Jordan Wirfs-Brock

Human-Computer Interaction Researcher

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SUMMARY

I study the future of voice interactions from a human-centered computing perspective. My research focuses on how unexpected mechanisms—sound, taste, participatory experiences—can help people understand quantitative data. For over ten years, I have been making complex information approachable as a journalist, data analyst, producer, and designer.

Research Skills

Qualitative interviewing and ethnographic methods, quantitative and statistical analysis, participatory design, critical technical practice, prototyping, speculative design, data visualization, applied machine learning, quasi-experimental methods/causal inference

EDUCATION

University of Colorado   Boulder, CO
PhD, Information Science   2017 - present
Advisor: Brian Keegan

University of Colorado   Boulder, CO
MA, Newsgathering   2011
Graduate Certificate in Environment, Policy and Society

Massachusetts Institute of Technology   Cambridge, MA
SB, Aeronautic and Astronautic Engineering   2006
Minor in Literature

PROFESSIONAL EXPERIENCE

Spotify   Boston, MA
Human-Computer Interaction Research Intern   Summer 2019
Mentors: Sarah Mennicken, Jenn Thom
Conducted a research project using participatory design methods to
imagine novel voice experiences leveraging personal listening history data

Mozilla   Remote
Emerging Technologies Research Intern   Fall 2018
Mentors: Jofish Kaye, Janice Tsai
Employed surveys, interviews, user studies, and rapid prototyping to
understand listening cultures and develop technologies around podcasting
and voice user interfaces

Yahoo/Oath   Sunnyvale, CA
User Experience Research Intern   Summer 2018
Mentor: Katie Quehl
Supported Yahoo News applications and explored future product areas by
conducting interviews, user tests, diary study, eye-tracking, surveys;
conceived of and led an hands-on voice design workshop for employees

Inside Energy / Rocky Mountain PBS   Denver, CO
Data Journalist   2014 – 2017
Produced stories for web, radio and TV about the energy industry;
experimented with creative techniques like stop-motion animation and
data sonification; collaborated with a team of reporters on investigative
projects; performed at live events; practiced audience-driven storytelling;
established data-driven culture for a start-up media organization

The Piton Foundation   Denver, CO
Data Curator; Product Manager   2011 – 2013
Analyzed socioeconomic data and community indicators; co-founded
Floodlight, a tool for digital storytelling; grant-writing, product/technology
development, outreach and community training

Center for Environmental Journalism, University of Colorado   Boulder, CO
Graduate Research Assistant   2008 – 2010
Assistant to Ted Scripps Fellowship program; coordinated weekly seminar
speakers; maintained program website and alumni communications

ACADEMIC PUBLICATIONS

Peer-Reviewed Journal Articles
Jordan Wirfs-Brock and Katie Quehl. 2019. News From the Background to the Foreground: How
People Use Technology To Manage Media Transitions: A Study of Technology-mediated News
Behaviors in a Hyper-connected World. *Proc. ACM Interact. Mob. Wearable Ubiquitous Technol.*
3, 3, Article 110 (September 2019), 19 pages. DOI: https://doi.org/10.1145/3351268

Peer-Reviewed Conference Papers
Mikhaila Friske, Jordan Wirfs-Brock, Laura Devendorf. 2020. Entangling the Roles of Maker and
Interpreter in Personal Data Narratives: Explorations in Yarn and Sound. (Submitted/under review)

Jordan Wirfs-Brock, Sarah Mennicken, Jenn Thom. 2020. Giving Voice to Silent Data: Designing
with Personal Music Listening History. In *Proceedings of the 2020 CHI Conference on Human
Factors in Computing Systems.* (to appear in CHI 2020)

Jordan Wirfs-Brock. 2019. Recipes for Breaking Data Free: Alternative Interactions for Experiencing
Personal Data. In *Companion Publication of the 2019 on Designing Interactive Systems
Conference 2019 Companion (DIS '19 Companion)*. ACM, New York, NY, USA, 325-330. DOI:
https://doi.org/10.1145/3301019.3323892

Frank Bentley, Katie Quehl, Jordan Wirfs-Brock, and Melissa Bica. 2019. Understanding Online News Behaviors. In *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems* (CHI '19). ACM, New York, NY, USA, Paper 590, 11 pages. DOI: https://doi.org/10.1145/3290605.3300820

Refereed Conference Posters and Talks
Jordan Wirfs-Brock. 2019. Quantuition: Exploring the Future of Representing Biometric Data. Entry in Student Design Competition at ACM Conference on Tangible, Embedded, and Embodied Interactions (TEI).

Jordan Wirfs-Brock. 2018. Conversational Sonification: Exploring the Intersection of Data Sonification, Voice Interfaces, and Interactivity. ThinkTank (Doctoral Consortium) poster and talk at International Conference on Auditory Display (ICAD).

INVITED TALKS

Google Developers Group/Women Techmakers "A Case for Conversing With Data" – http://bit.ly/JWB-WT2018	2018
People Powered Publishing Conference Reciprocal Podcasting: Interactivity in Audio	2017
TEDxMileHigh "Your Relationship with Energy is Broken" – http://bit.ly/JWB-TEDx	2016
Spark! Colorado School of Mines Co-emcee and writer, "Unpacking the Politics of Energy in Colorado" http://bit.ly/SparkMines	2016
NICAR (National Institute for Computer Assisted Reporting) "30 Energy Data Story Ideas in 60 Minutes"	2016
Spark! Colorado State University – Powerhouse Energy Campus Co-emcee, "Colorado on the Cutting Edge of Innovation" http://bit.ly/SparkCSU	2015
The Aspen Challenge, Denver "Storytelling Seminar"	2014
Colorado Library Consortium – Spring Workshops *Co-Keynote Speaker with Wendy Norris*	2014
Obama for America Colorado Citizen Engagement Roundtable Ignite Session	2013
Knight Media Learning Seminar Lessons learned from the Floodlight project	2013
Denver Regional Council of Governments Regional Data Summit	2012, 2013

National Neighbors Indicators Partnership, annual meeting	2011, 2012
Western Arts Federation Symposium	2012

TEACHING & TRAINING

University of Colorado, Boulder
Graduate Teaching Assistant
Taught recitations and held office hours for:
- ➔ INFO 1201: Computational Thinking – Intro Python programming class
    - *Guest lecture: Computing with sound and sonification*
- ➔ INFO 1121: Interaction Design – UX/UI class focusing on research, prototyping, and evaluating interactive technologies

Boulder, CO
Spring 2019
Fall, Spring 2018

Society for Professional Journalists
Google News Initiative Trainer; Denver Workshop Trainer
Taught hands-on workshops in advanced search, mapping, data visualization, immersive media at newsrooms, universities, conferences

Various locations
2016 – present

SRCCON
Designed and facilitated sessions for SRCCON, a conference "to transform the ways journalism and tech work"; peer mentor for session facilitators
- ➔ "Let's create a roadmap for user testing and feedback in newsrooms"
- ➔ "Can we pair program the news?"
- ➔ "Data audioization workshop"

Minneapolis, Portland
2015 – 2017

Kwangju Foreign School
High School Teacher; Princeton in Asia Fellow
Taught Biology, Physics, Pre-Calculus, Model U.N., World History; coached cross-country, basketball; advisor for yearbook and art-lit magazine

Gwangju, Korea
2006 – 2007

AWARDS

Tangible, Embedded and Embodied Interactions (TEI) student design competition, best concept/design – "Quantuition"	2019
Heartland Regional Emmy Nominee, informational series – Explaining fracking in 3 videos (with Macgregor Campbell)	2018
University of Colorado Data Visualization Contest, 1st place – "Indian Lands and Fossil Fuel Resources" 3rd place – "Mapping Colorado's Invisible Pipeline Network"	2017
Public Radio News Directors Incorporated Award, 1st place independent podcast – Out There, "High on Failure" (with Willow Belden)	2017

Heartland Regional Emmy Nominee, informational short – "What Does The Clean Power Plan Mean For You?" (with Macgregor Campbell)	2017
National Headliner Award, 2nd place radio series – "Blackout" (with Inside Energy team)	2016
Regional Murrow, investigative radio – "Abandoned Wells" (data journalist supporting reporter Stephanie Joyce)	2016
National Headliner Award, 2nd place radio feature – "How You're Invested In Oil And Gas" (data journalist supporting reporter Dan Boyce)	2015
MIT Boit Writing Prize, Best Essay	2006

GRANTS & FELLOWSHIPS

Mozilla Research Grant	2019
University of Colorado Travel Grant	2019
Sterling Award Scholarship, College of Media, Communication and Information	2018
People Power Publishing Fellowship – Project: Reciprocal Podcasting	2016
Princeton in Asia Fellowship	2006
Oregon Space Grant Award	2005
National Merit Scholar	2002

SERVICE

Peer Reviewing
ACM Conference on Human Factors in Computing (CHI); ACM Conference on Computer-Supported Cooperative Work and Social Computing (CWCW); Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT); ACM Conference on Designing Interactive Systems (DIS); International Conference on Agile Software Development (XP); ACM International Conference on Interactive Media Experiences (IMX/TVX)

Student Volunteering
ACM Conferences on Human Factors in Computing (CHI) and Designing Interactive Systems (DIS)

Mentoring
University of Colorado Graduate Mentorship Program

SELECTED JOURNALISM WORK

My reporting and visualizations from *Inside Energy* have been picked up by national outlets such as *NPR*, *High Country News*, and *PBS Newshour.* More is available at
http://jordanwb.com/portfolio and http://insideenergy.org/author/jbrock/.

Data Journalism
Beyond Standing Rock Data Companion – A series of maps designed to add context to the a video documentary that explores issues of tribal sovereignty and energy development.
http://bit.ly/BSR-data-companion

Mapping Colorado's invisible pipeline network – After a deadly home explosion in Firestone, Colorado, state officials called for the release of underground flowline data, mapped here.
http://bit.ly/invisible-pipelines

Visualizing the flow of money behind oil and gas ballot measures – In 2016, the race to gather enough signatures to get oil and gas ballot measures on Colorado's ballot cost $15.5 million dollars. Who spent that money and how?
http://bit.ly/oil-gas-ballot-measures

Where people meet oil and gas: A Colorado story in 3 maps – Coloradans aren't just living among new wells, they are also living on top of wells drilled and abandoned decades ago.
http://bit.ly/CO-oil-gas-maps

Radio and Podcasting
Listen to U.S. coal production fall off a cliff – An experiment turning data into music. What does the collapse of the U.S. coal industry sound like?
http://bit.ly/coal-sonification

Hacking the grid – A story about rural Colorado, cybersecurity and the electric grid.
http://bit.ly/grid-cybersecurity

The electricity mix in the Western grid is changing before our eyes – A radio news spot and three data visualizations on how natural gas is caught in the middle between coal and renewables.
http://bit.ly/western-grid

High on failure – A longform, personal narrative podcast I produced for *Out There*. I attempted a 550-mile mountain trail race in Vermont called Infinitus. I failed. This is the story.
http://www.outtherepodcast.com/episodes/2016/4/10/episode-17-high-on-failure

Qualia – An immersive podcast miniseries, co-produced with Bishop Sand, exploring the intersection of science and philosophy with thought experiments in sound.
https://www.qualiapod.com

ULTRA-RUNNING

A runner since middle school, my specialties are trail races and multi-day events. Here are some of the races I've run:
- ➔ **Infinitus 888km** 10-day race**:** soloist (2015, 2016, 2017, 2018); relay (2019)
- ➔ **100-mile runs:** Badger Mountain (1st place female, course record), Orcas Island (1st place female), IMTUF, Fat Dog (1st place female), Cascade Crest, Massanutten, Leadville
- ➔ Member of **Girls Heart Rockets**, a space and science-themed all-women relay team, for more than 10 years

PERSONAL INTERESTS

Playing board games, drawing, sketchnoting, baking, home-brewing