ELLA NEUMANN

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RESEARCH INTERESTS

I engage in community-led environmental justice research that uses data to inform policy.

EDUCATION

Georgia Institute of Technology *Aug 2025 – Present*
Ph.D. in Computer Science, Community-Engaged Sustainability Research Fellow
GPA: 4.0/4.0

Western Washington University *Sep 2018 – Mar 2022*
B.S. in Computer Science, Computer Science and Math Distinguished Scholar
GPA: 3.5/4.0

PUBLICATIONS

Neumann, E. "When Rain Falls, Communities Rise: Tracking Precipitation Together."
Presented at *American Geophysical Union,* 2025.

Johnson, A., Roering, J., Prussian, K., Wilcox, P., Heintz, R., Pierce, L., Head, D., Tobey, S.,
Danielson, Z., Udell, C., **Neumann, E.,** et al. "Participatory Science for Landslide
Community Awareness: Development of a Protocol for Southeast Alaska."
Community Science Exchange, 2025.

Neumann, E., Clinton, M. "White Paper: Designing Data Sharing Agreements and MOUs."
Sitka Sound Science Center White Paper Series, 2025.

Neumann, E. "NSF Workshop Summary Slides." Presented at *NSF Sustainable Computing
for Sustainability Conference, Alexandria, VA,* 2024.
`https://s3.amazonaws.com/edas.assets/nsf-wscs24/recap_slides.pdf`

Neumann, E., Heintz, R. "Summary Report: 2024 SE Alaska Interagency Landslide Working
Group." *Southeast Alaska Landslide Meeting,* 2024.

AWARDS

NSF Graduate Research Fellowship Program (**$159K**, Apr 2025 – 2030)
Grace Hopper Celebration Full Ride Scholarship, AnitaB.org (2020)
Community-Engaged Sustainability Research Faculty Fellowship, Georgia Tech (2025)
AI Safety Fellowship, Policy Track, AI Safety Initiative (2025)
Computer Science and Math Distinguished Scholar Award and Scholarship, WWU (2018–22)
Accenture Innovation Challenge Scholarship (2020)
Best in Class Award, Hewlett-Packard Firmware Engineering Internship (2019)

GRANTS

USGS Cooperative Agreement($150K, September 2024-25)
Co-lead; wrote research plan and budget for project on landslide risk reduction in Sitka, AK
NSF Granted Project($2.7M, Aug 2024 – 2030)
Wrote data management plan for grant to increase Sitka Tribe of Alaska research capacities

RESEARCH EXPERIENCE

South River Watershed Alliance   Atlanta, Georgia, 2025
Designs GIS visualizations/calculations to predict future storm water and impervious surface area; volunteers at community led river cleanups and community meetings; collaborates with executive director to support City of Atlanta in meeting EPA mandated consent decree

Coastal Air Quality Monitoring   Savannah, Georgia, 2025
Collaborates with CEAR Hub and Harambee House to collect hour-by-hour air quality data with marginalized communities residing near the third largest shipping port in the US

Sitka Precipitation Collection and Visualization   Sitka, Alaska, 2024-25
Lead PI for low cost rainfall monitoring system in partnership with United States Geological Survey to collect hyper-local precipitation data to reduce landslide risk in rural island community

Southeast Alaska Environmental Monitoring Dashboard   Sitka, Alaska, 2023-25
Led data visualization project to concatenate environmental monitoring site information from interagency entities to identify gaps in monitoring throughout the region and to reduce duplication of efforts

Kutí Geohazards Project   Sitka, Alaska, 2023-25
Data manager for project addressing geohazards in six communities in Southeast Alaska (Skagway, Hoonah, Klukwan, Yakutat, Craig, and Kasaan)

WORK EXPERIENCE

Affiliate Researcher, Sitka Sound Science Center   Aug 2025 – Present
Provides technical support regarding GitHub organization management, data storage, sharing, and visualization

Research Consultant, Ella Neumann Consulting   Aug 2025 – Present
Contracted by research field stations, including Sitka Sound Science Center, to mentor and manage year-long undergraduate computer science student projects that support the capacity of federal agencies, including the United States Geological Survey and the National Forest Service, and build open source code repositories for hyper-local scientific organizations to share research endeavors across the globe.

Founder, Southeast Alaska Landslide Information and Preparedness Partnership
Jan 2024 – Aug 2025
Led an organization with over 150 members from Federal and State agencies, non-profits, universities, Tribal Governments, and citizen scientists. Built an information dissemination system, led monthly information sharing meetings for the public; led an interagency steering committee; built a globally reaching network, website, and state database; organized a multi-day interagency conference to inform an agenda for landslide risk reduction in the State of Alaska; informed the design of a National USGS landslide working group

Data Scientist, Sitka Sound Science Center   Oct 2023 – Aug 2025
Developed organizational data management protocols using Openscapes Framework; collaborated with Tribal governments, co-producing robust Memorandum of Understanding to preserve Indigenous Data Sovereignty

Software Engineer, Körber Supply Chain   May 2022 – Aug 2023
Built global supply chain solutions in Transact-SQL

Board Member, Shifting Gears Sep 2021 – Oct 2023
Organized 40+ volunteers for community bike swap event; grant writer

Marketing and Outreach Director, WWU Outdoor Center Jun 2021 – Mar 2022
Increased social media traction by 175%; wrote and awarded $2,000 grant to fund yoga program

Consulting Intern, Artemis Connection Jun 2020 – Aug 2020
Worked with clients, including FIRST Robotics, to increase diversity and inclusion; created data-driven presentations to win new client business

Firmware Engineering Intern, Hewlett-Packard Jun 2019 – Aug 2019
Developed BLE testing system and visualization software using Python and C

VOLUNTEER EXPERIENCE

Community Volunteer and Data Analyst, South River Watershed Alliance (2025)
Bicycle Technician, Free Bikes 4 Kidz Atlanta (2025)
Bicycle Mechanic, The Salty Spoke (2024–25)
Soccer Coach, Shuksan Middle School (2023)
Adult Mathematics Tutor, Whatcom Literacy Council (2019–22)
Events Coordinator, Association for Women in CS (2018–22)

TECHNICAL SKILLS, TRAINING, AND CERTIFICATIONS

FAA Part 107 Certified Drone Pilot
SQL/HTML/CSS/JS/Python/Java
GIS (QGIS, ArcGIS)
Data Science, Management, and Governance
Inter-agency Leadership and Collaboration
Working Group Facilitation
Spanish (Intermediate)

MEMBERSHIPS

Founder/Chair, Southeast Alaska Landslide Information and Preparedness Partnership (SLIPP)
USGS National Geohazard Working Group
Interagency Arctic Research Policy Committee
National Weather Service Weather-Ready Nation Ambassador

PRESENTATIONS

American Geophysical Union (2025)
Yakutat Tlingit Tribal Council (2024)
SE Alaska Interagency Landslide Working Group (2024)
USGS National Landslide Working Group (2024)
Klawock Cooperative Association (2024)
Organized Village of Kasaan (2024)
Hydaburg Cooperative Association (2024)
Craig Tribal Association (2024)