

DAVID GRAY WIDDER HE/HIM/HIS

313 TCS Hall
School of Computer Science, Carnegie Mellon University
5000 Forbes Ave, Pittsburgh PA, 15213

www.davidwidder.me
dwidder@cmu.edu
@davidthewid

Education

School of Computer Science, Carnegie Mellon University, Pittsburgh, Pennsylvania.

- PhD student advised by Laura Dabbish & James Herbsleb, 2017- Present
- Masters of Science in Software Engineering, 2017-2021

Robert D. Clark Honors College, University of Oregon, Eugene, Oregon. 2013-2017

- Bachelor of Science in Computer Science, GPA: 3.95, Major GPA: 4.15, *Magna Cum Laude*

Related Work Experience

Research Intern, Socio-Technical Systems, Intel Labs. Remote. July 2021 – May 2022

- Interviewed 27 AI engineers about their perceived ethical agency and responsibility
- Led two workshops to translate findings into AI Ethics process and artifact improvements
- Presented findings to 150+ practitioners in two internal invited talk series
- Findings informed AI Ethics recommendations presented to C-suite decision makers

Research Intern, Microsoft Research. Redmond, Washington. February – May 2020

- Interviewed adopters of AI Ethics guidance to find technical and organizational barriers to use
- Presented findings to C-suite decision maker to inform internal Ethical AI policy roll out

Research Intern, Jet Propulsion Laboratory, NASA. Pasadena, California. June – August 2019

- Conducted interviews, participant observation, and user studies to study software engineer's trust in an automated software engineering tool
- Presented usability improvements to software team to improve software framework

Peer-Reviewed Publications

David Widder, Dawn Nafus, Laura Dabbish, James Herbsleb. "Limits and Possibilities for 'Ethical AI' in Open Source: A Study of Deepfakes". To appear in: *Proceedings of the ACM Conference on Fairness, Accountability, and Transparency (FACCT)*, 2022. [Link](#).

Hana Frluckaj, Laura Dabbish, **David Widder**, Sophie Huilian Qiu, James Herbsleb. "Open Source Software Participation Trajectories for Male and Female Participants" To appear in: *Proceedings of the ACM Conference on Computer-Supported Cooperative Work And Social Computing (CSCW)*, 2022. Preprint available soon.

David Widder, Laura Dabbish, James Herbsleb, Alexandra Holloway, Scott Davidoff. "Trust in Collaborative Automation in High Stakes Software Engineering Work: A Case Study at NASA". In: *Proceedings of the ACM Conference on Human-Computer Interaction (CHI)*, 2021. 26% acceptance rate. [Link](#).

David Widder, Michael Hilton, Christian Kästner, and Bogdan Vasilescu. "A Conceptual Replication of Continuous Integration Pain Points in the Context of Travis CI". In: *Proceedings of the ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (FSE)*, 2019. 24% acceptance rate. [Link](#).

David Widder, Joshua Sunshine, Stephen Fickas. “Barriers to Reproducible Scientific Programming”. In: *Proceedings of the IEEE Symposium on Visual Languages and Human-Centric Computing, Short Research Papers Track (VL/HCC)*, 2019. 44% acceptance rate. [Link](#).

Zack Coker, **David Widder**, Claire Le Goues, Christopher Bogart, and Joshua Sunshine. “A Qualitative Study on Framework Debugging”. In: *Proceedings of the IEEE Conference on Software Maintenance and Evolution (ICSME)*, 2019. 23% acceptance rate. [Link](#).

Courtney Miller, **David Widder**, Christian Kästner, and Bogdan Vasilescu. “Why do People Give Up FLOSSing? A Study of Contributor Disengagement in Open Source”. In: *Proceedings of the Conference on Open Source Systems (OSS)*, 2019. [Link](#).

David Widder, Christian Kästner, Michael Hilton, Bogdan Vasilescu. “I’m Leaving You, Travis: A Continuous Integration Breakup Story”. In: *Proceedings of the Conference on Mining Software Repositories, Short Research Papers Track (MSR)*, 2018. 27% acceptance rate. [Link](#).

Public Scholarship and Advocacy

- Wrote article for software engineering practitioner blog: “‘Ethical AI’ isn’t just how you build it, it’s how you use it”, David Gray Widder writing in the [Stack Overflow blog](#), 30 May 2022.
- Email interview, research paper quoted in practitioner blog: “The robots are coming for (the boring parts of) your job”, Eira May writing in the [Stack Overflow blog](#), 21 April 2022.
- Podcast interview: “Computers Aren’t Demigods: On the existence of Bias-Free systems”, Ellie Young and Matt Lepinski on [Byte Size](#), 4 May 2021.
- City Council testimony, newspaper interview: “Pittsburgh City Council told facial recognition bill should be stronger”, Tom Davidson reporting for [TribLive](#), 2 September 2020.

Invited Talks

- “AI Trust in a High Stakes Workplace: An Ethnography at NASA”, hosted by Senior Lecturer Rikke Jensen at the [Information Security Group](#) at Royal Holloway University of London, 1 June 2022.
- “Situating ‘AI for Social Good’ and ‘AI Ethics’ at Carnegie Mellon & in our Future Careers”, for Professors Emma Strubell and Alan Black’s [Computational Ethics for NLP](#) course, Language Technologies Institute at Carnegie Mellon University, 5 April 2022.
- “‘Ethical AI’ Across the AI Supply Chain: The Developer’s Perspective”, with Dawn Nafus at the *Intel Insights Discussion Forum* invited talk series, hosted by Michael Jacobson at Intel Corporation, 16 December 2021.
- “‘Ethical AI?’ Complicating and Situating Accountability, Transparency, and Trust”, at the *Data Science Center of Excellence* invited talk series, hosted by Joyce Weiner at Intel Corporation, 9 September 2021.

Non-Refereed Publications

David Widder. “Gender and Robots: A Literature Review”. *Technical Report*, 2019. [Link](#).

David Widder. “Gender in Open Source Communities: Different Migration Patterns and Forms of Work”. *VL/HCC Graduate Consortium*, 2019. [Link](#).

David Widder. “Tensions Between Scientific Programming and the Scientific Method”. *Undergraduate Honors Thesis*. Pass with Honors, 2017. [Link](#).

David Widder. “What Are Barriers to Efficient ROS Debugging?” *REUSE Poster Session*. 2016.

Teaching Activities

- Advocated for introducing ethics content into core Software Engineering PhD curriculum. Developed and delivered this content including: curating assigned readings, delivering two lectures, facilitating discussions, and grading reading responses. *Intro Course for Software Engineering PhD Students*, Spring 2022, with Professors Jonathan Aldrich and Christian Kästner.

- Teaching Assistant for *Ethics and Policy Issues in Computing*, Spring 2021. Course Instructors: Laura Dabbish and James Herbsleb, Carnegie Mellon University. Held office hours, lead breakout discussions, graded and gave feedback on exams and assignments.
- Teaching Assistant for *Human Factors*, Fall 2019. Course Instructor: Laura Dabbish, Carnegie Mellon University. Guest lectured, held office hours, graded and gave feedback on exams and assignments.

Student Mentorship

Lyric Sampson, 2022 – Present, in CMU's summer undergraduate research program

Derrik Zhen, 2022 – Present, in CMU's summer undergraduate research program

Hana Fruckaj, 2019 – 2020, now a PhD Student at University of Texas at Austin

Courtney Miller, 2018 – 2019, now a PhD Student at Carnegie Mellon University

Jamie Rosas-Smith, 2018, now a Software Engineer at JP Morgan Chase

Institutional Service

Application Reviewer, Research Experience for Undergraduates in Software Engineering, 2018-Present

Reviewed 25-35 applications for the REUSE program yearly.

Dean's PhD Advisory Committee, Co-Director, 2017 - 2020, Member, 2020 - 2021

Advocating for SCS PhD student interests to Dean: i.e. healthcare, anti-racism, advisor issues.

Departmental Climate Task Force, Student Co-Chair, 2018 - 2019

Committee tasked with improving departmental climate, inclusiveness, and diversity.

Research Experience for Undergraduates in Software Engineering Mentor, 2018, 2020

Mentored summer undergraduate research interns as part of the REUSE summer program

Professional Service

Conference on Human-Computer Interaction (CHI), 2021 Reviewer

International Conference on Automated Software Engineering (ASE), 2018 Sub-reviewer

Transactions on Software Engineering (TSE), 2018 Sub-reviewer

Conference on Computer Human Interaction (CHI), 2020 Reviewer

Memberships

Association for Computing Machinery, & Special Interest Group on Software Engineering

Upsilon Pi Epsilon, Honor Society for Computing and Information Disciplines

Phi Beta Kappa, Liberal Arts Honors Society