Simon Hans Edasi

801-833-1759 | simonhansedasi@gmail.com | simonhansedasi.github.io

Summary

I combine the inquisitive spirit of a scientist with the precise skill of a maintenance technician form a unique skillset capable of achieving anything. My background lies in geophysics, statistics, and data science, and I seek to tackle complex problems facing our communities. Experienced in fast paced environments and prioritizing for deadlines, I am seeking a challenge for which to apply my skills and help others.

Skills

Technical: Machine learning & neural networks, data pre-processing, data analysis & visualization, statistical analysis
Scripting: Python (*GeoPy*, *SciPy*, *pandas*, *numpy*, *matplotlib*, *tensorflow*); R (*car*, *dplyr*, *ggplot2*, *plotly*); Jupyter; Git
Soft Skills: Strategic problem solving, communication, task prioritization, collaboration, research & development

Education

University of Washington June 2024
Master of Science in Earth & Space Sciences – GPA: 3.75 *Seattle, Washington*

- Developed a neural network model to estimate glacier thickness using data from the Glacier Thickness Database (GlaThiDa) and glacier attributes from the Randolph Glacier Inventory (RGI).
- Conducted regression analysis on GlaThiDa data, refining glacier thickness estimates for the RGI dataset.
- Addressed challenges in matching thickness data to glacier attributes by applying distance and area thresholds to ensure accuracy.
- Identified lower volume estimates for shelf and marine-terminating glaciers, highlighting the need for better data in marine environments.
- Demonstrated that neural network models without ice shelves diverge from previous volume estimates, emphasizing their critical role in ice flow dynamics.

University of Washington March 2019
Bachelor of Science in Earth & Space Sciences: Physics – GPA: 3.37 *Seattle, Washington*

- Minor: Mathematical Physics, Estonian
- Dean's list for five quarters, and annual dean's list 2014-2015.
- Course work in continuum mechanics, geophysics, electromagnetism, thermodynamics, linear algebra, and differential equations.

Specialized Coursework

Photonic Sensing | *Data Wrangling, Anomaly Detection, Data Visualization*

- Used a Distributed Acoustic Sensing (DAS) system to survey Seattle and audit traffic patterns, automating data wrangling and anomaly detection for more efficient analysis.

Statistical Inferences in Ecology | *Statistical Analysis and Inference, Data Visualization*

- Gained proficiency in R while applying ANOVA, chi-square tests, non-parametric procedures, regression models, and experimental design to biological data analysis.

Geoscience Communication | *Writing, Presenting, and Communicating Ideas*

- Collaborated with a team on a capstone presentation while learning to effectively organize and write scientific abstracts, articles, proposals, and presentations, with attention to style, tone, and visual aids.

Geophysical Continuum Mechanics | *Geophysics, Strategic Problem Solving*

- Applied differential equations and linear algebra to analyze stress, strain, and elasticity in geological materials, with a focus on stress in the Earth's lithosphere and the flow behavior of solids.

Seismology | *Geophysics, Spacial Reasoning*

- Examined stress and strain, the wave equation, travel times, amplitude and phase, reflection seismology, surface waves, and source theory, including moment tensors, radiation patterns, far-field wave shapes, source spectra, stress drop, and magnitude.

Work Experience

University of Washington 2019 - 2022

Research Assistant, Supervisor: Dr. Alexis Licht *Seattle, WA*

- Processed and powdered over 150 paleosol samples using drills and hydrochloric acid baths for de-carbonation. Conducted carbon analysis with a spectrometer and Kiel machine, contributing data to a published article on early Eocene paleoclimate.

University of Washington 2017 - 2022

Administrative Assistant / Accounts Receivables Clerk *Seattle, WA*

- Created, administered, and collected invoice payments for lab work by UW Earth & Space Sciences IsoLab, Geochemistry Lab, Microprobe, and World Wide Lightning Location Network.
- Managed department financial records: Responsible for assembling, completing, and reconciling paperwork for transactions; maintained in-office records and interacted with archival records as needed for audit.
- Developed tool for managing online budget reconciliation status and email notification automation.

U.S. Air Force 2008 - 2014

AWACS Communication and Navigation Craftsman & Isochronal Inspection *Elmendorf AFB, AK; Tinker AFB, OK*

- Maintained communication and navigation equipment on board the Airborne Warning And Control System.
- Awarded Air Force Achievement Medal for no-notice deployment to Kadena Airbase, Japan in support of Operation Vigilant Ace following the 2010 Yeonpyeong bombardment.
- Managed secret cryptographic programs responsible for safety of assets and flightcrew during operations
- Executed annual inspection of all communication and navigation equipment on board fleet of AWACS aircraft to ensure long-term operability.
- Attended Airman Leadership School for promotion to Staff Sergeant, and achieved craftsman maintenance skill level, capable of clearing aircraft as safe to fly.
- Trained, mentored, and supervised junior airmen, directly responsible for on the job training and professional development.

Nibley Park Golf Course 2006 - 2008

Driving range and fairway ranger *Salt Lake City, UT*

- Responsible for collecting, washing, and maintaining supply of driving range golf balls. Also responsible for cleanliness and availability of golf carts and push carts.
- Fast paced environment, strategic problem solving, prioritization of tasks, customer service.

Service

University of Washington Graduate and Professional Student Senate Oct 2022 – June 2024

Senator *Seattle, Washington*

- Legislated in the UW Graduate and Professional Student Senate representing the rights and interests of over 15,000 graduate and professional students at the University of Washington. Procured funding for two departmental retreats and a picnic table to socialize on the department patio.

UAW 4121 Academic Student Employee Union Oct 2023 – May 2024

Contract Campaign Captain and Strike Captain *Seattle, Washington*

- Recruited student employees in departments across campus to join the union ahead of contract bargaining, and helped rally student employees to strike when bargaining failed to reach a fair contract.

Whale Scout 2023

Landscaper *Seattle, Washington*

- Volunteered to plant bushes and shrubs on an abandoned golf course. This project is meant to restore natural waterways that support local salmon populations and ultimately orcas in the Puget Sound.

Airmen Against Drunk Driving 2009 - 2012

Driver, Dispatcher *Elmendorf AFB, AK*

- Received calls and offered rides for hot-line for airmen to call for a free ride home to prevent drunk driving.