Qingyu Li

Data Science in Earth Observation, Technical University of Munich, Munich, Germany
Remote Sensing Technology Institute, German Aerospace Center, Wessling, Germany
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PERSONAL PROFILE

- High self-motivated researcher with demonstrated research expertise in remote sensing
- Strong interpersonal skills with a good sense of teamwork
- Programming skills: Python, PyTorch, Matlab
- Others: ENVI, QGIS, LaTex, GDAL

EDUCATION

04/2019 – now **Technical University of Munich, Germany**
Ph.D. degree, Supervisor: Prof. Xiaoxiang Zhu
Thesis: Deep learning for building footprint generation from optical imagery.

09/2015 – 11/2018 **Technical University of Munich, Germany & Wuhan University, China**
Double Master degree in Earth Space Oriented Space Science and Technology & Photogrammetry and Remote Sensing
Thesis: Building footprint generation using deep learning methods
Honors: passed with distinction

09/2011 – 06/2015 ***Wuhan University, China***
Bachelor degree in Remote Sensing Science and Technology
Thesis: Integrating multiple textural features for remote sensing image change detection
Honors: passed with high distinction

PROFESSIONAL APPOINTMENTS

04/2019 – Present **Research Associate**
Data Science in Earth Observation, Technical University of Munich

- Development of frameworks for global building footprint generation, “So2Sat” project (European Research Council)
- Development of frameworks for undocumented building detection, "Investigation of building cases using AI" project, (Bavarian Agency for Digitization, High-Speed Internet and Surveying)

TEACHING EXPERIENCE

10/2021 - 03/2022; Graduate
10/2019 - 03/2020 *Technical University of Munich*
Remote Sensing Seminar - TA
Teaching students to do research projects

LANGUAGE

Chinese, English, German

SELECTED PUBLICATIONS

Li, Qingyu, Hannes Taubenböck, Yilei Shi, Stefan Auer, Robert Roschlaub, Clemens Glock, Anna Kruspe, and Xiao Xiang Zhu. "Identification of undocumented buildings in cadastral data using remote sensing: Construction period, morphology, and landscape." **International Journal of Applied Earth Observation and Geoinformation** 112 (2022): 102909.

Li, Qingyu, Yilei Shi, and Xiao Xiang Zhu. "Semi-supervised building footprint generation with feature and output consistency training." **IEEE Transactions on Geoscience and Remote Sensing** (2022).

Li, Qingyu, Lichao Mou, Yuansheng Hua, Yilei Shi, and Xiao Xiang Zhu. "CrossGeoNet: A Framework for Building Footprint Generation of Label-Scarce Geographical Regions." **International Journal of Applied Earth Observation and Geoinformation** 111 (2022): 102824.

Li, Qingyu, Lichao Mou, Yuansheng Hua, Yilei Shi, and Xiao Xiang Zhu. "Building footprint generation through convolutional neural networks with attraction field representation." **IEEE Transactions on Geoscience and Remote Sensing** 60 (2021): 1-17.

Li, Qingyu, Yilei Shi, Xin Huang, and Xiao Xiang Zhu. "Building footprint generation by integrating convolution neural network with feature pairwise conditional random field (FPCRF)." **IEEE Transactions on Geoscience and Remote Sensing** 58, no. 11 (2020): 7502-7519.

Li, Qingyu, Chunping Qiu, Lei Ma, Michael Schmitt, and Xiao Xiang Zhu. "Mapping the land cover of Africa at 10 m resolution from multi-source remote sensing data with Google Earth Engine." **Remote Sensing** 12, no. 4 (2020): 602.

TALKS

07/2022	"Feature and Output Consistency Training for Semi-supervised Building Footprint Generation." Oral presentation in 2022 IEEE International Geoscience and Remote Sensing Symposium.
07/2021	"End-to-End Semantic Segmentation and Boundary Regularization of Buildings from Satellite Imagery." Oral presentation in 2021 IEEE International Geoscience and Remote Sensing Symposium.
09/2020	"Instance Segmentation of Buildings Using Keypoints." Oral presentation in 2020 IEEE International Geoscience and Remote Sensing Symposium.
09/2020	"Detection of Undocumented Buildings using Convolutional Neural Network and Official Geodata." Oral presentation in 2020 XXIVth ISPRS Congress.

SERVICE & LEADERSHIP

- **Session chair** for 2022 IEEE International Geoscience and Remote Sensing Symposium – WE3.O1: Image Segmentation and Mapping; 2021 IEEE International Geoscience and Remote Sensing Symposium – WE1.O.3: Advanced Segmentation and Land Cover Methods for Optical Data
- **Reviewer** for Scholarly Journals:
  IEEE Transactions on Geoscience and Remote Sensing, International Journal of Applied Earth Observation and Geoinformation, ISPRS Journal of Photogrammetry and Remote Sensing, Remote Sensing, Photogrammetric Engineering & Remote Sensing, IEEE Geoscience and Remote Sensing Letters

SELECTED AWARDS

10/2020 **Geodesy Award** of German Association for Geodesy, Geoinformation, and Land Management