Xiaohao YANG

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EDUCATION

Bachelor of Engineering in Landscape Architecture
2014.9 ~ 2018.6 South China Agricultural University

Master of Landscape Architecture
Master of Science in Geospatial Data Sciences
2019.9 – 2022.4 University of Michigan

Master candidate of Science in Information 2025
PhD candidate of Environment and Sustainability 2026

SOFTWARE PUBLICATION

R package (on CRAN) : streetscape

A collection of functions to search and download street view imagery and to extract, quantify, and visualize visual features. Moreover, there are functions provided to generate Qualtrics survey in TXT format with street views.

R package (on CRAN) : viewscape

A collection of functions to make R a more effective viewscape analysis tool for calculating viewscape metrics based on computing the viewable area for given a point/multiple viewpoints and a digital elevation model

R package (on CRAN) : dsmSearch

A collection of functions to search and donwload DSM (Digital Surface Model) and LiDAR (Light Detection and Ranging) data via APIs, including 'OpenTopography' and and 'TNMAccess'

ARTICLE PUBLICATION

Yang, X., Lindquist, M., & Van Berkel, D. (2025). “streetscape” package in R: A reproducible method for analyzing open-source street view datasets and facilitating research for urban analytics. SoftwareX, 29, 101981.

A Viewscape-based Approach for Assessing Perceived Walkability in Cities. (2024). Journal of Digital Landscape Architecture, 9, 735-746. ISBN 978-3-87907-752-6, ISSN 2367-4253, https://doi.org/10.14627/537752068.

Yang, X., Fox, N., Van Berkel, D., & Lindquist, M. (2024). Viewscape: An R package for the spatial analysis of landscape perception and configurations in viewsheds of landscapes. SoftwareX, 26, 101662.

Chen, C., Xia, Y., & Yang, X. (2020). Resilience Strategies to Impacts of Sea Level Rise on the Agricultural Areas in Nansha District of Guangzhou. Landscape Architecture Frontiers, 8(3), 10-25. https://doi.org/10.15302/J-LAF-1-020027

CHEN Chongxian,YANG Xiaohao,XIA Yu*.Impact of Sea Level Rise on Coastal Wetland Landscape Based on Sea Level Affecting Marshes Model[J].Landscape Architecture Journal, 2019, 26(9):75-82.

Chen, C., Luo, W., Li, H., Zhang, D., Kang, N., Yang, X., & Xia, Y. (2020). Impact of perception of green space for health promotion on willingness to use parks and actual use among young urban residents. International journal of environmental research and public health, 17(15), 5560.

SPEAK

Exploring Acoustic Landscapes of Places of Worship for Environmental Planning
2024 Graduate Conference in Religion & Ecology AT YALE DIVINITY SCHOOL

Sensing Affective Responses to Soundscapes in Social Media
2024 IALE-North America Annual Meeting

EXPERIENCE

Research Assistant in South China Urban Lab (SCULAB)
2017.09 ~ 2019.08
- GIS analysis in terms of sea-level rise
- Analyzed the walkability of urban within the accessible area of public parks
- Collected and analyzed point of interest (POI) data
- Processed remote sensing images (Landsat 8) for landcover classification
- Simulated the transformation of coastal wetland in the scenarios of sea-level rise

Research Assistant in School For Environment And Sustainability (SEAS), UMich
2020.06-2023.3
- Processed LiDAR data for green space/canopy cover recognition
- Analyzed accessible area of university's and hospitals' facilities
- Process remote science images for landcover recognition
- Recorded 360-degree videos across Ann Arbor
- Trained deep learning model for predicting emotion of soundscapes
- Developed functions in R for viewshed analysis
- Classified landcover with multi-source data using machine learning
- Analyzed and visualized Census data and water pollution data

TEACHING

Graduate Student Instructor in SEAS, UMich
2021Fall EAS 587 Place Making
2023Winter EAS 750 Urban Design
2023Fall EAS 587 Place Making
2024Fall EAS 548 Introduction To Geovisualization
2024Fall EAS 648 Advanced Geovisualization
2025Winter EAS 687 Landscape Modeling

HONORS

2019 ASLA Student Honor Award in Analysis and Planning
American Society of Landscape Architecture (ASLA)
From Risk to Productivity: A Successional Salty Agriculture System in the Pearl River Delta

2019 IFLA Asia-Pac Professional Award of Excellence (Team)
International Federation of Landscape Architecture (IFLA)
From risk to Resilience: Assessment and strategy of complex urban system to future sea-level rise in Guangzhou

SKILLS

Coding: Python, R, C++, C#, JavaScript, HTML, CSS, Bash
Machine learning: Pytorch [python]
Large language model: openai API (Python), CLIP (Python), CLAP (Python)
Statistical analysis: linear regression model, principle componont analysis
Spatial analysis: network analysis, spatial regression
Computational design: rhinoscriptsyntax (Python), Grasshopper (Rhino)
3D modeling: Rhino
Web 3D/application: A-Frame (html), Threejs (JavaScript), Leaflet (JavaScript/R)
Game development: Unity (C#), Unreal Engine
GIS: Qgis, ArcGIS, GRASS GIS
Design: Adobe Ps/Ai/Id

FUNDING

USD1500 Rackham Graduate Student Research Grant
USD 900 Rackham Travel Grant
USD 200 SEAS Conference Travel Grant