Geolocation Data Processing
Spring 2019

Course Number: CMSE 890-006 (2 credits)
Title: Geolocation Data Processing
Time: Fridays - 10:20am-12:10 p.m. in Spring 2019
Location: 1220 Engineering Building
Instructors: Ming Yan, Yuying Xie
Email: {myan,xyy}@msu.edu

Description: This is an advanced course where students will work side by side with instructors to explore a large geolocation dataset and use this data to answer scientific questions. The first patent on geolocation technology was granted only in 2004, and the geolocation data has been applied in multiple industries, including retail, healthcare, financial services, and logistics/transportations. Companies and academic institutions are developing geospatial technologies to utilize this valuable data outside traditional markets.

This course will give you access to the geospatial mobility data collected from 30 million cell users and locations of 5 million commercial points of interests in the U.S. Students in this course will find interest information from this data and use this data to answer interesting scientific questions.

Format: This is a project-based course with topics primarily driven by the research interests and needs of the students. Students will work with the instructors to come up with specific learning goals and objectives. All students will be expected to present their work to their peers with a final goal of distilling what they have learned in the form of example codes and training materials that can be shared with future students. Some results may be submitted to related conferences and journals.

Prerequisites: Students in this class are expected to be comfortable with programming in at least one data processing software such as Python, Matlab, and R, and willing to learn new software for geospatial data. We also encourage motivated undergraduate students to enroll!

Questions? Contact the instructor for more information, or to obtain an enrollment override.