



Transportation Data Science Seminar Series

Connected Vehicle Data Safety Applications & Emerging Trends

Seminar summary

Over 60 million newer-model vehicles in the US are regularly sending data to cloud databases, and this will more than double to 150 million connected vehicles by 2030. The value of the connected car data market is already estimated to be in the billions of dollars, and we are only getting started. Big data has finally arrived in the automotive sector, with connected cars generating on the order of 4 terabytes of data per day. And with 5G, we will think nothing of sending all that data to the cloud.

In one example, imagine being able to immediately quantify how drivers respond to innovative new traffic control devices like wet reflective pavement markings or retroreflective signage. Machine vision sensor data quantifying the degree of visibility of the markings might be combined with windshield wiper operation, speed, location, and even sudden braking events to clarify the safety impact of better pavement markings. Additional examples may in the future enable the use of aggregated data to guide development of transportation facing products such as sensor materials, acoustic insulation, displays, battery thermal management and others.



Speaker's information

Michael Martin is an Assistant Research Scientist at TTI with 8 years of experience as a data-wrangling urban planner. Mr. Martin's research is centered on applying spatial analysis and statistical methods to transportation planning and safety problems to produce practical results that help save lives, time, and resources.

Mr. Martin has extensive experience in big data and spatial analysis techniques to evaluate local, state, and national travel behavior data. These data include proprietary passive data (cellular, LBS, and GPS) and commercially available connected vehicle data, in-vehicle monitoring system data, regional and national household travel surveys, US Census, Highway Performance and Monitoring System traffic and roadway data, state and national (FARS) crash data,

along with various other local and regional data. His daily responsibilities include developing and managing cloud computing environments for big data hosting, processing, and analysis related to mobility and safety research.

Date: Thursday, March 4, 2021

Time: 4:00-5:00 p.m. US Central Time

Meeting ID: 732 641 0814

Passcode: 575829

Faculty Host: Xinyue Ye, LAUP & Urban Data Science Lab



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