

PHD CANDIDATE

SKILLS

Analytical

Software Development (C++ | Python);
Deep Learning (Pytorch | TF);
GIScience (QGIS | R);
Computer Vision (OpenCV | Open3D);
Data Mining (Selenium | BS4);
Statistics & Econometrics (R | Python);

Design

Web Development (HTML5 | JS | CSS);
Mobile App Development (Flutter);
Dashboard Analytics (Dash);
Poster Design (Adobe Suite);
3D Modelling & Render (Blender);
Focus Group Discussion & Interviews;
Community Design Workshops;

EDUCATION

PhD, Urban Analytics (GPA: 4.75/5.0)
National University of Singapore
Supervised by Prof. Filip Biljecki

2021 - 2025

Masters of Urban Planning (95th Perc.)
National University of Singapore

2017 - 2018

BSc Real Estate (Hons) w.
Specialisation in Urban Planning
National University of Singapore

2013 - 2017

Integrated Programme
Raffles Institution

2005 - 2010

REFEREES

CHAN Heng Chee
Professor (Former Chair)
Lee Kuan Yew Centre for
Innovative Cities
(PA) serena_lin@sutd.edu.sg

NEO Harvey
Professorial Fellow
Lee Kuan Yew Centre for
Innovative Cities
harvey_neo@sutd.edu.sg

RESEARCH EXPERIENCE

Research Associate
Lee Kuan Yew Centre for
Innovative Cities

2018 - 2021

Lee Li Ming Programme in Ageing Urbanism
Innovative Planning and Design of Age-Friendly
Neighbourhoods in Singapore (NRF-MND)

Programme on Cities and Urban Science
Future of Asian Cities - Citizen Urban Science:
Policy and Practice (MOE)

Programme on Cities and Urban Science
Sociospatial Reconfiguration of the City in a
Post-Covid World (LKYCIC)

MANUSCRIPT PUBLICATION

Chan, H. C. & **Yap, W.** (2023). Housing and the city: The Singapore case. Council of Urban Initiatives. UN-Habitat, UCL IIPP and LSE Cities.

Yap, W. & Biljecki, F. (2023). A Global Feature-Rich Network Dataset of Cities and Dashboard for Comprehensive Urban Analyses. *Scientific Data*, 10, 667. <https://doi.org/10.1038/s41597-023-02578-1>

Yap, W., Stouffs, R. & Biljecki, F. (2023). Urbanity: automated modelling and analysis of multidimensional networks in cities. *npj Urban Sustainability*, 3, 45. <https://doi.org/10.1038/s42949-023-00125-w>

Yap, W., Janssen, P., & Biljecki, F. (2022). Free and open source urbanism: software for urban planning practice. *Computers, Environment and Urban Systems*, 96, 101825. <https://doi.org/10.1016/j.compenvurbsys.2022.101825>

Yap, W., Chang, J. H., & Biljecki, F. (2022). Incorporating networks in semantic understanding of streetscapes: Contextualising active mobility decisions. *Environment and Planning B: Urban Analytics and City Science*, 50, 1416-1437. <https://doi.org/10.1177/23998083221138832>

Song, S., **Yap, W.**, Hou, Y., & Yuen, B. (2020). Neighbourhood built Environment, physical activity, and physical health among older adults in Singapore: A simultaneous equations approach. *Journal of Transport & Health*, 18, 100881.

Hou, Y., **Yap, W.**, Chua, R., Song, S., & Yuen, B. (2020). The associations between older adults' daily travel pattern and objective and perceived built environment: A study of three neighbourhoods in Singapore. *Transport Policy*, 99, 314-328.

TEACHING

Graduate Teaching Assistant, CDE2212 Artificial Intelligence for Design.
@National University of Singapore - Fall 2023.

Graduate Teaching Assistant, DEP5101 Planning Technologies (Introduction to R).
@National University of Singapore - Spring 2022.

Bootcamp Instructor, Masters of Urban Science, Policy, and Planning Python Bootcamp.
@Singapore University of Technology and Design - Spring 2023.

MENTORING

Brian van Laar, Master of Science, Spatial, Transport and Environmental Economics, VU Amsterdam.

PRESENTATIONS

"Urban Network Modelling Workshop with Urbanity". Free and Open Source for Geospatial Asia 2023. Seoul Hall of Urbanism and Architecture, South Korea. 28 November, 2023.

"Science-based Approach to Future Scenario Planning?". Urban Solutions and Sustainability R&D Conference 2023: Science of Cities Symposium. Marina Bay Sands Expo, Singapore. 5 October, 2023.

"Multidimensional Network Modelling with Urbanity?". 127th OGC Member Meeting: Digital Twins Special Session. Lifelong Learning Institute, Singapore. 26 September, 2023.

"Unlocking Urban Insights: How Technology Shapes City Planning and Management". Integrative Fiesta. SMU College of Integrative Studies, Singapore. 8 September, 2023.

"Street view imagery: Have we answered all the questions with it? What's left to do?". 4th Spatial Data Science Symposium. Virtual. 6 September, 2023.

"Free and Open Source Digital Planning Tools". Planning Institute of Australia, PlanTech Series. 20 July, 2023.

"Drivers and Challenges of Digital Citizen Participation: Experiential Evidence from Southeast Asian Cities". RC21 Conference: Sensing the City. Antwerp. 15 July, 2021.

BOOKS / BOOK CHAPTERS

Nicholas, S & **Yap, W.** Is the City Center Hollowing Out?, In Chan, H. C., Neo, H., & Joyce, S (Eds), Socio-spatial Reconfiguration of the City Post-Covid, World Scientific.

Chan, H. C., **Yap, W.**, & Nicholas, S. The Magic of Modernity, In Chan, H. C., Neo, H., & Joyce, S (Eds), Socio-spatial Reconfiguration of the City Post-Covid, World Scientific.

Yuen, B., Močnik, Š., Moogoor, A., Dieterich, A., **Yap, W.**, & Bhuyan, M. R. (2022). Age-friendly Neighbourhood Environmental Audit Toolkit, World Scientific (electronic print).

Yuen, B., Bhuyan, M. R., Dieterich, A., **Yap, W.**, & Chua, R. (2022). Age-friendly Neighbourhood Post-implementation Toolkit, World Scientific (electronic print).

Yuen, B., Bhuyan, M. R., Song, S., Moogoor, A., **Yap, W.**, Močnik, Š., & Chua, R. (2022). Age-friendly Neighbourhood Planning and Design Guidelines: A Singapore Case Study, World Scientific.

Yap, W & Norakmal, H. (2021). Tokyo - Pushing Frontiers, Planning for Society 5.0., In Arturo, B., Christos, C., Bruno, L., & Chan, H. C. (Eds), *Cities in a Time of Global Emergencies*. IMD.

Yuen, B., Močnik, Š., Yu, C. F., & **Yap., W.** (2020). Ageing-friendly neighbourhoods in Singapore, Asia-Pacific, Europe and North America: An Annotated Bibliography, Springer Briefs in Aging.

ACADEMIC ACTIVITIES & SERVICES

Reviews

Geoforum (2019); Int. J. Geogr. Inf (2022); J. Open Source Softw (2022); Transp. Res. D: Transp (2023); Sustain. Cities Soc (2023); Environ Plan B Urban Anal City Sci (2023; 2024); Geogr Analysis (2023); Trans GIS (2023); Int. J. Appl. Earth Obs (2023); Comput Environ Urban Syst (2024);

Services

College Representative for National University of Singapore Graduate Education Virtual Open House	2022
Organizing Committee for SUTD-NUS PhD Symposium	2022
Speaker for NUS Cities Panel of Advisors Research Showcase	2023

AWARDS & PROGRAMMES

PHD Dissertation Fellowship 2023	Singapore Data Science Consortium
Asian Masters of Urbanism Programme (University of Tokyo Tokyo)	National University of Singapore
FOSS4G Asia Travel Award	Open Source Geospatial Foundation
NUS PhD Research Scholarship	National University of Singapore
NUS Overseas College PhD Programme (Map IV Nagoya)	National University of Singapore
NUS Overseas Research Immersion Award (MIT Senseable City Lab Cambridge)	National University of Singapore