Dan Hammer

Environmental data scientist
Managing Partner, Earthrise Media
National Geographic Fellow

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Education

PhD, MS, Environmental Economics, University of California, Berkeley, 2017.

BA, Mathematics and Economics, Swarthmore College, 2007, *High Honors.*

Grants and Awards

Mark Bingham Award for Excellence in Achievement by a Young Alumnus, UC Berkeley (2019)

Non-resident Fellow, National Council of Applied Economic Research, India (2018)

National Geographic Fellow (2018)

Pritzker Environmental Genius Award (2017)

Keynote Address to the California Water Resources Control Board (2017)

Summer at Census Scholar (2017)

Berkeley Institute for Data Science Fellowship (2015)

Presidential Innovation Fellowship (2014)

50 Data Scientists Gurus You Must Follow on Twitter, Automated Insights (2014)

Notable Mention, Amazon Web Services EC2 Spotathon (2012)

Graduate Student Research appointment, UC Berkeley (2011)

Honorable mention, National Science Foundation Graduate Research Fellowship (2011)

Innovation Fund grant (P126175, $94,500), The World Bank (2011)

Environmental Systems Research Institute (ESRI) student assistantship (2010)

First place, University of Maryland, graduate research in the field of earth/ocean science (2010)

Amazon Web Services project grant (2010, renewed)

Technical Expert, Scientific and Technical Advisory Panel, Global Environment Facility (2010)

Thomas J. Watson Fellowship (2007 - 2008)

Centennial Conference Academic Honor Role (2007)

Lang Opportunity Scholarship (2003) and Fellowship (2006); support for graduate studies

Work Experience

X, Senior Advisor and Climate Fellow

Advising on environmental data strategy at X, the Moonshot Factory at Google.

Earthrise Media, Managing Partner

Earthrise is a media brand and technology company, with the mission to tell stories about environmental and humanitarian events from satellite imagery. Partners include National Geographic, Reuters, and XPRIZE. Earthrise is a project of The Earth Genome, a 501(c)(3) nonprofit organization, co-founded with Steve McCormick and Glen Low.

National Geographic Society, Senior Advisor & Fellow

Advising the National Geographic Labs on strategic investment in conservation technology, reporting to the Vice President of Technology.

The White House, Senior Policy Advisor

Advising the Chief Technology Officer of the United States (Megan Smith) on the public finance of data infrastructure and supporting the civic tech community (e.g., US Digital Services, 18F, Presidential Innovation Fellows).

Global Partnership for Sustainable Development Data, Lead Data Scientist

The Global Partnership for Sustainable Development Data is global network of governments, NGOs and businesses working together to strengthen the inclusivity, trust and innovation in the way that data is used to address the world's sustainable development efforts. Led a group including Facebook, Harvard, McKinsey, and Planet labs for effective use of development data.

Berkeley Institute for Data Scientist, Fellow

Berkeley Institute for Data Science (BIDS) is a central hub of research and education at UC Berkeley designed to facilitate and nurture data-intensive science.

SpaceNinja, Chief Scientist

Co-founded SpaceNinja to begin to answer the question, "Is there a mass market for satellite imagery?" Wrote deep learning algorithms to index change detected from satellite imagery. Created change-detection and validation metrics for relevant use of commercial satellite imagery.

SpaceKnow, Chief Scientist

Led data analytics as a co-founder of SpaceKnow through a successful seed round ($1M). Designed algorithms to run on Google's computing and app framework for on-demand analytics on high-resolution satellite imagery.

NASA, Presidential Innovation Fellow

Selected as one of 23 fellows from over 2,100 applicants for a White House program to facilitate innovation, broadly defined, within federal agencies. Worked with the Office of the Chief Information Officer (OCIO) to prototype service-oriented architecture at NASA. Profile on White House website. Proudest moment here.

World Resources Institute, Chief Data Scientist and Research Fellow

Founded the Data Lab at the World Resources Institute. Released Global Forest Watch to monitor global deforestation. Developed algorithms to detect and classify structural change in the spectral time series for each 500m pixel in the tropics. GFW received 250,000 visitors from 171 countries in the first week, and featured in articles from the BBC, The Atlantic, Slate, and NBC, among many others.

Resources for the Future, Affiliated Expert, Research Analyst

Affiliated Expert in the Center for Climate and Electricity Policy. Developed the second release of the Forest Carbon Index (FCI), a public tool to analyze the global distribution of forest carbon resources; constructed the FCI workflow on Amazon.com's cloud computation platform.

Center for Global Development, Consultant and Research Assistant

Supported the research of David Wheeler, Nancy Birdsall, and Arvind Subramanian on multiple projects, including the development of a system to track deforestation in real-time at 1km spatial resolution using NASA satellite imagery.

RescueCorps, Project Coordinator

Core staff member for RescueCorps, a nonprofit that provides training to local firefighters in Bolivia and Thailand; personal responsibilities ranged from grant writing and curriculum development to on-site training and emergency response in Santa Cruz, Bolivia, as a nationally certified firefighter.

Academic Positions

Adjunct Professor, Georgetown University

Data Science for Public Policy: The course is focused on evaluating and analyzing public policy, telling stories with data to make compelling and fact-based arguments. Course materials online.

Adjunct Professor, University of San Francisco

Introduction to Web Mapping: A working knowledge of web-based mapping and spatial SQL queries for a variety of applications, based on the open-source Carto platform. Course materials online.

Graduate Student Instructor, University of California, Berkeley

ARE212: Multiple Equation estimation. Graduate-level econometrics to upper-division students in Economics, Public Policy, Biostatistics, among other departments. Course materials online.

IAS106: Undergraduate microeconomics.

Lead Instructor, San Quentin State Prison

Taught introductory statistics, intermediate algebra, and trigonometry to a group of upper-level inmates seeking an associate's degree as part of the Prison University Project.

Peer-Reviewed Publications

Dasgupta, S., **D. Hammer**, R. Kraft, D. Wheeler. 2014. "A Resource Allocation Model for Tiger Habitat Protection." *Journal of Management and Sustainability*, Vol **4**(3). Available online.

Hammer, D., D. Wheeler, R. Kraft. 2013. "Near real-time forest cover change detection in the humid tropics using MODIS data." *International Journal of Applied Earth Observation and Geoinformation*, Vol. **33**, pp. 1-9. Available online.

Wheeler, D., **D. Hammer**, R. Kraft, S. Dasgupta, B. Blankespoor. 2013. "Economic dynamics and forest clearing: A spatial econometric analysis for Indonesia." *Ecological Economics*, Vol. **85**, pp. 85-96. Access online.

Dasgupta, S., **D. Hammer**, R. Kraft, D. Wheeler. 2012. "Vyaghranomics in Space and Time: Estimating Habitat Threat for Bengal, Indochinese, Malayan and Sumatran Tigers." *Journal of Policy Modeling*, Vol. **36**(3), pp. 433-453. Access online.

Forrest, J., **D. Hammer**, R. Kraft, *et al.* 2011. "Single-species conservation in a multiple-use landscape: current protection of the tiger range." *Animal Conservation*, Vol. **14**. Access online.

Hammer, D., G. Judge, A. Plastino. 2013. "Information Recovery in Nonlinear Dynamic Time Series Models." *Quantitative Economics, Submitted.*

Miscellaneous

Team USA, Dragonboat World Championships; world-record holder, 500m Open

Tour du Teche 2010 winner; Key to the City of Breaux Bridge, Louisiana

Texas Water Safari, 262-mile "World's Toughest Canoe Race" overall win 2011

Speedcuber (fast-solving Rubik's cubes, PR: 27 seconds)

NOLS graduate, semester in Patagonia; Wilderness First Responder