

Julia Cambre

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EDUCATION

PhD Candidate in Human-Computer Interaction

Carnegie Mellon University

Dissertation: Designing for Voice in Context

Advisor: Chinmay Kulkarni

Committee: Jeff Bigham, Nikolas Martelaro, Andrés Monroy-Hernández, Amy Ogan

Expected
September 2024

Master of Science in Human-Computer Interaction

Carnegie Mellon University

2017 - 2020

Bachelor of Science in Symbolic Systems

Stanford University

Graduated with distinction

GPA: 3.88 / 4.0

Major Concentration: Human-Computer Interaction

Minor: Spanish

2010 - 2014

HONORS AND AWARDS

Adobe Research Fellowship, Adobe Research

2022

Presidential Fellowship, Human-Computer Interaction Institute, Carnegie Mellon University

2019-2020

Program in Interdisciplinary Education Research (PIER) Fellowship
(\$170,000 over 4 years), Institute of Education Sciences (IES)

2017 - 2020

Phi Beta Kappa Society, Stanford University

2014

Best Undergraduate Essay, Senior Year Award, Department of Iberian and Latin American Cultures, Stanford University

2014

ACADEMIC PUBLICATIONS

Google Scholar: <https://scholar.google.com/citations?user=vglP6lEAAAAJ>

An asterisk (*) indicates co-first authorship: these authors contributed equally to the work.

Refereed Conference Publications [stringently peer-reviewed]

- P7 **Julia Cambre**, Alex C. Williams, Afsaneh Razi, Ian Bicking, Abraham Wallin, Janice Tsai, Chinmay Kulkarni, Jofish Kaye. Firefox Voice: An Open and Extensible Voice Assistant Built Upon the Web. In *Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems (CHI '21)*. Association for Computing Machinery, New York, NY, USA, Article 250, 1–18. DOI: <https://doi.org/10.1145/3411764.3445409>
- P6 **Julia Cambre**, Samantha Reig, Queenie Kravitz, and Chinmay Kulkarni. "All Rise for the AI Director": Eliciting Possible Futures of Voice Technology through Story Completion. In *Proceedings of the 2020 ACM on Designing Interactive Systems Conference (DIS '20)*, 2051–2064. <https://doi.org/10.1145/3357236.3395479>

- P5 **Julia Cambre***, Jessica Colnago*, Jim Maddock*, Janice Tsai and Jofish Kaye. Choice of Voices: A Large-Scale Evaluation of Text-to-Speech Voice Quality for Long-Form Content. In *Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems (CHI '20)*. 13 pages. DOI: <https://doi.org/10.1145/3313831.3376789>.
- P4 **Julia Cambre** and Chinmay Kulkarni. One Voice Fits All? Social Implications and Research Challenges of Designing Voices for Smart Devices. In *Proceedings of the 22nd ACM Conference on Computer Supported Cooperative Work & Social Computing (CSCW '19)*. Article 223, 19 pages. DOI: <https://doi.org/10.1145/3359325>.
- P3 **Julia Cambre***, Ying Liu, Rebecca Taylor, and Chinmay Kulkarni*. Vitro: Designing a Voice Assistant for the Scientific Lab Workplace. In *Proceedings of the 2019 ACM Conference on Designing Interactive Systems Conference (DIS '19)*, 1531–1542. DOI: <https://doi.org/10.1145/3322276.3322298>.
- P2 **Julia Cambre**, Scott Klemmer, and Chinmay Kulkarni. 2018. Juxtapaper: Comparative Peer Review Yields Higher Quality Feedback and Promotes Deeper Reflection. In *Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems (CHI '18)*. Paper 294, 13 pages. DOI: <https://doi.org/10.1145/3173574.3173868>.
- P1 Chinmay Kulkarni, **Julia Cambre**, Yasmine Kotturi, Michael Bernstein, Scott Klemmer. 2015. Talkabout: Making Distance Matter with Small Groups in Massive Classes. In *Proceedings of the 18th ACM Conference on Computer Supported Cooperative Work & Social Computing (CSCW '15)*. DOI: <https://doi.org/10.1145/2675133.2675166>.

Extended Abstract (Late-Breaking Work) Publications [lightly peer-reviewed]

- EA3 **Julia Cambre**, Chinmay Kulkarni, Scott Klemmer. 2017. Escaping the echo chamber: ideologically and geographically diverse discussions about politics. In *Proceedings of the 2017 CHI Conference Extended Abstracts on Human Factors in Computing Systems (CHI EA '17)*, 2423-2428.
- EA2 **Julia Cambre**, Scott Klemmer. 2017. Standing on the Shoulders of Peers: Tournament-Style Remixing in Project Courses. In *Companion of the 2017 ACM Conference on Computer Supported Cooperative Work & Social Computing (CSCW '17)*, 155-158.
- EA1 **Julia Cambre**, Chinmay Kulkarni, Michael S. Bernstein, and Scott Klemmer. 2014. Talkabout: small-group discussions in massive global classes. In *Proceedings of the first ACM conference on Learning @ scale conference (L@S '14)*. Association for Computing Machinery, New York, NY, USA, 161–162. DOI:<https://doi.org/10.1145/2556325.2567859>

Workshop Publications [curated]

- W3 Raphael Tang, Jaejun Lee, Afsaneh Razi, **Julia Cambre**, Ian Bicking, Jofish Kaye, and Jimmy Lin. Howl: A Deployed, Open-Source Wake Word Detection System. In *Proceedings of Second Workshop for NLP Open Source Software (NLP-OSS)*, 61–65. Association for Computational Linguistics, 2020.
- W2 **Julia Cambre**, Chinmay Kulkarni. 2020. Methods and Tools for Prototyping Voice Interfaces. Workshop on *CUI@CHI: Mapping Grand Challenges for the Conversational User Interface Community*. CHI 2020.
- W1 Alex C. Williams, **Julia Cambre**, Ian Bicking, Abraham Wallin, Janice Tsai, Jofish Kaye. 2020. Toward Voice-Assisted Browsers: A Preliminary Study with Firefox Voice. Workshop on *CUI@CHI: Mapping Grand Challenges for the Conversational User Interface Community*. CHI 2020.

RESEARCH EXPERIENCE

Mozilla Corporation (San Francisco & Mountain View, CA)

Voice Experience Research Intern

May 2019 - August 2019

May 2020 - August 2020

Interned with the Consumer Voice Products Team over the course of two summers to prototype novel forms of voice interaction for the Firefox browser, with the aim of making the web more open, accessible, and efficient for all. Developed a web extension—Firefox Voice—which allows users to control Firefox with voice commands, and conducted iterative user studies to evaluate its effectiveness. Code for the project is available open source at <https://github.com/mozilla/firefox-voice>.

Design Lab at UC San Diego (La Jolla, CA)

Research Assistant

September 2016 - June 2017

Worked with Scott Klemmer on two projects aimed at improving peer-graded assignments in massive online courses, and one initiative to promote civilized discourse following the 2016 U.S. presidential election.

Remix Projects: Prototyped a process that allowed learners to build upon the work of their peers, turning project-based courses into peer production activities.

Comparative Peer Review: Built a new peer review tool and studied the efficacy of performing peer evaluations through pairwise comparisons of submissions.

Discussions about the election: Extended the Talkabout platform to encourage political dialogue among diverse Americans.

Human-Computer Interaction Group at Stanford University (Stanford, CA)

Undergraduate Research Assistant

June 2013 - June 2014

Worked with Chinmay Kulkarni, Yasmine Kotturi, Michael Bernstein, and Scott Klemmer to conceptualize, design, and implement Talkabout, a platform used by over 6,000 learners from 135 countries for coordinating and supporting small-group video discussions for students in Massive Open Online Courses.

INDUSTRY EXPERIENCE

Coursera (Mountain View, CA)

Technical Account Manager

September 2015 - August 2016

Partner Operations Specialist

July 2014 - September 2015

Managed relationships with strategic university partners and provided timely platform support to English and Spanish-speaking business contacts, with a special focus on matters related to research, data sharing and security, and user privacy. As a Technical Account Manager, my book of accounts included top research institutions with over 150 combined courses, including the world's largest open online course. I also served as a liaison for Coursera's research community, helping to answer questions regarding research data and fulfill dozens of highly sensitive data export requests per month. During my tenure at Coursera, I attended and presented at workshops and conferences throughout the United States and abroad.

Funding

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| G2 | Gift funding for voice research
Mozilla Corporation | Awarded
\$40,250
2020 |
| G1 | Understanding users' preferences for and attributions of psychological characteristics to voice-enabled devices
Graduate Student Small Project Help, Carnegie Mellon University Graduate Student Assembly and Office of the Provost | Awarded
\$750
2019 - 2020 |

INVITED TALKS

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| I1 | Invited Talk
Hasso Plattner Design Thinking Research Program Workshop (Potsdam, Germany)
Making distance matter with small groups in massive classes | September 2014 |
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SELECTED PRESS

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| Lifehacker , Firefox's New Voice Controls Make It As Good As a Smart Speaker | January 2020 |
| TechRadar , Firefox challenges Chrome with full browser voice controls – here's how to try them | January 2020 |
| Digital Trends , Mozilla Firefox's new add-on lets you surf the web with your voice | January 2020 |
| Voicebot.ai , Mozilla Releases Firefox Voice Assistant Beta | January 2020 |
| CNBC , Post-election therapy across Silicon Valley after Trump win | December 2016 |
| Seeker , 'Mini U.N.' Online Platform Fights the Echo Chamber Effect | December 2016 |
| Stanford Report , Stanford Researchers Use Diverse, Global Discussion Groups to Boost Online Learning Experience for Participants | May 2015 |

TEACHING EXPERIENCE

Teaching Assistantships

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| Programming Usable Interfaces
with instructor Patrick Carrington | Fall 2020 |
| User-centered Research and Evaluation
with instructors Raelin Musuraca & Carol Smith | Fall 2019 |

Other Teaching Experience

- | | |
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| Volunteer Science Instructor, LABSci Program at Lucile Packard Children's Hospital: Developed and taught science labs designed for the unique needs of middle and high school students in a hospital classroom environment, and helped coordinate and organize outreach efforts. | 2011 - 2014 |
| Yearbook Advisor, Stanford Online High School: Led 8th - 12th grade student staff members in the creation of the school's first yearbook in an online classroom environment. Instructed journalistic skills in graphic design, copywriting, and photography through synchronous videoconferencing-based lectures and asynchronous learning communities on Edmodo. | 2012 - 2013 |

Guest Lectures

- Learning with Peers: Lessons Learned from Three Years of PeerStudio** in *Tools for Online Learning*, taught by Chinmay Kulkarni at Carnegie Mellon University March 2020
- Designing Voice Interfaces** in *Programming Usable Interfaces*, taught by Patrick Carrington at Carnegie Mellon University December 2020
- Voice Assistants in Manufacturing Contexts** in *Making Your Product at Scale*, taught by Rebecca Taylor at Carnegie Mellon University April 2021

ACADEMIC & PROFESSIONAL SERVICE

Reviewer

- ACM Conference on Human Factors in Computing Systems (CHI)
- ACM Conference on Computer Supported Cooperative Work & Social Computing (CSCW)
- ACM Conference on Designing Interactive Systems (DIS)
- ACM Symposium on User Interface Software & Technology (UIST)

Service

- Program Committee*, ACM Conference on Learning at Scale 2021
- Ombudsperson*, Representative for the PhD students of the Human-Computer Interaction Institute (HCII) 2019-2021
- Workshops Jury*, ACM Conference on Human Factors in Computing Systems (CHI) 2021
- Organizing Board Member*, Coursera Alumni Program 2019, 2020
- Mentor*, CMU AI Undergraduate Research Mentoring Program 2020
- Student Coordinator*, HCII Prospective PhD Student Open House 2019