

**A1**

**Yi Kai Lee**

Ordered list of the 3 projects (from most to least desired):

1. Deep Learning-Driven 3D Reconstruction, Data Synthesis, and Size Estimation for Road Signs
2. Deep Learning for Estimating Lane Line Quality Using Retroreflectometer Ground Truth
3. Reinforcement Learning for Road Sign Detection and False Positive Elimination

I would like to work on the first projects because I am more familiar with CNN architecture and have more experience in Computer Vision projects.

Strategy Sketch:

Code up to automate 3D road signs using Blender.

Start with classical CNN architecture, then experiment with different architecture to enhance performance.

Combine the synthesis tool and the deep learning model.

Write detailed documentation for the tool and model.