

Shengjie Liu

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EDUCATION	Sun Yat-sen University	Guangzhou
	<ul style="list-style-type: none">▪ B.S. in Geographical Information Science (Remote Sensing), GPA: 3.9/4.0 Aug 2015 – Jun 2019<ul style="list-style-type: none">• Thesis: Deep Learning for Land Use and Land Cover Classification• Advisers: Prof. Qian Shi, Prof. Zhixin Qi	
PUBLICATIONS	<u>Liu, S.</u> and Shi, Q., Multitask Deep Learning with Spectral Knowledge for Hyperspectral Image Classification. <i>IEEE Geoscience and Remote Sensing Letters</i> , accepted, 2019.	
	<u>Liu, S.</u> , Qi, Z., Li, X. and Yeh, A.G.O., Integration of Convolutional Neural Networks and Object-Based Post-Classification Refinement for Land Use and Land Cover Mapping with Optical and SAR Data. <i>Remote Sensing</i> , 11 (6), p.690, 2019.	
	<u>Liu, S.</u> , Luo, H., Tu, Y., He, Z. and Li, J., Wide Contextual Residual Network with Active Learning for Remote Sensing Image Classification. In <i>IEEE International Geoscience and Remote Sensing Symposium</i> , July 2018, pp. 7145-7148.	
PROFESSIONAL EXPERIENCE	HKU Light Pollution ECF Team , The University of Hong Kong	Hong Kong
	<ul style="list-style-type: none">▪ Research Assistant, Department of Physics Sep 2019 – Present<ul style="list-style-type: none">• Investigations on light pollution in Hong Kong using satellite and site-based data• Principal Investigator: Dr. Jason C.S. Pun	
	OneSpace Technology	Chongqing
	<ul style="list-style-type: none">▪ Remote Sensing Engineer, Department of Spatial Information Jul 2019 – Aug 2019<ul style="list-style-type: none">• Crop type classification using Sentinel-2 satellite data• Water quality parameters estimation• Fine resolution PM2.5 monitoring using Zhuhai-1 hyperspectral data• Estimation of AOD using 6S radiative transfer model• Estimation of soil nutrient contents using Landsat-OLI imagery	
	Guangdong Provincial Key Lab. of Urbanization and Geo-simulation	Guangzhou
	<ul style="list-style-type: none">▪ Research Assistant (Part-time) Oct 2017 – Apr 2019<ul style="list-style-type: none">• Wide contextual residual network with active learning for remote sensing image classification• Combining optical and radar imagery from Sentinel for land use and land cover mapping• Multitask deep learning for hyperspectral image classification• Exploration of social segregation using mobility-activity data• Sustainable urban expansion of Zhuhai using GIS methods such as local Moran's I• Capturing the collapse and rise of the post-Soviet states using nighttime light data	
	GIS Lab , Sun Yat-sen University	Guangzhou
	<ul style="list-style-type: none">▪ Assistant Lab Manager (Part-time), School of Geography and Planning Jul 2017 – Dec 2018<ul style="list-style-type: none">• Maintained 82 computers and 2 multimedia systems for classes	
	Institute of Urbanization , Sun Yat-sen University	Guangzhou
	<ul style="list-style-type: none">▪ Research Assistant (Part-time) Mar 2018 – Jun 2018<ul style="list-style-type: none">• Discovered urban structure using mobility GPS data from cell phones with clustering analysis• Analysed the distribution of diseases using online medical record and network analysis	
	Center of Social Survey , Sun Yat-sen University	Zhuhai
	<ul style="list-style-type: none">▪ Interviewer (Internship), China Labor-force Dynamics Survey Jun 2016 – Aug 2016<ul style="list-style-type: none">• Face-to-face interviews with 70 families in 2 communities	

**RESEARCH
EXPERIENCE****Remote Sensing Image Classification**

- Remote Sensing Image Classification with Limited Labeled Samples
 - Active learning with convolutional neural networks
 - Object-based post-classification refinement for LULC mapping (superpixel-based regularization)
 - Multitask learning: utilized samples from multiple datasets to enhance machine generalization
- Multisource Data Fusion in Remote Sensing
 - Combining optical and radar imagery from Sentinel for LULC mapping
 - Local climate zones classification using Sentinel optical and radar data

Nighttime Light Remote Sensing

- Night Light in Socio-economic Studies
 - Capturing the collapse and rise of post-Soviet states from nighttime light data
 - Urban dynamics in Almaty from 1996 to 2011 using Landsat and nighttime light data
- Light Pollution
 - Identification of the source of light pollution using high-resolution imagery and nighttime light data

Urban Studies

- Urban Big Data Analytics
 - The effect and simulation of urban vitality using social media data: a case study of Guangzhou
 - The distribution and structure of human diseases using online medical records with network analysis
 - Exploration of social segregation using mobility-activity data: a case study of Hong Kong
- Urban Environment
 - Estimating PM2.5 directly from TOA reflectance using Zhuhai-1 hyperspectral data
 - Toward a sustainable urban expansion: a case study of Zhuhai, China

**VOLUNTEER
EXPERIENCE****Xiang Zhou Volunteers' Federation, Zhuhai**

- Volunteer at Zhuhai Railway Station Sep 2015 – Jun 2017
 - Help those in need to buy tickets on ticket machines
 - Provide information about train schedule and city guides in Mandarin, Cantonese and English
 - On Saturday or Sunday, more than 150 hours

**AWARDS &
SCHOLARSHIPS**

- The 1st Orbita Hyperspectral Satellite Data Processing Paper Contest Nov 2019
 - Second Prize (5,000 CNY)
 - Estimating PM2.5 directly from TOA reflectance using Zhuhai-1 hyperspectral data
- Alibaba Cloud German AI Challenge 2018 Feb 2019
 - Remote sensing scene classification of local climate zones
 - Preliminary: 18/1329 (top 2%), Semifinals: 29/1329 (top 3%)
- Scholarship of the EMBA Alumni Association for Real Estate of Sun Yat-sen University Dec 2018
- The First Prize of Excellent Undergraduate Scholarship, Sun Yat-sen University 2017 – 2018

LANGUAGES

English: fluent; Chinese: native in both Cantonese and Mandarin / Putonghua

SKILLS

General: machine learning, deep learning, satellite image processing, spatial analysis

- Coding Languages: Python, C/C++, MATLAB, HTML5, \LaTeX
- Software: ENVI, ArcGIS, GeoDa, QGIS, eCognition, OriginLab

Last updated on 2020-01-09