Katherine (Katie) Dagon (she/her)

NSF National Center for Atmospheric Research
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EDUCATION

Harvard University, Cambridge, MA
Ph.D., Earth and Planetary Sciences	2017
A.M., Earth and Planetary Science	2015

Brown University, Providence, RI
B.S., Mathematics-Physics	2010

PROFESSIONAL APPOINTMENTS

NSF National Center for Atmospheric Research, Boulder, CO
Project Scientist II / Scientist V, Climate and Global Dynamics	2022−
Project Scientist I, Climate and Global Dynamics	2019-2022
Advanced Study Program (ASP) Postdoctoral Fellow	2017-2019

Harvard University, Cambridge, MA
Graduate Research Assistant, Department of Earth and Planetary Sciences	2011-2017

Connecticut Department of Energy and Environmental Protection, Hartford, CT
Seasonal Resource Assistant	2010-2011

United Technologies, South Windsor, CT
NASA-UTC Internship Program	2010

Brown University, Providence, RI
Undergraduate Research Assistant, Department of Physics	2009-2010

AWARDS & FELLOWSHIPS

NCAR EdEC Special Recognition Award for the ML Bootcamp Team	2025
UCAR Education and Outreach Award for the Traveling Exhibit Program Team	2025
NCAR Early Career Scientists Assembly Travel Award	2023
NCAR Accelerated Scientific Discovery Computation Award (Lead: M.J. Molina)	2022-2023
Radiant Earth Foundation Leading Women in ML4EO	2022
NCAR CISL Special Recognition Award for AI4ESS	2020
Andrew Slater Award, NCAR Land Model Working Group Meeting	2019
Earth Educators' Rendezvous Travel Grant	2018
NCAR Advanced Study Program Postdoctoral Fellowship	2017-2019
Presidential Management Fellowship Finalist	2017
CESM Workshop Travel Grant	2016
Certificate of Teaching Excellence, Harvard University	2014, 2016
Duff Family Endowed Graduate Support Fund, Harvard University	2013-2014
Graduate Consortium Fellowship, Harvard University Center for the Environment	2012-2013
Joseph J. Loferski Award, Brown University Engineering	2010
Undergraduate Research and Teaching Award, Brown University	2009

PUBLICATIONS [*student/post-doc lead author]

Submitted

*Silwimba, K., A.N. Flores, L. Hawkins, C. Becker, **K. Dagon**, D.J. Gagne, et al. (Under Review), Efficient Emulation, Uncertainty Quantification, and Sensitivity Analysis for a Land Surface Model using Evidential Deep Learning, https://doi.org/10.22541/essoar.176409114.40301018/v1.

Foster, A., L. Hawkins, D. Kennedy, G.B. Bonan, R.A. Fisher, J.F. Needham, R.G. Knox, C.D. Koven, W.R. Wieder, **K. Dagon**, and D. M. Lawrence (Under Review), Contrasting parametric sensitivities in two global vegetation models using parameter perturbation ensembles, https://doi.org/10.22541/au.176281742.27975194/v1.

Peer-Reviewed

*Kim, H., F. Lehner, **K. Dagon**, D.M. Lawrence, S. Swenson, and A.W. Wood (In Press), Constraining climate model projections with observations amplifies future runoff declines, *Communications Earth & Environment*.

*Pérez-Carrasquilla, J.S., M.J. Molina, K.J. Mayer, **K. Dagon**, J.T. Fasullo, and I.R. Simpson (2025), Observed and modeled amplification of the frequency, duration, and extreme heat impacts of the Pacific trough regime, *Earth's Future*, 13, e2025EF007140, https://doi.org/10.1029/2025EF007140.

Raoult, N., N. Douglas, N. MacBean, J. Kolassa, T. Quaife, A.G. Roberts, R. Fisher, I. Fer, C. Bacour, **K. Dagon**, et al. (2025), Parameter estimation in land surface models: challenges and opportunities with data assimilation and machine learning, *Journal of Advances in Modeling Earth Systems*, 17, e2024MS004733, https://doi.org/10.1029/2024MS004733.

Mayer, K.J., **K. Dagon**, and M.J. Molina (2025), Can transfer learning be used to identify tropical state-dependent bias relevant to midlatitude subseasonal predictability?, *Artificial Intelligence for the Earth Systems*, 4, 240091, https://doi.org/10.1175/AIES-D-24-0091.1.

Kennedy, D., **K. Dagon**, D.M. Lawrence, R.A. Fisher, B.M. Sanderson, N. Collier, et al. (2025), One-at-a-time parameter perturbation ensemble of the Community Land Model, version 5.1, *Journal of Advances in Modeling Earth Systems*, 17, e2024MS004715, https://doi.org/10.1029/2024MS004715.

Ullrich, P.A., E.A. Barnes, W.D. Collins, **K. Dagon**, S. Duan, J. Elms, et al. (2025), Recommendations for comprehensive and independent evaluation of machine learning-based Earth system models, *Journal of Geophysical Research: Machine Learning and Computation*, 2, e2024JH000496, https://doi.org/10.1029/2024JH000496.

*Elkouk, A., Y. Pokhrel, B. Livneh, E. Payton, L. Luo, Y. Cheng, **K. Dagon**, S. Swenson, A.W. Wood, D.M. Lawrence, and W. Thiery (2024), Towards understanding parametric controls on runoff sensitivity to climate in the Community Land Model: A case study over the Colorado River headwaters, Water Resources Research, 60, e2024WR037718, https://doi.org/10.1029/2024WR037718.

*Zarakas, C.M., D. Kennedy, **K. Dagon**, D.M. Lawrence, A. Liu, G. Bonan, C. Koven, D. Lombardozzi, and A.L.S. Swann (2024), Land processes can substantially impact the mean climate state, *Geophysical Research Letters*, 51, e2024GL108372, https://doi.org/10.1029/2024GL108372.

Eyring, V., W.D. Collins, P. Gentine, E.A. Barnes, M. Barreiro, T. Beucler, M. Bocquet, C.S. Bretherton, H.M. Christensen, **K. Dagon**, et al. (2024), Pushing the frontiers in climate modelling and analysis with machine learning, *Nature Climate Change*, 14, 916-928, https://doi.org/10.1038/s41558-024-02095-y.

Molina, M.J., T.A. O'Brien, G. Anderson, M. Ashfaq, K.E. Bennett, W.D. Collins, **K. Dagon**, J.M. Restrepo, and P.A. Ullrich (2023), A review of recent and emerging machine learning applications for climate variability and weather phenomena, *Artificial Intelligence for the Earth Systems*, 2, 220086, https://doi.org/10.1175/AIES-D-22-0086.1.

*Touma, D., J.W. Hurrell, M. Tye, and **K. Dagon** (2023), The impact of stratospheric aerosol injection on extreme fire weather risk, *Earth's Future*, 11, e2023EF003626, https://doi.org/10.1029/2023EF003626.

Molina, M.J., J.H. Richter, A.A. Glanville, **K. Dagon**, J. Berner, A. Hu, and G.A. Meehl (2023), Subseasonal representation and predictability of North American weather regimes using cluster analysis, *Artificial Intelligence for the Earth Systems*, 2, e220051, https://doi.org/10.1175/AIES-D-22-0051.1.

*Cheng, Y., K. Musselman, S. Swenson, D. Lawrence, J. Hamman, **K. Dagon**, D. Kennedy, and A.J. Newman (2023), Moving land models towards more actionable science: A novel application of the Community Terrestrial Systems Model across Alaska and the Yukon River Basin, *Water Resources Research*, 59, e2022WR032204, https://doi.org/10.1029/2022WR032204.

Dagon, K., J. Truesdale, J.C. Biard, K.E. Kunkel, G.A. Meehl, and M.J. Molina (2022), Machine learning-based detection of weather fronts and associated extreme precipitation in historical and future climates, *Journal of Geophysical Research: Atmospheres*, 127, e2022JD037038, https://doi.org/10.1029/2022JD037038.

Tye, M.R., **K. Dagon**, M.J. Molina, J.H. Richter, D. Visioni, B. Kravitz, and S. Tilmes (2022), Indices of Extremes: Geographic patterns of change in extremes and associated vegetation impacts under climate intervention, *Earth System Dynamics*, 13, 1233-1257, https://doi.org/10.5194/esd-13-1233-2022.

Ali, A.A., Y. Fan, M.D. Corre, M.M. Kotowska, E. Preuss-Hassler, A.N. Cahyo, F.E. Moyano, C. Stiegler, A. Röll, A. Meijide, A. Olchev, A. Ringeler, C. Leuschner, R. Ariani, T. June, S. Tarigan, H. Kreft, D. Hölscher, C. Xu, C.D. Koven, **K. Dagon**, R.A. Fisher, E. Veldkamp, and A. Knohl (2022), Implementing a new rubber plant functional type in the Community Land Model (CLM5) improves accuracy of carbon and water flux estimation, *Land*, 11, 183, https://doi.org/10.3390/land11020183.

Prabhat, K. Kashinath, M. Mudigonda, S. Kim, L. Kapp-Schwoerer, A. Graubner, E. Karaismailoglu, L. von Kleist, T. Kurth, A. Greiner, K. Yang, C. Lewis, J. Chen, A. Lou, S. Chandran, B. Toms, W. Chapman, **K. Dagon**, C.A. Shields, T. O'Brien, M. Wehner, and W. Collins (2021), ClimateNet: an expert-labelled open dataset and Deep Learning architecture for enabling high-precision analyses of extreme weather, *Geoscientific Model Development*, 14, 107-124, https://doi.org/10.5194/gmd-14-107-2021.

Dagon, K., B.M. Sanderson, R.A. Fisher, D.M. Lawrence (2020), A machine learning approach to emulation and biophysical parameter estimation with the Community Land Model, version 5, *Advances in Statistical Climatology, Meteorology and Oceanography*, 6, 223-244, https://doi.org/10.5194/ascmo-6-223-2020.

Xu, Y., L. Lin, S. Tilmes, **K. Dagon**, L. Xia, C. Diao, W. Cheng, Z. Wang, I. Simpson, and L. Burnell (2020), Climate engineering to mitigate the projected 21st-century terrestrial drying of the Americas: a direct comparison of carbon capture and sulfur injection, *Earth System Dynamics*, 11, 673-695, https://doi.org/10.5194/esd-11-673-2020.

*Cheng, W., D.G. MacMartin, **K. Dagon**, B. Kravitz, S. Tilmes, J.H. Richter, M.J. Mills, and I.R. Simpson (2019), Soil moisture and other hydrological changes in a stratospheric aerosol geoengineering large ensemble, *Journal of Geophysical Research: Atmospheres*, 124, 12773-12793, https://doi.org/10.1029/2018JD030237.

Kravitz, B., D.G. MacMartin, S. Tilmes, J.H. Richter, M.J. Mills, W. Cheng, **K. Dagon**, A.S. Glanville, J.-F. Lamarque, I.R. Simpson, J.J. Tribbia, and F. Vitt (2019), Comparing surface and stratospheric impacts of geoengineering with different SO_2 injection strategies, *Journal of Geophysical Research: Atmospheres*, 124, 7900-7918, http://dx.doi.org/10.1029/2019JD030329.

Dagon, K., and D.P. Schrag (2019), Quantifying the effects of solar geoengineering on vegetation, *Climatic Change*, 153, 235-251, http://dx.doi.org/10.1007/s10584-019-02387-9.

Dagon, K., and D.P. Schrag (2017), Regional climate variability under model simulations of solar geo-engineering, *Journal of Geophysical Research: Atmospheres*, 122, 12106-12121, http://dx.doi.org/10.1002/2017JD027110.

Dagon, K., and D.P. Schrag (2016), Exploring the effects of solar radiation management on water cycling in a coupled land-atmosphere model, *Journal of Climate*, 29, 2635-2650, http://dx.doi.org/10.1175/JCLI-D-15-0472.1.

Tobias, S.M., **K. Dagon**, and J.B. Marston (2011), Astrophysical fluid dynamics via direct statistical simulation, *The Astrophysical Journal*, 727, 127, http://dx.doi.org/10.1088/0004-637X/727/2/127.

Non Peer-Reviewed

Mayer, K.J., **K. Dagon**, and M.J. Molina (2023), Identifying Tropical State-Dependent Bias Relevant to Midlatitude Subseasonal Predictability with Explainable Neural Networks, *Subseasonal-to-Seasonal Prediction Project Newsletter*, No. 23, http://s2sprediction.net/file/newsletter/Newsletter%2023_Aug%202023.pdf.

Molina, M.J., T.A. O'Brien, G. Anderson, M. Ashfaq, K.E. Bennett, W. Collins, S. Collis, **K. Dagon**, S. Klein, J.M. Restrepo, and P.A. Ullrich (2022), Climate Variability and Extremes, in Hickmon, N.L., C. Varadharajan, F.M. Hoffman, S. Collis, and H.M. Wainwright (Eds.), *Artificial Intelligence for Earth System Predictability (AI4ESP) Workshop Report*, https://doi.org/10.2172/1888810.

Dagon, K., M.J. Molina, et al. (2021), Machine learning to extend and understand the sources and limits of water cycle predictability on subseasonal-to-decadal timescales in the Earth system, DOE EESSD White Paper on AI4ESP, https://doi.org/10.2172/1769744.

INVITED TALKS & SEMINARS

LEAP Summer Lectures in Climate Data Science, virtual	July 2025
NCAR CISL Collaborate and Connect Talk, Boulder, CO	May 2024
CU Boulder Earth Lab Data Science Seminar, Boulder, CO	December 2023
Univ. of Wyoming Dept. of Atmospheric Science Seminar, Laramie, WY	November 2023
Univ. of Washington Dept. of Atmospheric Sciences Colloquium, Seattle, WA	November 2023
ARC Climate Extremes Attribution and Risk Webinar, virtual	April 2023
Colorado School of Mines Women Earth Data Scientists Day Keynote, Golden, CO	April 2023
NCAR CGD Seminar Series [joint with D. Kennedy], Boulder, CO	February 2023
DOE Rubisco SFA Biogeochemistry Science Friday Webinar, virtual	November 2021
Lewis University Dept. of Physics Weisenthal Colloquium Series, virtual	February 2021
Lawrence Berkeley National Laboratory NERSC Seminar, Berkeley, CA	November 2019
Penn State Dept. of Meteorology and Atmos. Sci. Colloquium, State College, PA	February 2019
American University Dept. of Environmental Science Seminar, Washington, DC	February 2019
Indiana Univ. Dept. of Earth and Atmos. Sci. Colloquium, Bloomington, IN	January 2019
Penn State Department of Geography Seminar, State College, PA	January 2019
Univ. of Washington Dept. of Atmospheric Sciences Seminar, Seattle, WA	July 2018

SELECTED CONFERENCE & WORKSHOP PRESENTATIONS [*invited]

Land Modeling with Machine Learning, *U.S. CLIVAR Summit*, Boulder, CO, July 2025 (*talk).

Machine Learning-Based Detection of Atmospheric Rivers and Regional Climate Impacts, *Gordon Research Conference on Machine Learning for Actionable Climate Science*, Smithfield, RI, June 2025 (poster).

Modeling the Climate Impacts of Solar Geoengineering on Land-Atmosphere Interactions, *CIREQ-CIRANO Interdisciplinary Day on Geoengineering*, virtual, April 2024 (*talk).

Systematic Parameter Calibration with Machine Learning-Based Emulation of a Global Land Model, *SIAM Conference on Uncertainty Quantification*, Trieste, Italy, February 2024 (*talk).

Building an Inclusive Earth System Data Science Community at NCAR/UCAR, American Geophysical Union Fall Meeting, San Francisco, CA, December 2023 (poster).

AI and Machine Learning for Climate Science and Modeling, *NSF Research Infrastructure Workshop*, virtual, June 2023 (*talk & panel).

Objective Calibration of Land Models, *American Meteorological Society Annual Meeting*, Denver, CO, January 2023 (*talk).

Machine Learning-Based Detection of Weather Fronts and Associated Extreme Precipitation in Historical and Future Climates, *American Geophysical Union Fall Meeting*, Chicago, IL, December 2022 (talk).

Changes in Extremes and Associated Vegetation Impacts under Climate Intervention, *Gordon Research Conference on Climate Engineering*, Newry, ME, June 2022 (poster).

Objective Calibration of Land Models, *Aspen Global Change Institute Workshop on Exploring the Frontiers in Earth System Modeling with Machine Learning and Big Data*, Aspen, CO, June 2022 (*talk).

NCAR Earth System Data Science, *NASEM Machine Learning and Artificial Intelligence to Advance Earth System Science Workshop*, virtual, February 2022 (*talk & panel), https://doi.org/10.5281/zenodo.6048010.

Machine Learning-Based Feature Detection to Associate Precipitation Extremes with Synoptic Weather Events, *American Geophysical Union Fall Meeting*, virtual, December 2021 (*talk).

Grand Challenges in AI4ESP: A Climate Modeling Perspective, *DOE Artificial Intelligence for Earth System Predictability (AI4ESP) Workshop*, virtual, November 2021 (*plenary).

Machine Learning and Earth System Modeling: From Parameter Calibration to Feature Detection, *Kavli Institute for Theoretical Physics Machine Learning for Climate Conference*, Santa Barbara, CA, November 2021 (*talk), https://doi.org/10.26081/K6334B.

Machine Learning-Based Feature Detection to Associate Precipitation Extremes with Synoptic Weather Events, *2nd Workshop on Knowledge Guided Machine Learning*, virtual, August 2021 (*talk).

Applying Machine Learning to Associate Precipitation Extremes with Synoptic-Scale Weather Events, *American Geophysical Union Fall Meeting*, virtual, December 2020 (talk).

Bayesian Calibration with Neural Network-Based Emulation of a Land Model, *American Geophysical Union Fall Meeting*, virtual, oral presentation, December 2020 (*talk).

A Machine Learning Approach to Quantify Land Model Parameter Uncertainty, *American Geophysical Union Fall Meeting*, San Francisco, CA, December 2019 (talk).

Machine Learning for Parameter Estimation in CLM5, *CESM Land Model Working Group Meeting*, Boulder, CO, February 2019 (talk).

Reducing Uncertainty in Land Surface Models, *American Geophysical Union Fall Meeting*, Washington, DC, December 2018 (talk).

Moving Towards a Global Biogeophysical Parameter Optimization for CLM5, *Community Earth System Model Workshop*, Boulder, CO, June 2018 (talk).

Effects of Solar Geoengineering on Vegetation: Implications for Biodiversity and Conservation, *American Geophysical Union Fall Meeting*, New Orleans, LA, December 2017 (talk).

Regional Climate Variability under Model Simulations of Solar Geoengineering, *Gordon Research Conference on Climate Engineering*, Newry, ME, July 2017 (poster).

Soil Moisture-Climate Coupling under Model Simulations of Solar Geoengineering, *Community Earth System Model Workshop*, Breckenridge, CO, June 2016 (talk).

Exploring the Effects of Solar Radiation Management on Water Cycling in a Coupled Land-Atmosphere Model, *Graduate Climate Conference*, Woods Hole, MA, November 2015 (talk).

OPEN DATA & CODE

Silwimba, K., L.R. Hawkins, **K. Dagon**, and D. Kennedy (2025), Global Total Projected Leaf Area Index Subset from the Community Land Model Version 5 (CLM5) Perturbed Parameter Ensemble Members, 1850-2015, Zenodo, https://doi.org/10.5281/zenodo.15170936.

Dagon, K. (2023), Machine learning-based detection of weather fronts with DL-FRONT in CESM1.3, Zenodo, https://doi.org/10.5281/zenodo.8306870.

Tye, M.R., and **K. Dagon** (2023), Data from: Indices of Extremes: Geographic patterns of change in extreme temperature and precipitation under climate intervention, Zenodo, https://doi.org/10.5281/zenodo.7552538.

Dagon, K., and M.J. Molina (2022), katiedagon/ML-extremes: Publication release (v1.0), Zenodo, https://doi.org/10.5281/zenodo.7126839.

Dagon, K., J. Truesdale, N. Rosenbloom, and S. Bates (2022), Machine learning-based detection of weather fronts and associated extreme precipitation in CESM1.3, NSF National Center for Atmospheric Research, https://doi.org/10.5065/q6t7-ta06.

Dagon, K. (2020), katiedagon/CLM5_ParameterUncertainty: Publication release (v1.0), Zenodo, https://doi.org/10.5281/zenodo.4302690.

Dagon, K. (2020), CLM5 Perturbed Parameter Ensembles, Zenodo, https://doi.org/10.5065/9bcc-4a87.

TEACHING

Tutorials and Workshops

NCAR Machine Learning Bootcamp, Boulder, CO	October-November 2025
Community Earth System Model Tutorial, virtual	August 2021
AGU Tutorial on Machine Learning and Deep Learning, virtual	December 2020
Artificial Intelligence for Earth System Science (AI4ESS) Summer School, virtual	June 2020
Community Terrestrial Systems Model Tutorial, Boulder, CO	February 2019

Guest Lectures

Undergraduate/Graduate Environmental Journalism Course, CU Boulder, Boulder, CO	April 2023
Masters of the Environment Graduate Program, CU Boulder, virtual	May 2021
Undergraduate Groundwater Hydrology Course, Oglala Lakota Tribal College, virtual	April 2020

MENTORING

Postdoctoral Research

Linnia Hawkins, Columbia University, LEAP Postdoctoral Fellow	2022-2024
Kirsten Mayer, NCAR, Postdoctoral Fellow	2022

Ph.D. Committees

Jhayron Steven Pérez-Carrasquilla, University of Maryland	2023–
Hossein Kaviani, University of Virginia	2023-2024
John Landy, Stony Brook University	2022-2025

Student Research

Sudhanshu Kumar, Auburn University, LEAP Momentum Fellow	Summer 2025
Isabella Lu, Columbia University, LEAP REU Program	Summer 2025
Sarah Ryu, UC Berkeley, LEAP REU Program	Summer 2025
Max Bouman, DLR Germany, NCAR Visitor	Summer 2025
Jhayron Steven Pérez-Carrasquilla, University of Maryland, NCAR ASP GVP	Summer 2024
Kachinga Silwimba, Boise State University, NCAR ASP GVP	Spring 2024
Hossein Kaviani, University of Virginia, PhD Plus	Fall 2023
Mark Irby-Gill, Red Rocks Community College, UCAR SOARS/LEAP REU	Summer 2023
Rebecca Porter, University of Saint Mary, UCAR SOARS/LEAP REU	Summer 2023
Tariq Walker, Kennesaw State University, UCAR SOARS	Summer 2021
Lilly Jones, South Dakota School of Mines & Technology, UCAR Next Gen Fellowship	2019-2020
William Meyers, Carmel High School, Science Research Mentor	2019
Victoria Garito, Briarcliff High School, Intel Science Research Program	2014-2015

ACADEMIC SERVICE & LEADERSHIP

National Academies' AI & Climate Workshop Planning Committee	2025−
NCAR AI Roadmap Working Group	2025−
CalLMIP Organizing Committee	2025−
NCAR CGD Communications Committee	2024−
Discussion Leader, GRC on Machine Learning for Actionable Climate Science	2025
Leadership Committee, NCAR Earth System Data Science Initiative	2020-2024
Discussion Leader, GRC on Climate Engineering	2024
Session Convener, AGU Fall Meeting	2023, 2024
Co-Organizer, CESM Workshop Parameter Estimation Cross Working Group	2023
Co-Chair, Gordon Research Seminar on Climate Engineering	2022
Co-Organizer, DOE AI4ESP Workshop Climate Variability and Extremes Session	2021
Co-Organizer, CESM Workshop Machine Learning Cross Working Group	2021, 2025
NCAR CGD Seminar Series Coordinator	2020-2021
Executive Committee, APS Topical Group on Physics of Climate	2019-2021
NCAR ASP Postdoctoral Fellows Networking Committee	2017-2019
Program Committee, APS Topical Group on Physics of Climate	2017-2018

Reviewer for the National Science Foundation, the Degrees Initiative, Artificial Intelligence for the Earth Systems, Atmospheric Chemistry and Physics, Biogeosciences, Earth's Future, Earth System Dynamics, Environmental Data Science, Geophysical Research Letters, Geoscientific Model Development, Journal of Advances in Modeling Earth Systems, Journal of Hydrometeorology, Scientific Data

PUBLIC ENGAGEMENT

UCAR Center for Science Education Workshop for Denver Public Schools	2025
CU Boulder Investigate Careers in the Environment	2022
American Physical Society Congressional Visits Day	2021
WOW Children's Museum Girls in Science Night	2020
NCAR Traveling Climate Exhibit Scientific Team	2019
USA Science and Engineering Festival	2018
Project Bridge Colorado Science Day at the State Capitol	2018
NCAR Super Science Saturday	2017-2019

TECHNICAL SKILLS

Languages	Python, NCL, R, Bash, Fortran, LaTeX, HTML
Modeling Tools	CESM, HPC, Unix, Machine Learning
Development Tools	Git/GitHub, Conda
Scientific Analysis	Jupyter, Xarray, Dask, Keras/TensorFlow, PyTorch, NCO, CDO