

Automated Extraction of Road and Roadside Features from LiDAR Data

PROJECT DESCRIPTION

The primary goal of this project is to explore the potential applications of LiDAR technology in transportation with a focus on how this new remote sensing technology can enhance existing efforts to improve the safety of our highway network. This research project aims to explore the possibility of automating the extraction of the highway environment from LiDAR data. The project will focus on achieving two major objectives. The first objective will be to synthesize information from the literature to document existing attempts of road feature extraction. The second objective will focus on trying to automate the extraction of several road features from a sample data. If used to their full potential, LiDAR datasets could create a paradigm shift in how geometric assessment and safety audits on highways are conducted. Moreover, this project will attempt to show the significant potential value of LiDAR data by expanding its use into business areas related to asset management, traffic operation, and road maintenance.

FACULTY-DEPARTMENT

Engineering - Civil Engineering

OPEN TO STUDENTS FROM THE FOLLOWING INSTITUTIONS

Chinese universities participating in the [*Double First-Class Initiative*](#).

DESIRED FIELD OF STUDENT STUDY

Civil Engineering, Computer Science, Geomatics

INTERNSHIP LOCATION

Edmonton Campus

NUMBER OF INTERNSHIP POSITIONS

2-3

INTERNSHIP DATES

Start: July 2, 2019

End: October 2, 2019

ARE THE DATES FLEXIBLE?

Yes, I am flexible regarding the internship dates. Selected students can contact me to request a date change.