

EDUCATION

Ph. D. in Geospatial Analytics, North Carolina State University <i>Center for Geospatial Analytics</i>	2028 (anticipated) Raleigh, NC
M.A. in Geography, Arizona State University <i>School for Geographical Sciences & Urban Planning</i>	December 2023 Tempe, AZ
B.S. in Biology, William & Mary <i>Minor in Marine Science, concentration in Geospatial Analysis</i>	May 2019 Williamsburg, VA

RESEARCH & PROFESSIONAL EXPERIENCE

North Carolina State University <i>Doctoral Student, Land Change Lab</i>	Raleigh, NC 8/2024–Present
<ul style="list-style-type: none">• Scope and analyze geospatial data to assess vulnerability of National Park lands to climate change• Develop analytical methods with multidisciplinary team of NCSU PIs and National Park Service partners	
Arizona State University <i>Master's Student, Donovan Lab</i>	Tempe, AZ 8/2021–5/2024
<ul style="list-style-type: none">• Developed species distribution model for rare reef fish species to examine drivers of habitat use• Led creation of social survey to gauge fisher interest in participating in management process, including guiding social survey through ASU Institutional Review Board (IRB) process	
National Park Service <i>Ecology Assistant, Southeast Coast Inventory and Monitoring Network</i>	Jacksonville, FL 1/2021–5/2021
<ul style="list-style-type: none">• Updated and organized long-term coastal wetland elevation monitoring datasets for public use• Assisted with the installation of surface elevation tables (SET) to collect wetland elevation data	
National Audubon Society <i>Project Manager, Public Lands Mapping</i>	Remote 7/2020–6/2021
<ul style="list-style-type: none">• Led cross-functional teams in the planning and execution of GIS projects related to the Public Lands Conservation Mapping of California• Developed and managed standards, tools, templates, and metrics for the Audubon Policy Department• Collaborated with key stakeholders to manage and guide project scope, goals, and deliverables	
Dangermond Fellow	6/2019–6/2020
<ul style="list-style-type: none">• Administered and maintained an Enterprise GIS with over 1,200 users• Inspected and edited complex multi-year community science data sets to support monitoring programs• Trained and assisted staff in GIS tools and methodologies, filled data requests, administered accounts and licenses, developed web applications, and polished map products to illustrate the results of analysis	
William & Mary Center for Geospatial Analysis <i>Fellow</i>	Williamsburg, VA 8/2019–7/2020
<ul style="list-style-type: none">• Collaborated with an interdisciplinary team to support student and faculty research projects across disciplines• Trained and instructed students in the use of GIS software and tools, GPS, and remote sensing• Applied data analysis and cartographic skills to technical tasks to create polished map products and graphics	
Teaching Assistant for Introduction to GIS	9/2017–5/2019
<ul style="list-style-type: none">• Assisted 225+ students with weekly lab activities, final projects, learning software, and using GPS units	
The Nature Conservancy <i>Florida Coral Reef Fisheries Mapping GIS GLOBE Intern</i>	Miami, FL 6/2019–8/2019
<ul style="list-style-type: none">• Developed spatially explicit data layers for incorporation into reef fish biomass model for management jurisdictions• Participated in planning meetings to review model results with a diverse group of state and federal management stakeholders to support cultural and natural resource management	
Resilient Islands Project	Dominican Republic 6/2018–10/2018
<ul style="list-style-type: none">• Used Phantom 4 Drone to collect data and survey coral reef health and to create fine-resolution flood maps to assess community vulnerability to storm events	

Geospatial Evaluation and Observation Lab
GeoBoundaries Undergraduate Research Assistant

Williamsburg, VA
9/2018–5/2019

- Performed geospatial analysis to improve international aid transparency by compiling subnational administrative boundaries for integration into an open-source platform

National Science Foundation
Research Experience for Undergraduates

Hopkins Village, Belize; Orlando, FL
6/2017–8/2017

- Analyzed data on marine debris using community-based GIS with a team of Belizean and American students
- Team conducted 100+ interviews with community members, collected local data via perception mapping

Virginia Institute of Marine Science (VIMS)
Eco-Ambassador

Gloucester, VA
9/2016–4/2017

- Partnered with diverse group of education and outreach staff to teach the public about different marine science topics through the creation of monthly Discovery Labs
- Created education posters, displays, and interactive exhibits for school-aged children and their parents

PUBLICATIONS

1. **Layko R**, Donovan MK. Anthropogenic and environmental drivers of *Acanthurus achilles* presence in Hawai'i. *Marine Ecology Progress Series*. 2024 July 25; 740:161-174.
2. Brittain CN, Bessler AM, Elgin AS, **Layko R**, Park S, Still SE, Wada H, Swaddle JP, Cristol DA. Mercury causes degradation of spatial cognition in a model songbird species. *Ecotoxicology and Environmental Safety*. 2023 Oct 1;264:115483.
3. Zuercher R, Kochan DP, Brumbaugh RD, Freeman K, **Layko R**, Harborne AR. Identifying correlates of coral-reef fish biomass on Florida's Coral Reef to assess potential management actions. *Aquatic Conservation: Marine and Freshwater Ecosystems*. 2023 Mar;33(3):246-63. <https://doi.org/10.1002/aqc.3921>.
4. Runfola D, [...], **Layko R**, et al. . geoBoundaries: A global database of political administrative boundaries. *Plos one*. 2020 April 24;15(4):e0231866. <https://doi.org/10.1371/journal.pone.0231866>.

SELECT AWARDS & RECOGNITION

- Goodnight Doctoral Fellowship (\$50,000) 2024–2028
- National Science Foundation Graduate Research Fellowship Program (\$134,000) 2022–2027
- 2023 Student Leader, Arizona State University 2023
- Nexus Research Fellowship, Arizona State University (\$68,000) 2021–2022
- Barbara Hirsch Special Service Award, URISA 2021
- Dr. Marilyn O'Hara Ruiz Young Professional Scholarship, URISA (\$1,850) 2019
- Upperclassman Monroe Research Grant, William & Mary (\$3,000) 2018

SELECT SERVICE & LEADERSHIP POSITIONS

- Graduate Student Representative, SGSUP Graduate Student Council, ASU 2023
- Social Coordinator, SGSUP Graduate Student Council, ASU 2022
- Peer Mentor for NSF GRFP, ASU 2022–2024
- Vanguard Cabinet Member, Geospatial Professional Network 2020–2022

SELECT PRESENTATIONS AND INVITED CONTRIBUTIONS

- "Examining the Influence of Anthropogenic and Environmental Drivers on Pāku'iku'i Presence in the Main Hawaiian Islands". **Layko, R.** Donovan, M. AAAG. Denver, CO. March 23–27, 2023.
- "Seas to Skies: Geospatial Tools for Conservation GIS Applications". **Layko, R.** *William & Mary Center for Geospatial Analysis*. (Guest Lecture). Remote. February 19, 2021.
- "From Liberal Arts to Labs: Enhancing GIS Use Across Campus". **Layko, R.** Moghanaki, J., Wiles, S. (Co-presenters). *URISA GIS-Pro 2020*. Remote. September 29 – October 2, 2020.
- "StoryMaps and Drones". **Layko, R.** *Historic Virginia Land Conservancy Annual Board Meeting* (Invited presentation). Williamsburg, VA. November 2019.
- "Fishy Data: Modeling Fishing Pressure Helps Conserve Coral Reefs". Zuercher, R., Brumbaugh, R., Freeman, K., **Layko, R.**, Harborne, A. *Esri User Conference*. (5-minute lightning talk). San Diego, CA. July 8–12, 2019.
- "Resiliency to Climate Change in the Dominican Republic". **Layko, R.** *William & Mary Day for Admitted Students* (Invited presentation to prospective students and families). Williamsburg, VA. April 13, 2019.
- "Citizen Science GIS: Collaborating with Communities to Investigate Marine Debris in Belize." Chang, M. **Layko, R.**, Uzowihe, C., Butler, E., Garcia Von Saqui, R., Graham, L., Munisteri, C. *Esri Ocean GIS Forum*. (Co-presented with L. Graham). Redlands, CA. November 2017. Video: <https://youtu.be/RBqNUPJcLkI>.