

RUOYU LI

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NYU graduate student pursuing a degree in urban data science, specializing in remote sensing, spatial analytics, and environmental research. Advocate for light pollution control. Experienced with startups and NGOs.

SKILLS

Machine Learning | Spatial Analytics | Causal Inference | Remote Sensing: Nightlight, Hyperspectral & LiDAR

Tools: Python | R | MATLAB | Java | Google Earth Engine | ArcGIS Pro | QGIS | CloudCompare | Tableau | Alteryx

EDUCATION

New York University, New York, NY | Expected May 2026

- **MS, Applied Urban Science and Informatics**, Center for Urban Science + Progress (CUSP), Tandon
- **Honors:** Tandon's highest merit scholarship | CUSP Experiential Scholars
- **Capstone:** Urban Colocation Intelligence: Mapping Amenity Clusters and Dependency Networks Using Open-Source POI Data (Project Sponsor: Foster + Partners & NYU)
- **Activities:** American Society for Photogrammetry and Remote Sensing (ASPRS) NYU Chapter (Founding Treasurer) | NYC Geospatial Information Systems and Mapping Organization (GISMO) (Student & Open Tech Committee) | Vertically Integrated Projects (VIP) Urban Remote Sensing Team (Hyperspectral Image Analysis) | Public Data Challenge (Finalist) | Global Data Dive (3rd Place) | Tandon Capstone Competition (Selected) | NYU GIS Day 2025 Mapping Competition (2nd Place)
- **Volunteers:** Climate Week NYC | World Environment Day | NYC School of Data | CityCamp NYC

Columbia University, New York, NY | Jul 2021

- **Graduate Certificate in Advanced Business**

University of Arizona, Tucson, AZ | May 2019

- **BS, Mathematics | BS, Information Science and Technology**
- **Minors:** Statistics and Data Science | Finance | Computer Science
- **Certificate:** Entrepreneurship and New Venture Development
- **Honors:** Academic Distinction | Dean's List with Distinction | Dean's List | Director's List
- **Activities:** Arizona Chinese Culture Club (Co-founder & VP) | Association of Chinese Students and Scholars (Marketing Director) | McGuire New Venture Development Program (Finalist) | Putnam Mathematical Competition | Hack Arizona | Design Thinking Challenge

EXPERIENCES

DarkSky International, Tucson, AZ

New York State & Beijing Chapter Leader | Mar 2015 - Present

- Led advocacy efforts for light pollution control in New York State and in China.
- Established China's first International Dark Sky Community in Shenzhen.

Information Technology Manager & Regional Engagement Associate | Oct 2023 - Aug 2024

- Managed IT infrastructure to improve efficiency; provided support for staff and advocates.
- Enhanced regional engagement and developed DarkSky's China strategy.

China Academy of Urban Planning and Design, Shenzhen, China

Intern (Research Center for Urban Lighting Planning and Design) | Nov 2023 - Jan 2024

- Contributed to citywide lighting master plans and participated in public lighting art installation projects.

- Co-authored the *Urban and Rural Dark Sky Places Planning Standards*.

Eco Green Recycle Corp., San Juan, Puerto Rico

Co-President | Aug 2019 - Aug 2023

- Supervised daily operations; employed data-driven strategies to enhance production & financial performance.

National Museum of Mathematics, New York, NY

Intern | Jun 2018 - Aug 2018

- Alternated between roles in administration, museum docent, and retail assistant.

Arizona/NASA Space Grant Consortium, Tucson, AZ

Research Intern (ASCEND! Program) | Sep 2014 - May 2016

- Member of a statewide aerospace student program, design-build-fly-operate-analyze small payloads for launch from high altitude (100,000 feet) weather balloons.

National Astronomical Observatories (NAOC), Chinese Academy of Sciences (CAS), Beijing, China

Research Intern | Jun 2015 - Jul 2015

- Participated in a sky survey research project, learned data processing, and studied professional telescope operations on-site.

RESEARCH PROJECTS

In progress:

- Urban Colocation Intelligence: Mapping Amenity Clusters and Dependency Networks Using Open-Source POI Data (NYU Capstone)
- The Causal Effect of Municipal Lighting Policy on Satellite-Observed Nighttime Brightness
- Automated Hyperspectral Assessment of Sidewalk Pavement Conditions
- Greener NYC: An Analysis of Urban Green Spaces and Public Health Outcomes
- Characterizations of International Dark Sky Communities in the U.S.

Finished:

- Map the NYC 2025 Primary & General Mayoral Election - Open-Source NYC Mayoral Real-Time Election Night Results Mapping at the Election District (ED) Level
- Google Maps Timeline Data Viewer & Heatmap Visualization
- Impact of COVID-19 on Urban Mobility: A Spatial Analysis of Citi Bike Ridership Changes in New York City
- Hidden Exposure: Personal Air Pollution Monitoring Reveals Gaps in Public Urban Sensing Systems
- Light Pollution Indicator Weighted by Urban Development Level
- Airport Heat Island: Phoenix, Dallas, and NYC
- Awareness of Privately Owned Public Spaces (POPS)
- Implementing Advanced Catalytic Plastic Recycling Technology in New York City (Business Case Analysis)

PUBLICATIONS & PRESENTATIONS

Author:

- Li, R. (2022, June 20). Dark Sky State: Arizona, US, *Chinese National Astronomy*, 16(6), 30-33.

Organizer, Planning Committee, & Host:

- DarkSky Global Conference, *Virtual, 2021 & 2023*
- Forum for the Dark and Quiet Sky Protection, International Year of Basic Sciences for Sustainable Development (IYBSSD), *Hebei, China, 2023*
- International Dark Sky Week x NYU CUSP, *New York, NY, 2025*

- Climate Week NYC x SEE the Future Forum: Entrepreneurship and Coalition-Building for Global Climate Action, New York, NY, 2025

Interviewee:

- Bi-City Biennale of Urbanism/Architecture (UABB) of Shenzhen and Hong Kong, 2022
- *News and Science*, Hunan TV, 2024
- Island Stars, 2025
- *New York Times*, 2025 | Mancall-Bitel, N., & Moran, K. (2025, December 2). New York's Skyline Has a Bold New Look. *The New York Times*.

Invited Speaker:

- Student Seminar, National Astronomical Observatories (NAOC), CAS, Beijing, China, 2015
- Academic Salon, Youth Innovation Promotion Association, NAOC, CAS, Beijing, China, 2022
- “Under One Sky” Live Event, UABB of Shenzhen and Hong Kong, Guangdong, China, 2022
- Forum for the Dark and Quiet Sky Protection, IYBSSD, Hebei, China, 2023
- The Fifth Star Party of the Yangtze River Delta, Zhejiang, China, 2023
- Hangzhou High School, Zhejiang, China, 2023
- Ningbo Haishu District Government, Zhejiang, China, 2023
- Yangzhou Urban Lighting Management Office, Jiangsu, China, 2023
- Guangdong-Hong Kong-Macao Greater Bay Area Dark Sky Astronomy Festival, Guangdong, China, 2024
- Brooklyn Heights Garden Club, New York, NY, 2025
- Dark Sky and Territorial Spatial Planning (class), Guangzhou University, Guangdong, China, 2025

Speaker, Poster, Lighting Talk & Showcase:

- DarkSky Global Conference, Phoenix, AZ, 2015 / Tucson, AZ, 2016 / Boston, MA, 2017 / Salt Lake City, UT, 2018
- NYC Open Data Week x GISMO, New York, NY, 2025
- Tandon Capstone Showcase, New York, NY, 2025
- CUSP Summer Research Showcase, New York, NY, 2025
- NYU GIS Day 2025 Mapping Competition, New York, NY, 2025