Clayton Sasaki

clayton.rss.sasaki@gmail.com | (239) 596-6991 | Personal Website | LinkedIn

PROFESSIONAL SUMMARY

Atmospheric data scientist with 9+ years of experience applying numerical weather modeling, geospatial analysis, and large atmospheric datasets to forecasting and climate risk analysis. Proven track record of translating complex meteorological signals into commercial and operational insights for aviation, field operations, and research programs for both technical and non-technical stakeholders. Strong background in Python programming, re-analysis datasets (e.g., ERA5), and weather model interpretation for applications across energy, infrastructure, and climate analytics.

CORE EXPERTISE & TECHNICAL SKILLS

Atmospheric & Climate Modeling: Numerical Weather Prediction (NWP), high-resolution modeling, ensemble interpretation, model verification, regime analysis, short-range to seasonal forecasting
Programming & Data Analysis: Python (pandas, numpy, xarray, scipy, scikit-learn), MATLAB, R, bash, Git, AWS/GCP, Claude Code CLI, Microsoft Office
Geospatial Analysis & Visualization: ArcGIS, QGIS, cartopy, matplotlib, seaborn, AWIPS2, BUFKIT
Data Formats: NetCDF, GRIB, METAR/TAF, GeoJSON, CSV

EDUCATION

PhD – Atmospheric Sciences | Seattle, WA | University of Washington **2021-2025**
Dissertation: Convective Upscale Growth in Central Argentina: Environmental Conditions and the Role of the South American Low-level Jet

MS – Atmospheric Sciences | Seattle, WA | University of Washington **2018-2021**
Thesis: New Insights into the South American Low-Level Jet from RELAMPAGO Observations

BS – Atmospheric Science, BS - Environmental Engineering | Ithaca, NY | Cornell University **2014-2018**
Distinction in research, Departmental Honors, Elected to Alpha Epsilon Honor Society
Honors Thesis: Exploring the Impacts of Energy Generation Composition on the Future Climate

EXPERIENCE

Data Annotation | AI Trainer | *Remote* **May 2025-Present**

- Evaluated code-generating deep-learning models by writing and debugging 100+ Python and Java-based reference solutions and unit tests to assess model reasoning across complex analytical tasks
- Assessed correctness and performance of model-generated code, identifying failure modes and recommending clear improvements and actionable feedback to evaluation frameworks
- Developed fine-grained criteria for use in model self-evaluation

University of Washington, Atmospheric Sciences | Research Assistant | *Seattle, WA* **September 2018-March 2025**

- Analyzed large (>50 TB) multi-source meteorological datasets (observations, re-analysis and model output) using Python to identify environmental drivers of convective storm development
- Produced operational hydro-meteorological forecasts and operated C-band radar during RELAMPAGO field campaign, supporting real-time decision-making for 19 research deployments
- Collaborated with cross-agency teams to improve modeling of convective processes
- Published 4 first-author papers in top-tier journals and presented findings at conferences and public meetings

Cornell University, Atmospheric Sciences | Research Assistant | *Ithaca, NY* **August 2016-May 2018**

- Created simple climate models to simulate radiative forcing and the corresponding global temperature changes across 16 economic and emissions scenarios based upon projections of electricity generation makeup and electricity demand
- Managed long-term multi-file projects on unix servers

National Weather Service | Student Intern | *Charleston, WV* **July 2017-August 2017**

- Briefed state and local emergency managers, clearly and concisely highlighting major impacts

- Automated generation of decision-support graphics through shell scripts to inform emergency teams, saving 3 hrs/wk
- Performed hydrologist duties with supervision including adjusting hydrometeorological forecasts by watching radar and flash flood guidance
- Refined short- and long-range forecasts using remote meteorological and hydrological observational tools such as Doppler radar, satellite imagery, surface and upper air observations, and numerical models
- Conducted E-19 flood stage and post-storm surveys
- Managed surface weather stations (rain gauges, temperature and humidity sensors)

National Air Traffic Services | Assistant Analyst **|** *Whiteley, UK* **May 2017-June 2017**

- Modeled impacts of weather-related incurred delay using NEST (Network Strategic Tool), performing cost-benefit analysis of future airspace management projects
- Developed indices to forecast meteorological impacts at airports using METAR/TAF data using machine learning approaches (e.g., random forests)
- Researched and wrote report suggesting approaches for forecasting en-route weather delay based on forecastable meteorological parameters
- Authored report on radiative forcing used in training the Sustainable Aviation Group

Cornell University, Biological & Environ Engineering | Research Assistant | *Ithaca, NY* **January 2016-May 2016**

- Researched the effect of Glyphosate (active pesticide ingredient) and Tallow Amine on the growth rate of P. Putida (a bacteria found in soil that is beneficial to plant growth), leading to published work

WeatherBELL Analytics | Intern **|** *New York, NY* **June 2015-August 2015**

- Evaluated feasibility of location-specific weather alert products for commodity trading clients using temperature and precipitation data for 30 largest US cities
- Analyzed conferences which represented potential business development opportunities, identifying 8 high-value opportunities

SELECTED PUBLICATIONS (AS FIRST AUTHOR)

Sasaki, C. R. S., A. K. Rowe, and L. A. McMurdie, 2026: Initial Upscale Growth Environments in Central Argentina from a Convection-Permitting Simulation. J. Geophys. Res. Atmos, 131, e2025JD044251.

Sasaki, C. R. S., A. K. Rowe, and L. A. McMurdie, 2025: Environmental Conditions Leading to Observed Convective Organization in Central Argentina. Mon. Wea. Rev. https://doi.org/10.1175/MWR-D-24-0183.1.

Sasaki, C. R. S., A. K. Rowe, L. A. McMurdie, A. Varble, and Z. Zhang, 2024: Influences of the South American Low-Level Jet on the Convective Environment in Central Argentina Using a Convection-Permitting Simulation. Mon. Wea. Rev., 152, 629–648, https://doi.org/10.1175/MWR-D-23-0122.1.

SCIENTIFIC COMMUNITY ENGAGEMENT

Cabinet Member, *King County Metro Fares Cabinet* **2024-Present**
Board Member, *American Meteorological Society STAC Weather Analysis and Forecasting cmte.* **2023-Present**
Peer Reviewer, https://www.webofscience.com/wos/author/record/3705759 **2022-Present**
Board Member, *Habitat for Humanity, Young Professionals Seattle-King County* **2018-2020, 2022-Present**
Board Member, *Husky Experience Student Advisory Council* **2022-2023**
Graduate Student Distinguished Visiting Lecture Organizer, *UW Atmospheric Sciences* **2019-2023**
Undergraduate Mentor, UW Atmospheric Sciences **2019-2024**

AWARDS AND FELLOWSHIPS

Radar Observations of Clouds and Precipitation Summer School Travel Grant, Stony Brook University **2023**
Graduate Student Distinguished Service Certificate, UW Atmospheric Sciences **2022**
Achievement Rewards for College Scientists (ARCS) Fellowship **2018-2021**

Personal Interests

Hiking, sailing, WxChallenge forecasting, travelling, following the news