

# 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 download DSM (Digital Surface Model) and LiDAR (Light Detection and Ranging) data via APIs, including 'OpenTopography' 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 watershed 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 component 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