Mingyi He

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EDUCATION

New York University   **New York, NY**
Master of Science in Applied Urban Science and Informatics | GPA 3.75/4.0   *Aug 2018 - Aug 2019*

Harbin Institute of Technology   **Harbin, CHN**
Bachelor of Engineering in Urban and Rural Planning | GPA 3.36/4.0   *Sep 2013 - Jun 2018*

PUBLICATIONS

- Stanislav Sobolevsky, Philipp Kats, Colin Bradley, **Mingyi He** and Sergey Malinchik, "Anomaly detection in temporal networks", NetSci 2019, Burlington, Vermont, USA, May. 27-31 2019.
- Cui Zhe, **He Mingyi**, Lu Ming, "An Analysis of Green View Index in Cold Region City: A Case Study of Harbin", Journal of Chinese Urban Forestry, 2018 (05), pp 34-38.

PROFESSIONAL EXPERIENCE

New York State Homes and Community Renewal   **New York, NY**
Research Assistant Intern, Research and Strategy Group   *May 2019 - Aug 2019*

- Used SQL to wrangle the data of NYC rent-stabilized units in 2016 and 2017, applied machine learning classification models in R to predict the unit turnover. The accuracy rate was higher than 0.9.
- Filtered the property sales data in the NYC Rent Stabilization system from 2003 to 2017, the data set was 500MB. Conducted exploratory analysis and spatial analysis on the data set in R, and compared the legal rent distribution of property at different transaction times to analyze the impact of property transaction on legal rent.

Center for Urban Science and Progress, New York University   **New York, NY**
Research Assistant, Dr. Stanislav Sobolevsky   *Sep 2018 - Present*
Project: Pattern and Anomaly Detection in Urban Temporal Network

- Collected 80GB data set of taxi and subway ridership in NYC and Taipei over the past two years, wrangled in Hadoop and built up mobility network graph.
- Applied the Dynamic Community Detection algorithm and spatial aggregation method in Python to analyze the network graph to aggregate the network.
- Evaluated the anomaly detection results by comparing the performances of different machine learning algorithms in Python, including network aggregation, dimension reduction and unsupervised classification, visualized the insights using JavaScript.

Intelligent Urbanization Co-Creation Center for High Density Region, Tongji University   **Shanghai, CHN**
Data Analyst, Prof. Zhiqiang Wu   *Dec 2017 - Feb 2018*
Project: Trace the Urban Morphological Change Based on the Data from "City Tree"

- Retrieved satellite images of global cities within 40 years on Google earth. The data set was over 50TB.
- Cooperated with 4 members, superimposed the satellite remote sensing images through a 30mx30m precision grid, and diagramed the City Trees for 13,810 cities.
- Assisted Prof. Wu to identify the development process of 1,500 sample City Trees, determined the urban development modes and the laws of growth.

SELECTED PROJECTS

Visualizing the Distribution of Drug-Abuse-Related Tweets

- Text matched the tweets content from each census tract with drug-related key words, and computed the normalized number of target tweets using the provided boundary and population data. Developed Pyspark code and implemented it in Hadoop. Data set was 50 GB.

Investigation of Urban Outdoor Environment in Citi-Bike Usage

- Retrieved street view image and simulated bike-riding route by Google API, applied PSPNet algorithm to segment images of streetscapes, and utilized classification algorithm to explore the impact of urban outdoor environment on bike ridership.

SKILLS

- Python, R, SQL, Apache Spark, LaTex, JavaScript, ArcGIS, AutoCAD, Adobe Photoshop, Adobe Illustrator, SketchUp