

# 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

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- 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

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- 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

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- 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

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

## LANGUAGE

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Chinese, English, German

## SELECTED PUBLICATIONS

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- 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, Yilei Shi, Stefan Auer, Robert Roschlaub, Karin Möst, Michael Schmitt, Clemens Glock, and Xiaoxiang Zhu. "Detection of Undocumented Building Constructions from Official Geodata Using a Convolutional Neural Network." **Remote Sensing** 12, no. 21 (2020): 3537.
- 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.
- Li, Qingyu, Xin Huang, Dawei Wen, and Hui Liu. "Integrating multiple textural features for remote sensing image change detection." **Photogrammetric Engineering & Remote Sensing** 83, no. 2 (2017): 109-121.

## TALKS

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| 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

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- **Session chair** for 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

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| 10/2020 | <b>Geodesy Award</b> of German Association for Geodesy, Geoinformation, and Land Management |
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