CE HOU (ALBERT)

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EDUCATION

University College London — London, United Kingdom
Master of Science — Sep 2021 – Dec 2022 (expected)

- Major in Spatial Data Science and Visualization

Wuhan University — Wuhan, China
Bachelor of Engineering — Sep 2017 – Jun 2021

- Major in Geodesy and Geomatics Engineering

WORK AND RESEARCH EXPERIENCE

Microsoft Research Asia (MSRA), Tsinghua University
Beijing, China
Research Assistant — Jul 2022 – Present
AI based Near-real-time Global Carbon Budget (ANGCB)
Use a Conv-LSTM deep learning structure to diminish system error and reduce stochastic error of ocean carbon sink by integrating 13 multi-source data products. Result shows that our model has state-of-the-art performance compared with other models published (this study is still in progress).

Centre for Advanced Spatial Analysis (CASA), University College London — London, United Kingdom
Researcher — Feb 2022 – Sep 2022
Why people cycling: illustrating the mismatch between cycling environment and cycling behavior (collaborative projects with TfL)
Establish a street bikeability score based on environmental factors extracted from street view images to evaluate the street's bikeability, detect the mismatch between the built environment and cycling behavior. Result shows that areas near the inner cardon boundary of London show the mismatch phenomenon, and propose some solution to promote cycling rate based on the socio-economic factors of areas have mismatch phenomenon.

School of Geodesy and Geomatics, Wuhan University — Wuhan, China
Researcher — Jan 2021 – May 2021
Research on Data Fusion of Multi-source Precipitable Water Vaper
Use GNSS Precipitable Water Vaper (PWV) to diminish system error and stochastic error in MODIS PWV and ERA5 PWV by Bi-LSTM, generate a new dataset which have high precision and spatial resolution. Compared with the MODIS and ERA5 data, the bias of fused data is almost eliminated, standard deviation and root mean square (RMS) are reduced. In addition, fused data has spatial resolution as 5km, and temporal resolution of 60 minutes, which shows the fused data has high spatio-temporal resolution.

School of Geodesy and Geomatics, Wuhan University — Wuhan, China
Researcher — Nov 2018 – Apr 2020
Research on Traffic Light Control Method Based on Road Cameras
Project belongs to Hubei Province's innovation and entrepreneurship training program for college students. Design a timing algorithm of traffic lights based on vehicle counts in the road camera images. Result shows that our traffic light control method can achieve the automatic control of vehicle movements within a certain range, and has better performance compared with theorical model without considering the real-time road condition.

EXTRACURRICULAR ACTIVITIES

GISphere Online
Co-assistant Mar 2022 – Present
Participate in organizing GISalon (an online seminars), manage the official WeChat account and update the related news about GISalon.

The Chinese Professional in Geographic Information Systems Online
Volunteer Dec 2021 – Present
Assist in managing the official WeChat account and publish tweets. Produced a tweet with more than 3,000 reads

School of Geodesy and Geomatics, Wuhan University Wuhan, China
Class Monitor Sep 2018 – Jun 2021

- Managed the daily affairs of the class, communicating with teachers and classmates to strengthen whole class
- Won second prize in 2018 League Branch Elegance Competition, which involves the class's overall quality and leadership; Won third prize in the League Branch Challenge Competition, which involves leaders' management skills

Public Relations Department of the Student Union, Wuhan University Wuhan, China
Member Sep 2017 – Jun 2018

- Created and operated the WeChat public account
- Contacted Tencent to seek sponsorship for the school, winning sponsorship worth more than 1,000 CNY from hotpot restaurants
- Communicated with Global Education & Technology (an English education company) to hold IELTS and TOEFL Mock Exam in the Information and Technology Department; Host the who process including finding sponsors, organizing the exam, and advertising for sponsors.

HONORS

- Bezos/Musk Prize for Entrepreneurial Potential in Knight Frank Dubai Housing Data Hackathon 2022
- Outstanding undergraduate graduation design, Wuhan University 2021
- Outstanding Graduate Student, Wuhan University 2021
- Outstanding Student, Wuhan University **(**top 5%) 2021
- Li Qinghai Scholarship for Outstanding Students in Geomatics 2021
- First Class Scholarship, Wuhan University (top 15%) 2021
- Excellent Student, Wuhan University (top 15%) 2020
- Outstanding student leaders 2020
- Second Class Scholarship, Wuhan University (top 15%) 2020
- Social activist Student, Wuhan University 2020

ADDITIONAL INFORMATION

- **Language Skills:** Mandarin (Native), English (Fluent), IEITS: 6.5
- **Computer Skills:** Python, TensorFlow, Pytorch, R, C#, MATLAB, ArcGIS, Erdas and other GIS/RS softwares.
- **Interests:** Drawing, reading, musical instruments such as Erhu (traditional Chinese instrument)