

MAGGIE (MENGYUAN) LI

Email: ml4424@cumc.columbia.edu

LinkedIn: linkedin.com/in/li-maggie

Personal Website: <https://maggie-mengyuan-li.github.io/>

Passionate PhD candidate with strong communication skills and extensive research and teaching experience in spatial analysis and environmental epidemiology through a social justice framework. Special expertise in the following areas:

- *Air pollution epidemiology*
- *Environmental justice*
- *Health disparities evaluation*
- *Data analysis*
- *Epidemiologic study design*
- *Literature review*

EDUCATION

| | |
|--|-------------------------------|
| Columbia University Ph.D. Environmental Health Sciences | New York, NY Expected 2024 |
| Columbia University M.A. Environmental Health Sciences | New York, NY October 2021 |
| University of California, Berkeley B.S. Conservation and Resource Studies <i>Honors, Highest Distinction in General Scholarship</i> B.A. Geography <i>High Distinction in General Scholarship</i> | Berkeley, CA May 2019 |

AWARDS AND SCHOLARSHIPS

| | |
|--|-----------|
| David A. Rose Scholarship in Physical Geography <i>Recipient of award for a graduating senior demonstrating outstanding work in physical geography/cartography in the Department of Geography at UC Berkeley.</i> | May 2019 |
| Regents' and Chancellor's Scholar (top 2% of incoming class) <i>"The Regents' and Chancellor's Scholarship is the most prestigious scholarship offered by UC Berkeley to entering undergraduates, and attracts, retains, and graduates the most sought-after students in the world."</i> | 2015-2019 |

RESEARCH EXPERIENCE

| | |
|--|-------------------------------------|
| Columbia University <i>PhD Researcher</i> | New York, NY Sep. 2019 – Present |
| <ul style="list-style-type: none">• Using big data to quantify air pollution concentrations and coverage in American Indian communities.• Investigating air pollution exposure disparities that exists between predominantly American Indian and other communities.• Examining the long-term effects of air pollution exposure on cardiovascular health in American Indians in the NHLBI-funded Strong Heart Study cohort. | |

Pennsylvania State University*Climate Science REU Researcher*

State College, PA

Jun. – Aug. 2018

- Developed methodology and python code to calculate dust burden from monthly and daily Weather Research and Forecasting (WRF) model and NASA satellite data.
- Connected exposure data to respiratory health outcomes data in Senegal.
- Visualized data using ArcGIS by creating choropleth maps displaying exposure and asthma outcome for children ages under 5 and individuals ages over 5.

University of California, Berkeley*Undergraduate Researcher*

Berkeley, CA

Mar. – Aug. 2017

- Utilized remote sensing to study environmental impacts of cannabis over time in Mendocino and Humboldt counties using ArcGIS and Google Earth Engine.
- Digitized and quantified regions of cannabis production, organizing and compiling these individual shapefiles into geodatabases.
- Contributions aided and acknowledged in a published manuscript:
<https://doi.org/10.1088/1748-9326/aaeade>

COMPUTER SKILLS**Programming Languages:** R, Python, SAS**Applications/Platforms:** ArcGIS, QGIS, Google Earth Engine, RStudio, GitHub

PUBLICATIONS

- Li, M., Hilpert, M., Goldsmith, J., Brooks, J.L., Shearston, J.A., Chillrude, S.N., Ali, T., Umans, J.G., Best, L.G., Yracheta, J., van Donkelaar, A., Martin, R.V., Navas-Acien, A., Kioumourtoglou, M.-A., 2022. Air pollution in American Indian vs. Non-American Indian communities. *American Journal of Public Health, In Press*.
- Nunez, Y., Boehme, A.K., Li, M., Goldsmith, J., Weisskopf, M.G., Re, D.B., Navas-Acien, A., van Donkelaar, A., Martin, R.V., Kioumourtoglou, M.-A., 2021. Parkinson's disease aggravation in association with fine particle components in New York State. *Environmental Research* 201, 111554. <https://doi.org/10.1016/j.envres.2021.111554>
- Toure, N.O., Gueye, N.R.D., Mbow-Diokhane, A., Jenkins, G.S., Li, M., Drame, M.S., Coker, K.A.R., Thiam, K., 2019. Observed and Modeled Seasonal Air Quality and Respiratory Health in Senegal During 2015 and 2016. *GeoHealth* 3, 423–442.
<https://doi.org/10.1029/2019GH000214>

CONFERENCE AND SEMINAR PRESENTATIONS

- International Society for Environmental Epidemiology 33rd Annual Conference, Symposium on Environmental Health Inequalities in Indigenous Communities: Lessons and Opportunities. “Air Pollution in American Indian vs. Non-American Indian Communities,” Oral talk. New York, NY. August 2021.
- Columbia University Environmental Health Sciences Departmental Seminar Series, “Air Pollution in American Indian Communities,” Oral talk. New York, NY. February 2021; April 2020.
- Association of American Geographers Annual Meeting, Geospatial Health Research Poster Session, “Impacts of Saharan dust on respiratory health across Senegal,” Washington, DC, April 2019.
- American Meteorological Society 99th Annual Meeting, 10th Conference on Environment and Health, “Impacts of Saharan dust on asthma outcomes across

Senegal,” Oral talk. Phoenix, AZ. January 2019. **Awardee: Top Overall Student Presentation**
 Uplift Climate Conference, “Effective Communication for Equitable Spaces,” Lona Mesa Campground, Moab, UT, September 2017.

TEACHING

Columbia University

SHARP Training Program: Environmental Justice Boot Camp 2021
Workshop Guide

A two-day intensive course featuring seminars and applied analytical sessions on key concepts, exposure assessment techniques, epidemiologic methods, community engagement and health policy applications, and statistical analytic approaches for conducting effective and solution-driven environmental justice research.

EHSC P8307: Molecular Epidemiology 2020

Teaching Fellow

This course covers conceptual and methodological issues in molecular epidemiology, including the application of biomarkers to the study of disease causation, risk assessment, and prevention, study design and statistical methods in data analysis.

SHARP Training Program: GIS Workshop: Visualizing and Analyzing Health Data 2020

Workshop Guide

This two-day summer workshop provides an overview of fundamental concepts and training of hands-on techniques for health data visualization and analysis using publicly available open-source GIS programs.

UC Berkeley

ESPM 198: Foundations of Effective Communication 2017

Primary Instructor

A 2-unit UC Berkeley undergraduate course encompassing social theories and methods of effective communication across diverse audiences and disciplines.

COMMUNITY SERVICE & LEADERSHIP

Student Environmental Resource Center (SERC)

Aug. 2017 – May 2019

Community Engagement Associate

- Supervised a team of students to organize campus events and compile environmental resources.
- Facilitated semesterly check-in meetings with campus student leaders.
- Spearheaded data collection and institutional knowledge retention efforts for environmental campus organizations.
- Created and managed volunteer membership program of 100+ students.

Berkeley Student Food Collective (BSFC)

Aug. 2018 – May 2019

Board Chair

- Organized and led board meetings for a 501(c)(3) nonprofit, volunteer, educational, member-run grocery store.
- Represented the BSFC at all campus food system stakeholder & coalition meetings.

- Supported board members in maintaining physical storefront, fostering member cohesion, and fulfilling educational goals.

UC Berkeley Residential and Student Services Programs

Aug. 2016 – May 2017

Global Environment Theme House (GETH) Theme Program Assistant

- Collaborated with College of Natural Resources faculty to design seminar curriculum.
- Organized retreats and educational activities to develop community inclusiveness.
- Mentored and interacted with residents regularly to ensure holistic wellness.

LANGUAGES

English: Native Language

Chinese: Proficient Speaking and Listening, Novice Reading and Writing