Ella Neumann

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Research Interests

Human-centered computing, data organization, information science, interagency coordination, environmental science, community-led research solutions, co-production methodologies, and technology engagement, policy.

Work Experience

Data Manager
Sitka Sound Science Center, Sitka, AK
October 2023 - August 2025

- Principal Investigator for United States Geological Survey grant ($150K), installing a low-cost, community-maintained rainfall monitoring system in Sitka, Alaska, to gather precipitation data on mid-slope hillslopes prone to debris flows.
- Creator, chair, and web developer for a globally reaching landslide risk reduction organization (alaskalandslide.org).
- Designed data management infrastructure for coastal southeast Alaskan research fieldsation using state-of-the-art GitHub organization strategies, including Openscapes Frameworks.
- Developed open-source data visualization tools, including an environmental monitoring locations map to visualize sensors, bridging topographic and atmospheric data to better predict landslides.
- Iterated upon sitkalandslide.org's logistic regression model and web infrastructure to alert Sitkans about landslide risk during heavy precipitation events
- Collaborated with Tribal governments and corporations, municipalities, state and federal agencies, and researchers throughout the globe to improve data sovereignty and management practices in the geohazard risk reduction space, including co-producing memoranda of understanding.

Software Engineer
Körber Supply Chain, Bellingham, WA
May 2022 - August 2023

- Built warehousing technology efficiently using Transact-SQL.
- Designed cutting-edge supply chain solutions for customers globally.

- Implemented high-quality, customer-facing processes to enhance warehouse coherence.

Board Member
Shifting Gears, Bellingham, WA
September 2021 - Present

- Organized over 40 volunteers to execute a community fundraising event, securing funding for the nonprofit.
- Applied for grants to fund free events for women in the area.
- Represented the organization at sea kayaking, mountain biking, and recreational events.

Marketing and Outreach Coordinator
Western Washington University Outdoor Center, Bellingham, WA
June 2021 - March 2022

- Increased social media traction and interaction by over 175% within the first three months of employment.
- Organized the creation and strategic distribution of over two thousand informational pamphlets, increasing trip turnout by 150%.
- Tailored events based on feedback from students and faculty.

Consulting Intern
Artemis Connection, Seattle, WA
June 2020 - August 2020

- Collaborated with clients to address complex diversity, inclusion, COVID response, and organizational restructuring issues.
- Created powerful presentations that conveyed meaningful stories based on customer needs.

Firmware Engineering Intern
Hewlett-Packard, Vancouver, WA
June 2019 - August 2019

- Engineered a Bluetooth Low Energy (BLE) testing system using semiconductors, Python, and C.
- Developed data visualization software to optimize wireless printer setup by tracking throughput and registered signal strength indices (RSSI).

Awards and Scholarships

U.S. National Science Foundation (NSF) 2025 Graduate Research Fellowship in Computer Science and Engineering

Computer Science and Math Distinguished Scholar Award
Western Washington University
2018-2022

Recognized for academic excellence in computer science and math.

Grace Hopper Celebration of Women in Computing Full Ride Scholarship
Sponsored by AnitaB.org
2020

Awarded for promoting women in technology and computing.

Accenture Innovation Challenge Participant Scholarship
2020

Acknowledged for participation in innovative challenges addressing real-world problems.

Best in Class Award
Hewlett-Packard Internship, Vancouver, WA
2019

Recognized for exceptional performance during the internship.

Volunteer Experience

Soccer Coach
Shuksan Middle School, Bellingham, WA, 2023

Inspired girls' self-confidence through coaching the beautiful game. I also organized the procurement of soccer shorts and shin guards for students and communicated in Spanish with players.

Events Coordinator
Association for Women in Computer Science, 2018 – 2022

Hosted think tanks, social gatherings, and career information sessions to prepare women in computer science for the workforce.

Adult Mathematics Tutor
Whatcom Literacy Council, 2019 – 2022

Worked with a student every week to teach the student how to read and write in English. This student has continued her educational journey and now takes community college courses as she works toward her GRE. We still keep in touch. This is one of my proudest accomplishments.

Technical Skills, Training, and Certifications

- HTML, CSS, JavaScript, Python, Java
- Geographic Information System (GIS), including QGIS and ArcGIS
- Data Governance, including creating data infrastructure for the Sitka Sound Science Center research department (GitHub organization, data management system)
- Interagency relationship building and leadership, collaborating with local Tribal Governments, regional Tribal Governments, Tribal corporations, U.S. National Weather Service, U.S. Forest Service, U.S. Geological Survey, Alaska Division of Geological & Geophysical Surveys,

universities, RAND Corporation, FEMA, Legislative Representatives, Red Cross, local municipalities, and more
- Working group and meeting facilitation
- Elementary-level Spanish speaking

Memberships

- Southeast Alaska Interagency Landslide Working Group, Founder, Organizer, and Chair
- USGS National Geohazard Working Group
- Interagency Arctic Research Policy Committee
- National Science Foundation Sustainable Computing for Sustainability Group
- Climate/Computing Network - Computing Community Consortium
- Ambassador for the National Weather Service Weather-Ready Nation

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Grant Writing and Information Dissemination

- Summary Report, 2024 Southeast Alaska Interagency Landslide Working Group
- Data Management Plan, NSF-Granted Project ($5M)
- USGS Cooperative Agreement for Landslide Risk Reduction Information Dissemination, Duplication Prevention, and Infrastructure Maintenance ($150K)
- White Paper: Designing Data Sharing Agreements and Memoranda of Understanding with partner agencies

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Presentations

- Sustainable Computing for Sustainability Conference, Alexandria, VA 2024
- U.S. Geological Survey Environmental Monitoring Grant Review, 2024
- NSF Data Management Plan Presenter and Slide Developer for Ḵutí Project, 2024
- Yakutat Tlingit Tribal Council Ḵutí Project, 2024
- Southeast Alaska Interagency Landslide Working Group, 2024
- U.S. Geological Survey National Landslide Working Group, 2024
- Southeast Alaska Area Contingency Plan (SEAK ACP), 2024
- Klawock Cooperative Association Landslide Risk Information Presentation, 2024
- Organized Village of Kasaan Landslide Risk Information Presentation, 2024
- Hydaburg Cooperative Association Landslide Risk Information Presentation, 2024
- Craig Tribal Association Landslide Risk Information Presentation, 2024

Education

PhD in Computer Science
Georgia Institute of Technology, Atlanta, GA
August 2025 – Present

B.S. in Computer Science
Western Washington University, Bellingham, WA
September 2018 – March 2022

- Overall GPA: 3.5
- Mathematics and Computer Science Scholars Program