

HU Wenmiao

Ph.D. student & Ph.D. Researcher

Ph.D. student from National University of Singapore, School of Computing and Ph.D. Research at Grabtaxi Holding.
Research interest: geoinformation extraction from imagery.



hu.wenmiao19@gmail.com

+ 65 90579163

linkedin.com/in/wenmiao-hu

WORK EXPERIENCE

Ph.D. Researcher

Grabtaxi Holding Pte. Ltd.

08/2019- present
Responsibilities

Singapore

- Work with the Grab Geo Data Science Team.
- Conduct researches to extract geoinformation from imagery.
- Joint industrial Ph.D. sponsored by Grab, NUS and EDB of Singapore.

Product Manager & Solution Developer

Skymap Global Pte. Ltd.

11/2016- 02/2019
Responsibilities

Singapore

- Applied and awarded government & business fund for project.
- Managed multi-culture dynamic product development group.
- Conducted market research, product design, recruited team members.

Research Assistant

German Aerospace Center/TUM Signal Processing in Earth ObServation

03/2016- 09/2016
Task

Oberpfaffenhofen, Germany

- Master thesis "Object-based Multi-view Facade Matching in SAR Images of Dense Urban Areas".

Research Assistant

TUM Institute of Astronautics

03/2016- 09/2016
Task

Munich, Germany

- Supported data collection & Performed data analysis for projects.

Internship

Panasonic R&D Center Singapore

03/2013- 08/2013
Task

Singapore

- Developed algorithm for nail beautification application.
- Improved car plate recognition algorithm.

EDUCATION

Ph.D. (Computer Science)

National University of Singapore

08/2019- present

Singapore

Master of Science (Earth Oriented Space Science and Technology) Passed with High Distinction

Technische Universität München

10/2014- 09/2016

Munich, Germany

Bachelor of Engineering (Electrical and Electronic Engineering) First Class Honours

Nanyang Technological University

08/2010- 08/2014

Singapore

PUBLICATION

GeoPalette: Road Segmentation with Limited Satellite Imagery

Wenmiao Hu, Yifang Yin, Ying Kiat Tan, An Tran, Hannes Kruppa, and Zimmermann Roger. In Proceedings of the 29th International Conference on Advances in Geographic Information Systems, pp. 95-98. 2021.

A Context-enriched Satellite Imagery Dataset and an Approach for Parking Lot Detection

Yifang Yin, Wenmiao Hu*, An Tran, Hannes Kruppa, Roger Zimmermann, and See-Kiong Ng. In Proceedings of the IEEE/CVF Winter Conference on Applications of Computer Vision, pp. 1371-1380. 2022.

Beyond Geo-localization: Fine-grained Orientation of Street-view Images by Cross-view Matching with Satellite Imagery

Wenmiao Hu, Yichen Zhang, Yuxuan Liang, Yifang Yin, Andrei Georgescu, An Tran, Hannes Kruppa, See-Kiong Ng, and Roger Zimmermann. In Proceedings of the 30th ACM International Conference on Multimedia (MM '22), Oct. 10-14, 2022, Lisboa, Portugal.

OTHER RESEARCH PROJECTS

Water Resource Monitoring Solution (06/2017 – 09/2017)

- Water resource detection & monitoring of surrounding environment using multi-sensor data.

Urban Change Monitoring Study (04/2017 – 07/2017)

- Understood the problem statement of the urban area change monitoring challenge and provide corresponding solutions.

Vessel Detection and Information Extraction (11/2016 – 05/2017)

- Development of vessel-related solution using multi-sensor data.
- Developed the corresponding algorithms for information extraction, data analysis and visualization.

Data Analysis for Vehicle Location (2015)

- Recognized route from GPS data log.
- Delivered visualization on map.

SKILLS

python

Satellite imagery analysis

GIS

Computer Vision

Image Segmentation

pytorch

OTHER INFO

Nationality: Chinese Language: English, Chinese

Work Permit in Singapore: Permanent Residence