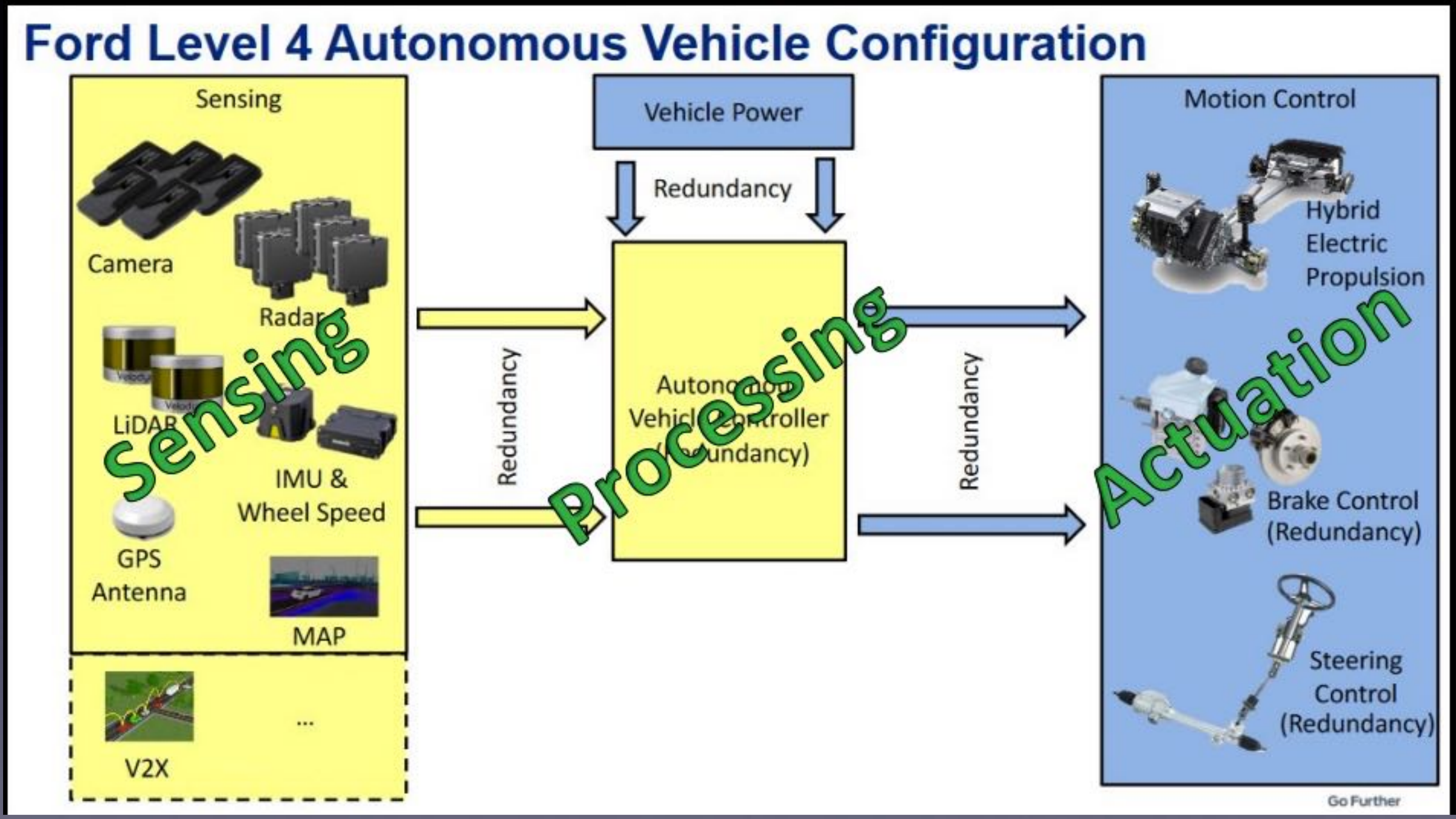
What friends think I do

What the government think I do

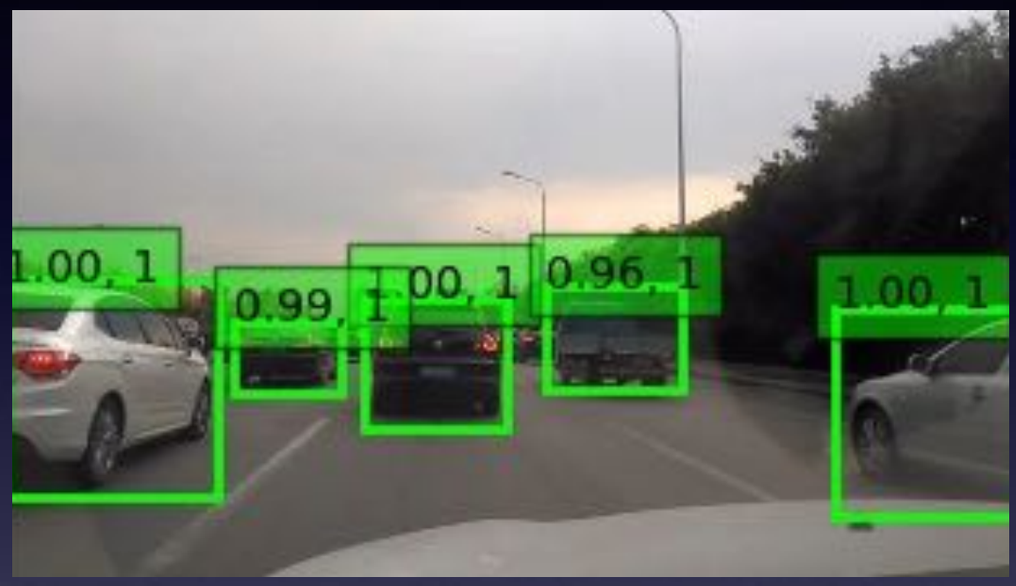
What I think I do

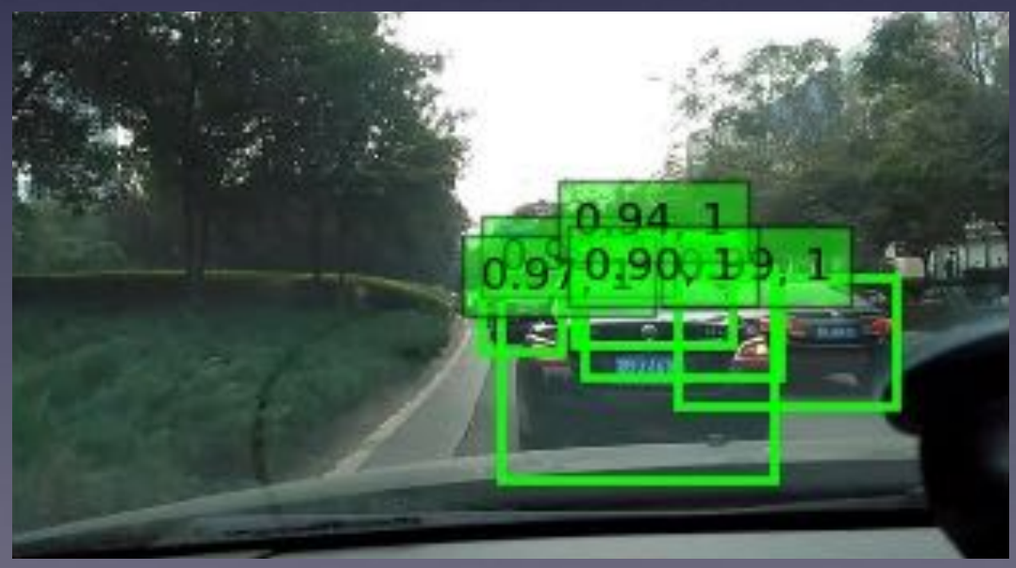
What I actually do

Needs in Autonomous Driving



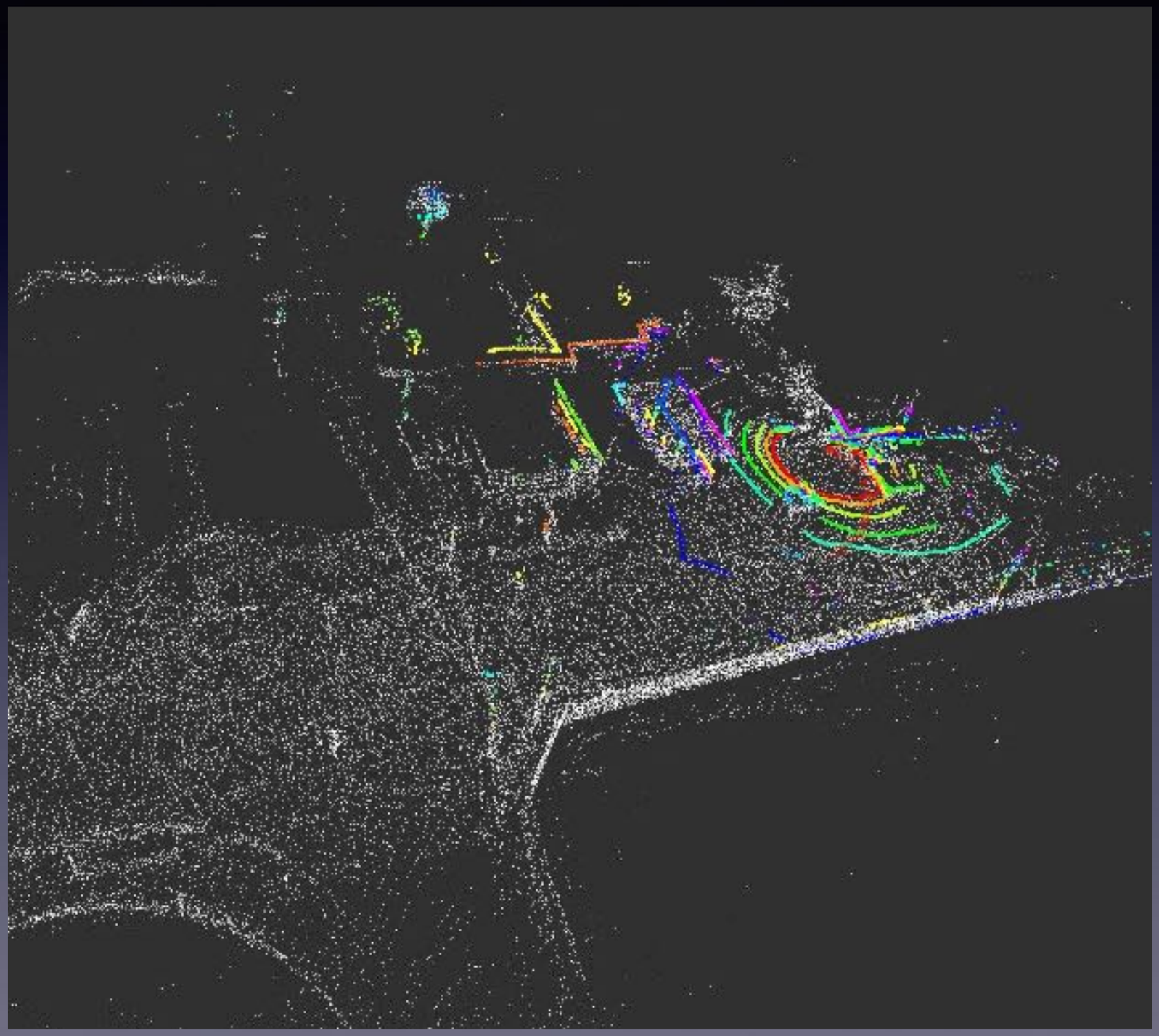
Hello China Traffic @ 30 fps





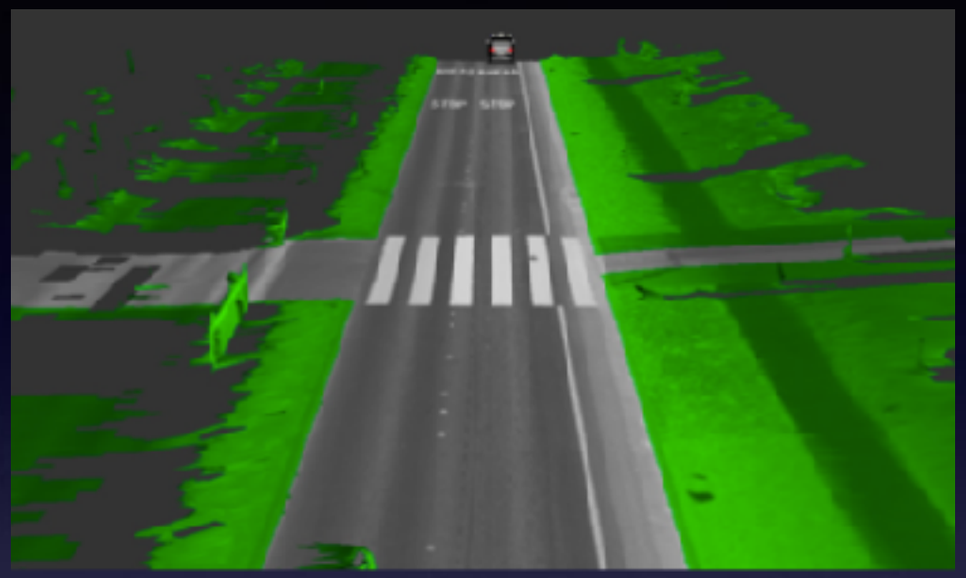
Learning Driving Behavior

DeepSLAM The World！

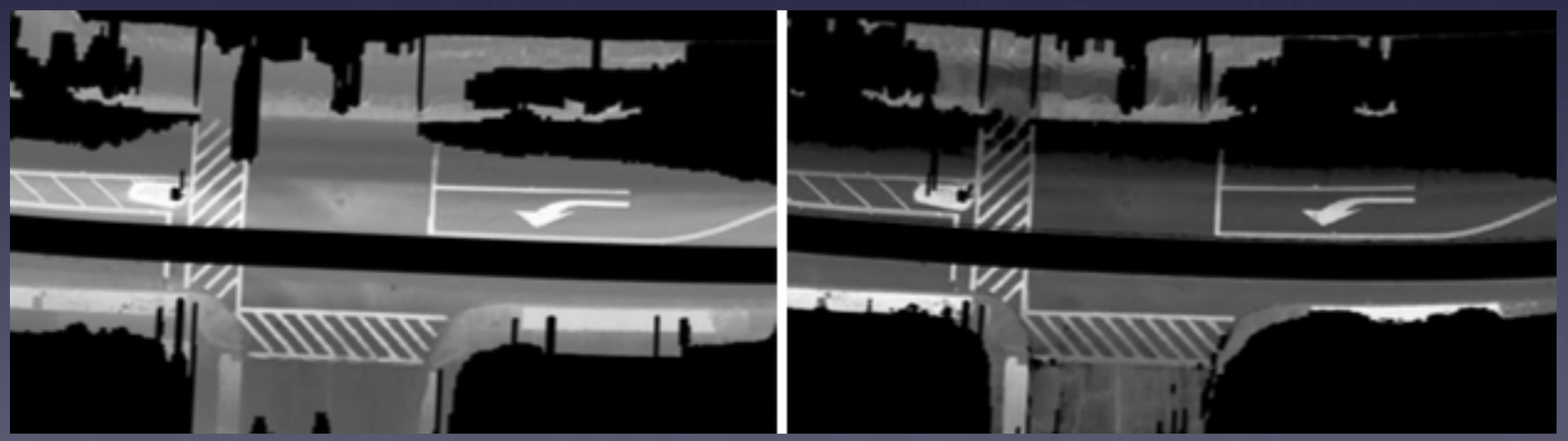


CNN/RNN/LSTM tested on RC Car

Testing back again on the Road



Feature extraction from
Velodyne for Ground Plane



Sunny Day Heavy Rain Night

SLAM
Optimization

Road Testing

2017 Autonomous Lap

Thanks!