Lei WANG

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EDUCATION BACKGROUND

2021-present	**School of Architecture, Tianjin University** Ph.D. candidate in Landscape Architecture	Supervisor: Prof. Jie He
2018-2021	**School of Architecture, Tianjin Chengjian University** Master in Landscape Architecture	Supervisor: Prof. Pengbo Li
2014-2018	**School of Forestry, Henan University of Technology** Bachelor in Landscape	

PUBLICATION

1. **Lei Wang**, Xin Han, Jie He*, Taeyeol Jung*. Measuring residents' perceptions of city streets to inform better street planning through deep learning and space syntax. ISPRS Journal of Photogrammetry and Remote Sensing, 2022, 190: 215-230.
   DOI: 10.1016/j.isprsjprs.2022.06.011.

2. Xin Han, **Lei Wang**, Seong-hyeok Seo, Jie He*, Taeyeol Jung*. Measuring perceived psychological stress in urban built environments using Google Street View and deep learning. Frontiers in Public Health, 2022, 10: 891736.
   DOI: 10.3389/fpubh.2022.891736.

3. YiKe Hu, TianLin Zhang, **Lei Wang**, Jie He*. Measurement and Spatial Distribution of Perception in Urban Blocks from the Perspective of Landscape Service. Landscape Architecture, 2022, 29(10): 45-52.
   DOI: 10.14085/j.fjyl.2022.10.0045.08.

4. **Lei Wang**, Li PengBo*. The Application of Computer Deep Learning in Relics Landscape Restoration. HUAZHONG ARCHITECTURE, 2022, 40(01):42-45.
   DOI: 10.13942/j.cnki.hzjz.2022.01.008.

5. Longhao Zhang, **Lei Wang**, Jun Wu, PengBo Li*, Jiali Dong. Decoding Urban Green Spaces: Deep Learning and Google Street View Measure Green Structures. Urban Forestry & Urban Greening. (Under Review)
   DOI: 10.2139/ssrn.4180331.

AWARD & HONOR

1.	Doctoral Scholarship of Tianjin University in 2021 & 2022	Sliver Award
2.	2020 “Qing Run” China University Student Research Competition	Sliver Award
3.	Master Scholarship of Tianjin Chengjian University in 2020	Gold Award
4	Master Scholarship of Tianjin Chengjian University in 2018 & 2019	Sliver Award

SKILL & HOBBIES

Hobbies: Badminton, Music, Vlogger, Blogger

Design Skills: AutoCAD, Sketchup, Lumion, Adobe Photoshop, Adobe AI

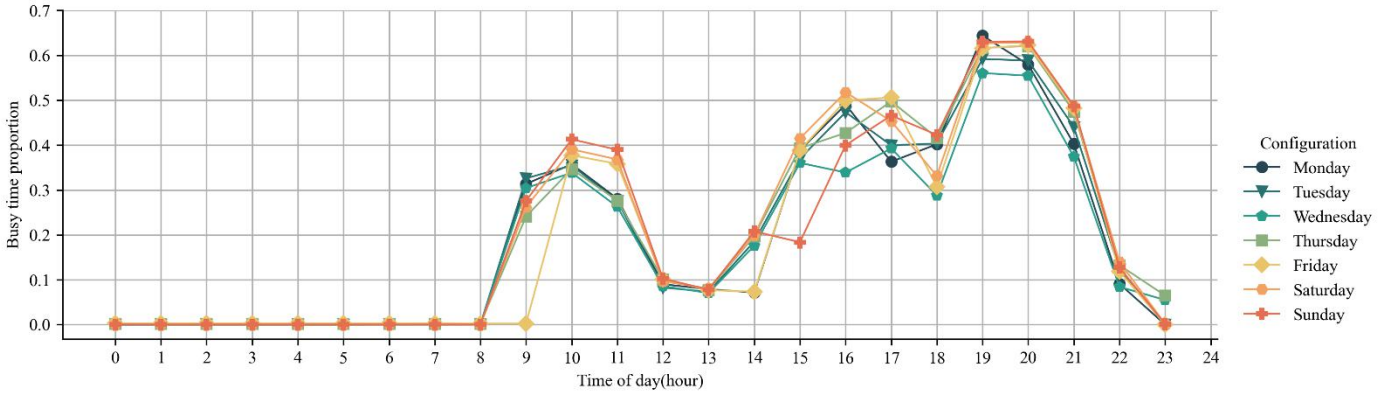
Computer Skills: Proficient in Python, Deep Learning Framework Pytorch, Machine Learning Framework Sklearn

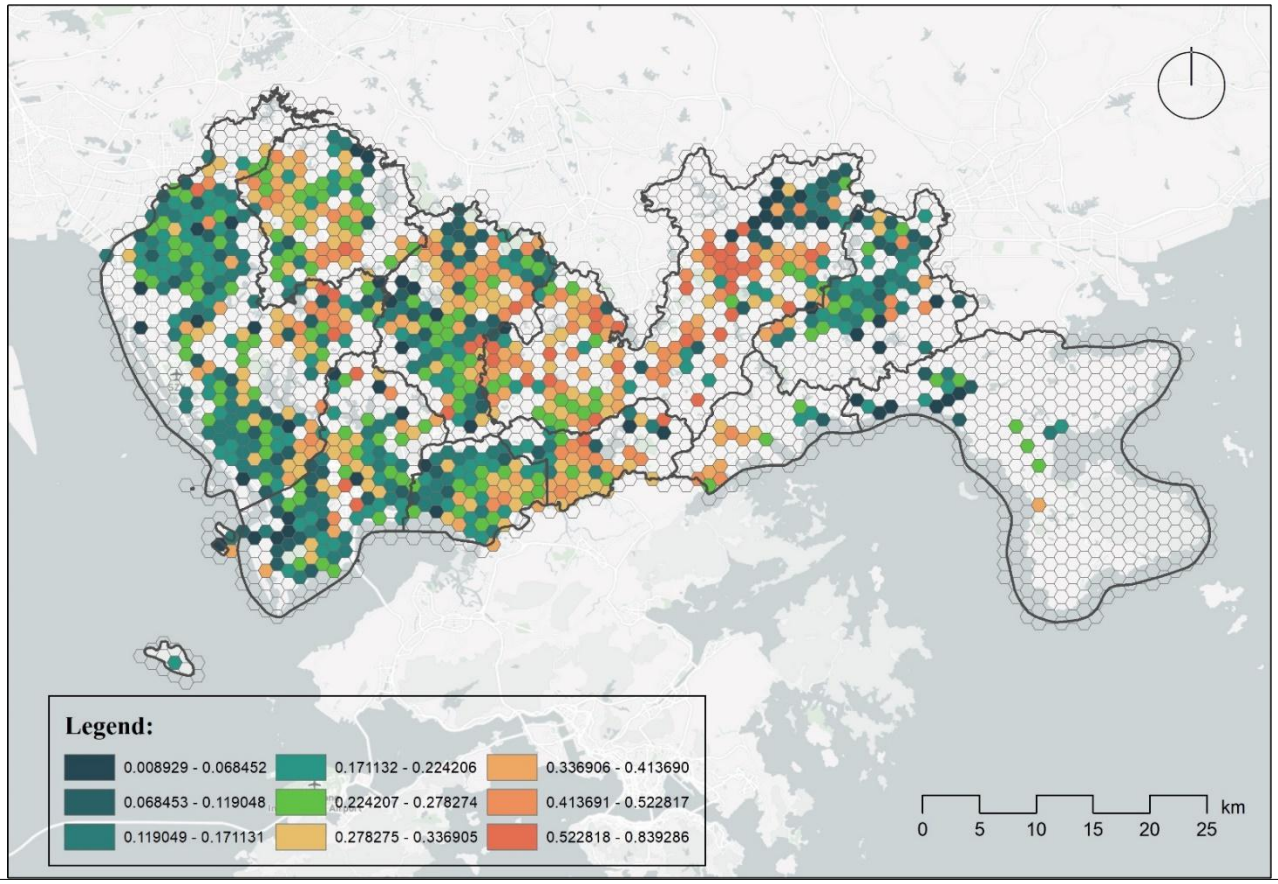
Data analysis: ArcGIS, SPSS, Numpy, pandas, Geopandas, Osmnx

RELATE WORKS

1.	**Infection risk factor measurement based on spatial and temporal distribution and busyness of COVID-19 nucleic acid test sites: an example from Shenzhen *(2022 November)***

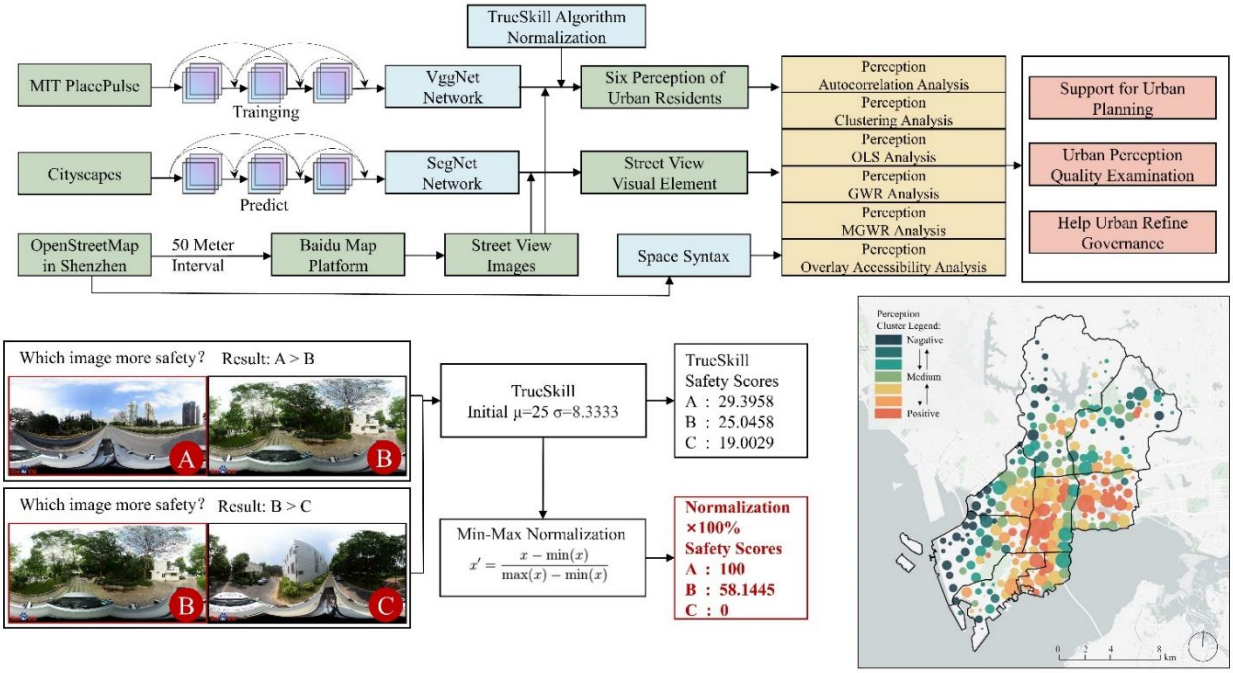
Busy nucleic acid testing sites can lead to long queues and the gathering of people will increase the risk of virus transmission. In this research, we investigated the complete COVID-19 nucleic acid testing site data in Shenzhen during a continuous week (24-30 October 2022), and counted the percentage of busy hours at each nucleic acid testing site to explore the spatial distribution of nucleic acid testing site busyness in Shenzhen. (Source Code)





2.	**Urban perception assessment and refined street governance supported by Baidu street view data** ***(2022 August)***

This research mainly using two kinds of convolutional structure neural networks to obtain urban space perception and street view visual elements, which provides data basis for realizing identification and analysis of large-scale urban space perception. In this model we collected data to improve the efficiency of urban physical examination investigation. To provide scientific suggestions for the rapid and efficient refinement of street space management, and to provide planning and design support for improving the quality of street space.(Presentation start from 1hour30min)



3.	**Analysis of spatial color characteristics of urban Internet celebrities - images from the social media software "XiaoHongshu"*(2021 October)***

20210504003145_00000495_00000052.png

Naming rules and data cleaning:

20210504003145 The photo was uploaded on May 4, 2021.Through the time can be selected and compared in different time periods agree low Internet celebrities spatial image feature changes.

00000495 The number of likes on this picture, 495. The highly praised pictures were selected by the number of "likes" and used as the representative pictures of Internet celebrities in the space to analyze the spatial characteristics.

00000052 Image download number, number 52. Used to count the total number of downloaded images.

20200918153656_00017461_00000223.png

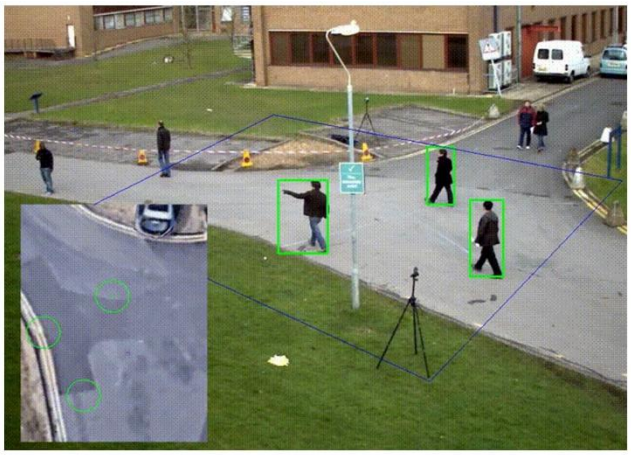
ratio	H	S	V
0.22	26	20	83
0.16	212	25	72
0.15	214	27	58
0.13	34	5	97
0.12	208	20	87
0.12	214	40	44
0.05	215	42	21
0.05	194	76	75

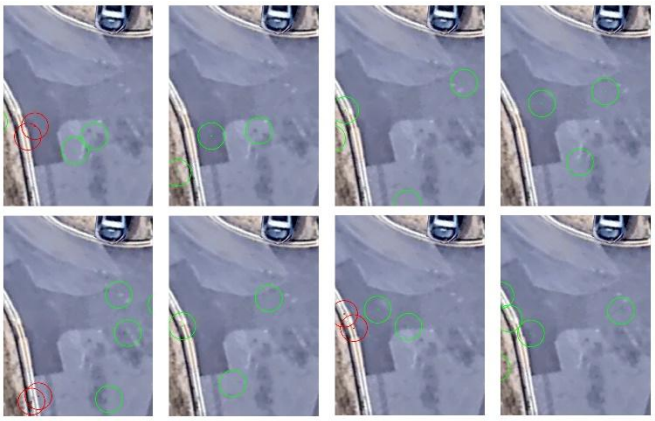
20210918164640_00001584_00000161.png

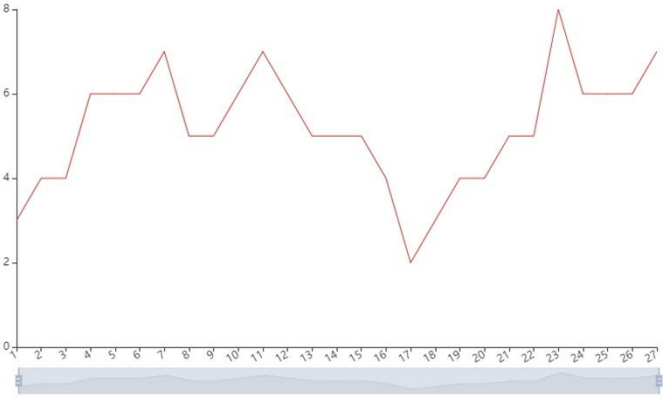
ratio	H	S	V
0.2	224	58	34
0.18	205	29	86
0.16	228	73	19
0.13	223	82	55
0.1	208	70	95
0.1	220	52	70
0.09	225	86	86
0.04	294	2	98

3.	**Environment-deterministic pedestrian behavior? New insights from UVA video evidence** ***(2021 November)***

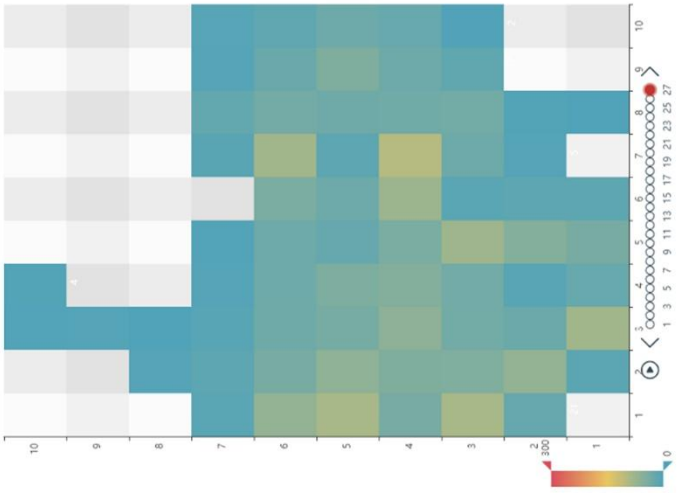
UAV(unmanned aerial vehicle) are used to take aerial photos of the public space for a consecutive week at the same time period, image recognition technology is used to identify and record the number and location of pedestrians in the space. Analyze the travel patterns of pedestrians. (UAV flight recorders)







Line chart of pedestrians number



Hotspot map of pedestrains location