

Chayanika Singh, GISP

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Research Interests

Applied GIS for Built Environment and Healthy Aging, Spatial Health Disparities, Spatial Data Visualization, Simulation Modelling & Data Analytics

Teaching Interests

Quantitative Research Methods, Geo-spatial databases, Web GIS, Geo-spatial Data Visualization, Spatial Analysis and Simulation Modeling, Spatial Data Science

Education

Aug 2017 - Aug 2022	Ph.D., Geographic Information Science (GIS) Texas State University San Marcos, TX, USA Dissertation : <i>Multilevel Spatial Modelling to Examine Relationship Between Housing Environments and Physical Functioning of Older Americans.</i>
Jan 2015 -May 2016	Graduate Certificate in Geographic Information Science (GIS) University of Wisconsin-Milwaukee, WI, USA
Aug 2004 -May 2006	M.S. in Urban Planning (Specialization in Housing) School of Planning & Architecture, New Delhi, India
Aug 1998 -Dec 2003	B.S. in Architecture School of Planning & Architecture, New Delhi, India

Technical Skills

- Advanced level Spatial analysis, Spatial Statistics, and Cartographic mapping
- Design and development of web GIS applications
- Geospatial raster data analysis, photogrammetry, and remote sensing using ERDAS imagine
- Qualitative and quantitative data analytics, and spatial statistical modelling using SPSS and R
- Spatial modeling using Machine learning algorithm in Python programming language
- Geo-Spatial database management and SQL query building in PostGIS and PostgreSQL database management systems

Teaching Experience

Aug 2024 - present	Assistant Professor of Teaching	Department of Geography, The Ohio State University
Aug 2022 – May 2024	Senior Lecturer	Department of Geography, The Ohio State University
Aug 2020 –May 2022	Instructor on Record	Department of Geography, Texas State University

Aug 2017- May 2020	Doctoral Instructional Assistant	Department of Geography, Texas State University
Feb 2016- May 2016	Assistant GIS Technician	Cartography and GIS center, University of Wisconsin, Milwaukee, WI
Aug 2004- May 2006	Research Assistant	Department of Housing, School of Planning & Architecture, New Delhi, India

Other Professional Experience

May 2016- May 2017	GIS –Intern, Department of Planning, Research and Sustainability at Milwaukee Metropolitan Sewage District (MMSD), Milwaukee, WI GIS mapping and using advance GIS editing tools, topological editing, mapping with geo-referenced data sets four counties (Milwaukee, Ozaukee, Washington and Waukesha).
Aug 2016- Dec 2016	GIS- Intern, General Mitchel International Airport, Milwaukee County GIS mapping, editing and database management of Airport properties.
Sept 2006 - Dec 2014	Architecture and Urban Planning Professional, New Delhi, India

Volunteer Work

Jan 2017- May 2017	Volunteer work for Bureau of land Management (BLM) GIS mapping support and Story map development for public lands owned by Bureau of Land Management (BLM) - Eastern States, Dept. of Interiors, US federal Govt.
Jan 2016- May 2016	Volunteer work for Metropolitan Milwaukee Fair Housing Council (MMFHC) GIS analysis on Housing discrimination & segregations in Society based on race and income levels for a nonprofit organization, MMFHC

Fellowships, Scholarships, Awards

In USA	
Fall 2021	Finalist in 3-Minute Thesis (3MT) university competition, Texas State University, San Marcos, TX
Fall 2021	Southwest division of American Association of Geographers (SWAAG), 2 nd place in Graduate Poster Competition
Fall 2021	Doctoral Research Support Fellowship, Texas State University, San Marcos, TX
Fall 2020	Jeffries Family Graduate Geography Scholarship, Texas State University, San Marcos, TX
Fall 2020	Central Texas section student scholarship 2020, American Planning Association
Fall (2021, 2020, 2019)	Graduate college Scholarship, Texas State University, San Marcos, TX
Fall 2019	Student Travel Award, for UCGIS conference 2019

In India

2004 - 2006	National Graduate Scholarship GATE (Graduate Aptitude Test in Engineering) by All India Council for Technical Education
2003	Best Design Award, Urban Housing competition, Department of Architecture, SPA Delhi, India
2000	1st prize, Louis I Kahn design trophy, 42nd annual conference, National association of Student of Architecture (NASA) India

Conference Presentations

- American Association of Geographers (AAG) (shortlisted for 2022, NYC conference) Health and Medical Geography Specialty Group Peter Gould Graduate Paper competition.
- Southwest division of American Association of Geographers (SWAAG) Oct 2021, 2nd place winner in Graduate Poster Competition.
- Applied Geography Conference (AGC) Oct 2021, virtual Paper Presentation.
- University Consortium for Geographic Information Science (UCGIS) 2019 conference at Washington DC, Poster Presentation.
- American Association of Geographers (AAG) 2019 Poster presentation.

Publications

- Singh, C. *“Cross-Scale Examination of Spatial Distribution of Community-dwelling Older Americans with Physical Functioning Difficulties.” (in preparation)*
- Singh, C. & Lu, Y. *“Multi-level Spatial Regression Analysis of Impact of Perceived Neighborhood Safety on Physical Functioning of Community-dwelling Older Americans.” (in preparation)*
- Singh, C. & Lu, Y. *“Spatial Contiguity and Categorical Similarity (SCCS) based novel method for Spatial Weight Matrix.” (in preparation)*

Memberships & Certifications

2025 – present	GISP (Geographic Information Science Professional)
2017- present	AAG (American Association of Geographers) member
2016- 2022	APA (American Planning Association) student member
2011- present	Certified Associate Member- Institute of Town Planners India
2008- present	Certified Member - Council of Architecture, India
