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# Hanyong Xu

## Education

2023 – Present

### Ph.D. student

#### in Urban Studies and Planning

Massachusetts Institute of Technology,  
Cambridge MA  
cGPA 5.0/5.0

2019 – 2020

### Master of Urban Spatial Analytics

University of Pennsylvania,  
Philadelphia  
cGPA 3.93/4.0

2015 – 2019

### Honors Bachelor of Arts with High Distinction

Double Major in Economics and  
Architectural Design  
University of Toronto, Toronto  
cGPA 3.92/4.0

## Expertise

### Data Analysis & Applied ML

Python (pandas, numpy, matplotlib, sklearn), SQL, R, Excel  
Deep Learning (PyTorch), Google Cloud Computing, Web Scraping

### Front End & Visualization

JavaScript + html + css, Vue.js, Mapbox.gl, Kepler.gl

### Geo-Spatial Analysis

Remote Sensing, ArcGIS, ArcPy, Google Earth Engine, GeoDa

### Product Design

Figma, Adobe Photoshop, Illustrator, InDesign

## Experience

2023 – present / JTL Mobility Lab, MIT / Cambridge, MA, USA

### Research Assistant

Projects: Fairness-enhancing vehicle rebalancing in the ride-hailing system; Large language models for travel behavior prediction.

- > Developed and evaluated methods to enhance fairness distributions in demand prediction in ride-hailing systems with PyTorch.
- > Prompt engineered and tuned ways to improve prediction.
- > Co-supervised two undergraduate students on their research with the lab.

2021 – 2023 / Meituan / Beijing, China

### Data Analyst, Internal Risk Control and Compliance

Projects: Shell partner company identification, Abnormal CRM payment method change identification, Transfer of benefits of staff, Problematic delivery dispatch identification, Platform fee rate legitimacy assessment, etc.

- > Extracted data using SQL/Hive on data on shopping orders, logistics, retailers, and employees at the level of thousands of billions; Analyzed data with Python, clustering algorithms, and statistics to uncover risky events.
- > Established a Network Graph of partner companies and employees with industry and commerce data through Python and external APIs.
- > Generated and maintained 6+ daily/monthly-scheduled dashboards/reports.

2020 – 2021 / CityDNA Technology Co. / Beijing, China

### Data Analyst & GIS Analyst

Projects: Development index for 36 cities and 50 historic streets; Biking condition evaluation in Changzhou; Traditional architecture style recognition; Frontend for EzCloud (data management, toolbox, visualizations, etc.).

- > Collected and analyzed temporal-spatial data (POI, phone signal, surveys, customer review semantic analysis, map API, streetview analysis).
- > Developed and maintained the deep learning network based on Detectron 2 framework in Pytorch; Used Apache Airflow for the model streamline deployment for 150+ cities.
- > Collected requirements and developed front end of multiple modules and visualization dashboard using Kepler.gl based product.

## Honors

- > Presidential Graduate Fellowship, MIT / 2023
- > Descartes Award (top 2 in cohort), University of Pennsylvania / 2020
- > 1st Place, Wharton Customer Analytics + Electronic Arts Datathon / 2020