

Singapore-MIT Alliance for Research and Technology Centre

SMART is a major new research enterprise established by the Massachusetts Institute of Technology (MIT) in partnership with the National Research Foundation of Singapore (NRF). SMART serves as an intellectual hub for international research collaborations, not only between MIT and Singapore, but also involving researchers from the region and beyond. At SMART, we identify and carry out research on critical problems of societal importance. SMART is a magnet attracting and anchoring global research talent, while simultaneously instilling and promoting a culture of translational research and entrepreneurship in Singapore. Five interdisciplinary research groups (IRGs) have been established to date: BioSystems and Micromechanics (BioSym), Centre for Environmental Sensing and Modeling (CENSAM), Future Urban Mobility (FM), Infectious Diseases (ID) and Low Energy Electronic Systems (LEES) .

Research Engineer – Data Visualization and Analysis

Future Urban Mobility Interdisciplinary Research Group

Project Overview

A key research task ongoing at the Singapore-MIT Alliance for Research and Technology (SMART) in Singapore is providing next-generation data collection, modeling and solutions for urban freight and city logistics. The data collection component intends to create a new framework that leverages innovative technologies for freight data collection through truck tracking and truck driver surveys, shipment tracking, and establishment surveys. The framework is based on innovative and scalable technologies with time and geographical coverage (national, urban and intercity contexts), and it aims to ameliorate inherent limitations in current freight data collection methods.

The project comprises of teams from both MIT, SMART, SUTD and local agencies in collaboration with several international research and industry partners. This position will be based at the SMART Centre in Singapore. The research team is led by Prof. Moshe Ben-Akiva and Prof. Chris Zegras from MIT, Dr. Fang Zhao from SMART, and by Prof. Lynette Cheah from SUTD.

Job description

Several data collection efforts are planned under the urban freight study, and various kinds information will be studied. We are looking for a highly motivated and proactive Research Engineer that will undertake the following activities:

- Design and develop visualization platform for collected data using in-house solutions, database and Tableau
- Work closely with the research scientists, post docs, programmers and external stake holders to create/deliver analytical solutions and reporting and strategic insights
- Participate in the data collection effort, assist in providing technical support and coordination with survey companies.
- Write and give presentations to project team members, stakeholders and to third parties
- Work with the researchers on publishing research papers.

Requirements

- Bachelor or Master's degree in Computer Science, Electrical Engineering, or other related disciplines
- Experience with BI tools such as **Tableau** to create visualizations following industry best practice reporting is preferred
- Strong hands-on experience with extracting multiple data-sets, writing complex SQL queries & building Excel tables
- Perform statistical analysis of large data sets to understand correlations, trends, and derive insights
- Hands-on experience with statistical tools such as R, SAS, SQL, SPSS a big plus
- Knowledge of and experience in data integration processes & data mining
- Strong written and verbal communication skills
- Ability to work autonomously
- Must be a team player that is self-motivated with excellent communication skills

Interested applicants should submit their full CV/resume, cover letter and list of three references (to include reference names and contact information) to andrew.tong@smart.mit.edu and CC: kakali@smart.mit.edu. We regret that only shortlisted candidates will be notified.