Select a topic

Do a literature review

* Look for a survey or review paper on semantic segmentation
* Semantic segmentation, LIDAR, CAMERA, FUSION, UNET, SEGNET, SQEEZESEG
* Implement some state of the art

Show some novelty somewhere

* Better performance, faster algorithm, new architecture, modify

SqueezeSeg – project lidar data into camera image, took a small window

Implemented in tensorflow/keras

What are my final goals –

* More accurate semantic segmentation

Chapter 1 is an introduction, give motivation, why would they care

-military applications, civilian applications, list contributions,

Chapter 2 is a literature review, discuss state of the art, semantic segmentation

Chapter 3 or 4 which would be conference paper of journal papers

Conclusions, summarize the work and list future works.

Complete a literature review

Talk to Dr. Gurbuz on what is the objective of the thesis

* What is he trying to get improvement in.
* Scope and objective of the work, particular stuff in mind, what do I want to pursue

Would be great to improve trail detection and ability to localize and classify trees.

Tim Foster has done some work with squeeze seg.

High interest – implement on an actual system, what is the frame rate we could achieve

* If there is a low frame rate the vehicle can go slower.

Look into segmentation for lidar data, find some paper and/or networks that I can implement.

Try to do it with available existing data.