



CORE COMPETENCIES

- Data Science (Python, R, SQL)
- Technical Report Writing
- Experimental Design
- Project and Team Management
- Stakeholder Engagement
- Strategic Thinking
- Thoughtful Leadership
- Crisis Management
- Microsoft Office Suite

EDUCATION

STANFORD UNIVERSITY, DOERR SCHOOL OF SUSTAINABILITY, STANFORD, CA Expected Aug. 2027
PhD Candidate, Emmett Interdisciplinary Program in Environment and Resources (E-IPER) GPA: 4.25/4.30
PhD Minor, Civil and Environmental Engineering

DUKE UNIVERSITY, THE PRATT SCHOOL OF ENGINEERING, DURHAM, NC Dec. 2021
Master of Engineering Management GPA: 4.00/4.00

UNIVERSITY OF COLORADO SCHOOL OF MEDICINE, AURORA, CO May 2019
Master of Science in Medical Science GPA: 3.58/4.00

- Enrolled in Medical Scientist Training Program (MD/PhD), 2015-2019.
- Completed Phase I/II pre-clinical medical school requirements, 2015-2017.
- Completed PhD core courses, Preliminary Examination, and student research rotation, 2015-2018.

CORNELL UNIVERSITY, COLLEGE OF AGRICULTURE & LIFE SCIENCES, ITHACA, NY Aug. 2011
Bachelor of Science with Distinction in Research in Animal Science, Pre-Medical Studies GPA: 3.63/4.00

- Cum Laude

PROFESSIONAL EXPERIENCE

LYFT, INC. San Francisco, CA
On-demand ride-hailing transportation network company. May 2021 – Aug. 2021
Sustainability Graduate Intern

- Completed Lyft's 2020 Greenhouse Gas (GHG) Inventory and Report in accordance with the WRI/WBCSD GHG Protocol.
- Rebuilt GHG Inventory to streamline the structure for semi-automated calculation.
- Designed an air quality model using ~190 billion data points, quantifying potential health benefits of electric vehicle (EV) adoption with a focus on underserved communities.

NATIONAL ECOLOGICAL OBSERVATORY NETWORK, BATTELLE Boulder, CO
Ecological observation facilities collecting continental-scale, long-term, open-access data. Jun. 2019 – Oct. 2019
Flora Field Technician, Domain 10: Central Plains and Domain 13: Southern Rockies

- Gathered data for exploration of ecosystem changes in atmosphere, organisms, water, and soil.
- Spearheaded laboratory operations for the Belowground Biomass protocol to develop greater understanding of plant biomass, production, and decomposition.
- Performed field investigation on plant phenology, diversity, and biomass sampling.

JOHNS HOPKINS UNIVERSITY SCHOOL OF MEDICINE Baltimore, MD
Translational research laboratory generating zebrafish models for the treatment of thyroid cancer. Sep. 2012 – May 2015
Research Specialist, Human Genetics and Molecular Biology

- Managed day-to-day operations, including procurement, inventory, and budgeting, and the supervision of 2 direct reports.
- Monitored and tracked compliance with Johns Hopkins Health, Safety & Environment, and Animal Care & Use Committees.
- Developed and executed multiple interdependent project schedules to ensure timely completion and progress of research.
- Designed experimental studies, evaluated data, and interpreted results to develop new therapeutic agents.

CITY YEAR AMERICORPS Washington, DC
AmeriCorps program dedicated to supporting students in high-poverty schools across the country. Aug. 2011 – Jun. 2012
Corps Member, City Year DC

- Ran small group Math and English interventions for students displaying off-track testing indicators.
- Assumed full teaching responsibilities following fifth-grade faculty departure.
- Worked with External Affairs and Development departments as a representative to increase visibility to the community through two leadership Ambassador Teams.

LEADERSHIP AND INVOLVEMENT

E-IPER PHD ADMISSIONS COMMITTEE

Stanford, CA

Graduate Representative

Aug. 2023 – Mar. 2024

- Interviewed all prospective students, led student panels, and planned site visit events and budgets.
- Redesigned prospective student interview process and assessment rubric.

ON DECK

Remote

Build for Climate Fellow

Aug. 2021 – Dec. 2021

- Developed a minimum viable product for investors and insurance companies to evaluate the financial strength and resiliency of a company to climatic events using a gender lens.
- Pitched our product to a panel of expert judges, climate investors, and the On Deck community.

TASK FORCE FOR EQUITY IN CLIMATE-RELATED FINANCIAL DISCLOSURES (TECFD)

Remote

Team Member, Metrics and Targets

Aug. 2021 – Dec. 2021

- Worked on an international team of women to create a toolkit for business and government to identify risks and opportunities related to gender equity and climate change in the TCFD reporting framework.
- Recommendations and findings presented by team representatives at The Nest Summit 2021.

OCEANS@DUKE, DUKE UNIVERSITY

Durham, NC

Strategic Action Planning Co-Chair

Mar. 2021 – Dec. 2021

- Worked with a cross-functional team to promote ocean sustainability at the intersections of science, policy, and business.
- Created a strategic plan to successfully implement student club and working group goals and objectives.

PROGRAM DEVELOPMENT COMMITTEE, DUKE UNIVERSITY, THE PRATT SCHOOL OF ENGINEERING

Durham, NC

Board President

Nov. 2020 – May 2021

- Led the Program Development Committee and oversaw seven Club Presidents.
- Implemented professional and social events and initiatives with a focus on increasing diversity and female representation.
- Built a centralized Microsoft Teams channel to promote student engagement and interaction during the pandemic.
- Implemented Community Outreach Initiative, resulting in a student volunteer program and a \$1,500 donation to Duke's Community Pantry.

RESEARCH EXPERIENCE

STANFORD DOERR SCHOOL OF SUSTAINABILITY

Stanford, CA

PhD Candidate

Sep. 2022 – Present

- Developing graph-based decision-support models to inform equitable urban resilience planning in informal settlements, integrating participatory community data with advanced network and AI techniques (multilayer spatial networks, GNNs).
- Conducting a retrospective case study of infrastructure interventions in Ciudad Bolívar, Bogotá, using community-generated data, participatory mapping, and art-based methods to model social-ecological-technological (SETs) resilience.
- Advancing methods for extracting actionable insights from sparse, nontraditional datasets to inform sustainable development policy and community-driven infrastructure investments.

DUKE UNIVERSITY, BASS CONNECTIONS PROJECT TEAM

Durham, NC

Graduate Student Team Member and Project Manager

Aug. 2021 – Dec. 2021

- Developed deep learning models for detection of energy infrastructure in satellite imagery to inform energy access decision-making and electricity system planning.
- Used generative models (GP-GANs) and other synthetic data generation techniques to create synthetic overhead imagery.
- Contributed to an open-source repository of tools and generated data for use by other researchers and decision makers.

UNIVERSITY OF COLORADO ANSCHUTZ MEDICAL CAMPUS

Aurora, CO

PhD Rotation Student

Jun. 2016 – Aug. 2016

- Developed lentiviral based shRNA knockdowns for Mediator Complex 14 (Med14) in human leukemia cells.
- Transduced human Med14 shRNA into Molm-13 cells and evaluated the knockdown through real-time quantitative PCR and Western blot analyses.
- Obtained and analyzed data for a cell growth curve analysis.
- Investigated the effects of Med14 shRNA knockdown on human AML Molm-13 cells.

JOHNS HOPKINS UNIVERSITY SCHOOL OF MEDICINE
Research Specialist, Human Genetics and Molecular Biology

Baltimore, MD
Sep. 2012 – May 2015

- Generated a transgenic zebrafish model of thyroid cancer designed for the rapid development of new treatments for both Papillary Thyroid Carcinoma (PTC) and the very aggressive Anaplastic Thyroid Carcinoma (ATC) subtypes.
- Identified new inhibitors of the BRAF proto-oncogene, BRAFV600E, by reversing its expression and preventing silencing of thyroid differentiation marker expression.
- Utilized laboratory techniques including zebrafish microinjection; polymerase chain reaction; DNA cloning with plasmid vectors; RNA preparation; in situ hybridization; embedding and sectioning of zebrafish embryos with JB-4 Resin; cell culture maintenance; and fluorescence microscopy.

CORNELL UNIVERSITY DEPARTMENT OF POPULATION MEDICINE AND DIAGNOSTIC SCIENCES
Honors Undergraduate Researcher

Ithaca, NY
Jan. 2010 – May 2011

- Obtained biologically active exotoxins that are major virulent factors of Clostridium difficile (C. difficile) Infection (CDI).
- Cloned and expressed C. difficile toxins in Escherichia coli to get highly purified recombinant proteins.
- Studied the pathogenesis of CDI and host immune response to the infection.

CORNELL BIOLOGICAL FIELD STATION
Research Intern

Bridgeport, NY
Jun. 2009 – May 2010

- Dissected double-crested cormorants from four breeding periods and locations.
- Participated in diet identification and processing of fish for temporal and spatial comparisons.
- Performed microscopic dissection of alewives for age identification.
- Created a final intern report that summarized results through various statistical analyses.

PUBLICATIONS AND PRESENTATIONS

Poster Presentation, Transforming Community and Climate Resilience in Informal Settlements: A novel, multilayer spatial network analysis (MSNA) approach in Bogotá, Colombia, Stanford Data Science Conference, Apr 29, 2025.

Oral Presentation, Urban Transformation for Social and Climate Resilience in Informal Settlements in Bogotá, Colombia, AGU23 (American Geophysical Union), Dec 13, 2023.

Design Workshop, Modeling connections between urban green and blue spaces for health, EDRA54 (Environmental Design Research Association), Jun 21, 2023.

Oral Presentation, Examining the Role of Mediator Complex in Meningioma-1 (MN1) High Human and Mouse Leukemia Cells, University of Colorado Anschutz Medical Center MSTP Seminar, Oct 25, 2016.

Guo, S., Yan, W., McDonough, S.P., Lin, N., Wu, K.J. et al. (2015). The Recombinant Lactococcus lactis Oral Vaccine Induces Protection Against C. difficile Spore Challenge in a Mouse Model. *Vaccine, Volume 33* (Issue 13), pp. 1586-1595.
<http://dx.doi.org/10.1016/j.vaccine.2015.02.006>.

Wu, K.J. (2011). Sequencing and Expression of Clostridium difficile Toxin Genes (Cornell University honors thesis). College of Agriculture and Life Sciences, Cornell Library.

Poster Presentation, Temporal and Spatial Comparisons of Double-Crested Cormorant (Phalacrocorax auritus) Diet Compositions from Lake Champlain, Cornell Undergraduate Research Board's Research Forum, Apr 27, 2011.

Oral Presentation, Sequencing and Expression of Clostridium difficile Toxin Genes, Seminar in Animal Sciences, Apr 14, 2011.

Oral Presentation, Temporal and Spatial Comparisons of Double-Crested Cormorant (Phalacrocorax auritus) Diet Compositions from Lake Champlain, NCUR, Apr 1, 2011.

Last Author, Oral Presentation, Location, Location, Location: Cormorant Diets from Four Sites on Lake Champlain, Intl Assoc for Great Lakes Research Conference, May 18, 2010.

Oral Presentation, Temporal and Spatial Comparisons of Double-Crested Cormorant (Phalacrocorax auritus) Diet Compositions from Lake Champlain, Dept of Natural Resources Intern Res Symp, Dec 8, 2009.

HONORS AND AWARDS

Emerson Consequential Scholar '24-'25 (Stanford Technology Ventures Program); Stanford Community Impact Award 2024; Stanford Human-Centered AI (HAI) Graduate Fellow '23-'24; Stanford Doerr School of Sustainability Dean's Graduate Scholars

Award '22-'23; Stanford Dalai Lama Fellow '22-'23; On Deck Build for Climate Fellow; Duke University Energy Initiative Funding Award; Duke Master of Engineering Management Professionalism Award for Communication; AAAS/Science Program for Excellence in Science; Morrison Award; American Society of Animal Science Award; New York City Council Citation for Outstanding Citizen Service Award