

Zhewei LIU

ZS1010, Block Z,
Department of Land Surveying and Geo-informatics
The Hong Kong Polytechnic University
Email: jackie.zw.liu@connect.polyu.hk
Website: <https://zheweiliu.com/>

EDUCATION

Ph.D in GIS, The Hong Kong Polytechnic University 08.2016-03.2021 (expected)
Thesis Topic: Semantic, Spatial and Temporal Modelling of Geotagged Social Media Data for Desirable Region and Event Detection, Supervised by Prof. Wenzhong Shi and Prof. Geoffery Shen

B.S. in Remote Sensing and Geographical Information Science, Wuhan University
09.2011-06.2015
GPA 3.65/4.0, Average Score 89.57/100

Research Interest

urban informatics, human mobility, machine learning, social network analysis, location-based service

PUBLICATIONS

Liu Z, Shi W*, Yao Y, et al. LambdaMART-OD: a machine-learned ranking method for origin detection with geotagged social media data. Transactions in GIS (under review)

Wang, A, Zhang A, Chan E, Shi W, Zhou X, **Liu Z**. "A Review of Human Mobility Research Based on Big Data and Its Implication for Smart City Development." ISPRS International Journal of Geo-Information 10, no. 1 (2021): 13.

Liu Z, Zhang A, Yao Y, Shi W*, et al. Analysis of the performance and robustness of methods to detect base locations of individuals with geo-tagged social media data. International Journal of Geographical Information Science. (accepted and in press)

Shi W, **Liu Z***, An Z, et al. RegNet: a neural network model for predicting regional desirability with VGI data [J]. International Journal of Geographical Information Science, 2021, 35(1): 175-192 (**corresponding author**, with supervisor being first author).

Chen P, Shi W*, Zhou X, **Liu Z**, et al. STLP-GSM: a method to predict future locations of individuals based on geotagged social media data [J]. International Journal of Geographical Information Science, 2019, 33(12): 2337-2362.

Liu Z, Zhou X, Shi W*, et al. Recommending attractive thematic regions by semantic community detection with multi-sourced VGI data[J]. International Journal of Geographical Information Science, 2019, 33(8): 1520-1544.

Liu Z, Zhou X, Shi W*, et al. Towards Detecting Social Events by Mining Geographical Patterns with VGI Data[J]. ISPRS International Journal of Geo-Information, 2018, 7(12): 481.

RESEARCH PROJECT

User Origin Detection with LBSN 11.2019-Current

Urban Desirability Prediction 02.2017-Current

Researcher and Developer, to predict the desirability of urban region with volunteered geographic information (geotagged social media data)

Urban Irregularity Detection 02.2018- Current

Researcher and Developer, to detect urban event with volunteered geographic information (geotagged social media data)

Traffic Sign Detection 2012-2013

Developer, to identify Traffic Sign with Computer Vision algorithm

QC Spatial Software Developing 09.2015-12.2015

Developer, to develop a comprehensive software for automatic quality checking of the spatial data

Monitoring of the Evolution of Urbanization of Dongguan 09.2014-09.2015

Researcher and Developer, to evaluate urbanization of Dongguan and develop a comprehensive software

AWARDS & HONORS

- First Honor Scholarship of Wuhan University, 2012 (2%)
- Xijie Special Scholarship, 2012
- Second Honor Scholarship of Wuhan University, twice (2013, 2014) (10%)
- Annual Outstanding Students of Wuhan University, three times (2012, 2013, 2014) (10%)
- Outstanding Graduates of Wuhan University, 2015 (10%)

COMPUTER SKILLS

Programming Languages: Python, SQL, Matlab, C/C++, C#, Javascript
Code Library: Pytorch, Keras, Scikit-learn, Numpy, OpenCV, ArcObjects
Skills: machine learning, large-scale database, complex network analysis

LANGUAGES

Mandarin: Native

English: Professional Proficiency, **GRE:** 329/340

Cantonese: Elementary Proficiency

SERVICE

Reviewer for IEEE Access

Co-founder/Coordinator of Taibai Reading Club, the Hong Kong Polytechnic University 2017-Present