Christopher Perriau



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RESEARCH INTERESTS

I explore how we can best enable software practitioners to create inclusive software, how to teach and design inclusive methods, and how to make computer science education more inclusive. My goal is to enable a wide range of users, focusing in particular on supporting diverse genders, cultures, and backgrounds.

Topics

human-computer interaction, computing education, inclusive software design, explainable artificial intelligence, design education

EDUCATION

2017 - present

B.S. in Computer Science with a minor in Psychology

Oregon State University, Corvallis, OR, USA Expected graduation date June 2021 Advisor: Margaret M. Burnett

PUBLICATIONS

Peer-Reviewed Papers

- c2 C. Holderbrand, <u>C. Perdriau</u>, L. Letaw, J. Emard, Z. Steine-Hanson, M. Burnett, A. Sarma. Engineering Gender-Inclusivity into Software: Ten Teams' Tales from the Trenches. In Proceedings of the 42nd International Conference on Software Engineering (ICSE '20). ACM, New York, NY, USA.
- c1 Alannah Oleson, Christopher J. Mendez, Zoe Steine-Hanson, Claudia Hilderbrand, Christopher Perdriau, Margaret Burnett, and Amy J. Ko. **Pedagogical Content Knowledge for Teaching Inclusive Design.** In Proceedings of the 2018 ACM Conference on International Computing Education Research (ICER '18). 69-77.
- C3 Theresa Mai, Roli Khanna, Jonathan Dodge, Jed Irvine, Kin-Ho Lam, Zhengxian Lin, Nicholas Kiddle, Evan Newman, Sai Raja, Caleb Matthews, Christopher Perdriau, Margaret Burnett, and Alan Fern. 2020. Keeping it "organized and logical": after-action review for Al (AAR/Al). In Proceedings of the 25th International Conference on Intelligent User Interfaces (IUI '20). Association for Computing Machinery, New York, NY, USA, 465–476.
- j1 Catherine Hu, Christopher Perdriau, Christopher mendez, Caroline Gao, Abrar Fallatah, Margaret Burnett. **Toward a Socioeconomic-Aware HCI: Five Facets.**Draft in preparation
- j3 Christopher Perdriau, Meron Solomon, Amy Ko. **How Cultural Competence**Plays a Role in Inclusive Recruiting Practices. Draft in preparation
- j2 Alannah Oleson, Meron Solomon, Christopher Perdriau, and Amy J. Ko. **Teaching Inclusive HCI Design by Helping Students Identify Design Bias.** Draft in preparation.

RESEARCH EXPERIENCE

Oct. 2017 - Present

Undergraduate Research Assistant

Oregon State University, Corvallis, OR, USA

Advisor: Margaret Burnett

Researched projects on end-user software engineering, gender-inclusive software interface design, and the information that is needed for novices to assess an artificial intelligent (AI) agent

- Past Projects:
 - Conducted a qualitative longitudinal field study on how 10 real world software teams integrated GenderMag, a software inspection method for finding and fixing inclusivity problems, into their development methods in order to reduce and mitigate gender inclusivity issues [c2].
 - * Presented at the 2018 Oregon State Summer Undergraduate Research Symposium
 - Investigated the pedagogical content knowledge (PCK) that 9 teacherresearchers needed in order to effectively teach GenderMag to over 400 undergraduate and graduate computer science and information science students [c1].
 - Conducted a qualitative in-lab study to learn what people need when assessing an AI agent. We presented a new assessment method called After-Action Review for AI (AAR/AI). The study involved 11 students who evaluated an artificial intelligence agent actions within the domain of Star-Craft II [c3].

Current Project:

Used the meta-method InclusiveMag to identify five key characteristics
that are unique to how people with varying levels of socioeconomic status
interact with technology to enable software practitioners to design software that is inclusive to low SES. Also mapped researched based design
recommendations to each of the five facets presented [j1].

June 2020 – present

Undergraduate Research Assistant, Code & Cognition Lab

University of Washington, Seattle, WA, USA

Advisor: Amy Ko

Researching the role of design in computing education to promote creative and inclusive software interface design practices. Also, the role that recruiting practices have in engaging diverse populations in informal CS programs.

- Current projects:
 - Researching how 14 informal CS learning programs market and recruit participants to understand how the the cultural competency of the marketing and recruiting practices influence the diversity of students who participate [j3].
 - Evaluating how well an inclusive design activity enabled computing students to recognize and respond to the exclusionary assumptions built into human-computer interaction artifacts worked [j2].

RESEARCH SKILLS

Oualitative Methods

- Action Research [c1] and [c2]
- Literature review [i1]
- Semi-structured interviews [j3]
- Lab studies [c3]
- InclusiveMag [j1]

Qualitative Analysis

- Thematic analysis [c1], [j2], and [j3].
- Inductive qualitative coding [c1], [j2], and [j3]
- Deductive qualitative coding [c3] and [j3]
- Triangulation [c1], [c2], and [j3]

Teaching

February 2018 - present

GenderMag Instructor

Oregon State University, Corvallis, OR, USA

 Teaching real-world software teams and undergraduate computer science majors how to use the GenderMag Method by explaining the research foundations of the method, the personas that the method uses, and how to conduct a cognitive walkthrough.

June. 2017 - Sept 2017 June 2018 - Sept 2018

Apprenticeships in Science Engineering (ASE) mentor

Oregon State University, Corvallis, OR, USA

 developed a group of 9th - 12th grade student's interest in HCI, qualitative research, and inclusive design by guiding them through the data collection and analysis process of a project that the lab is working on that they found interesting.

March. 2016 - June 2017

Math Tutor

McKinley Elementary School, Portland, OR, USA

developed kids math skills, between third and fifth grade, who had low state
math scores, and qualified for free or reduced lunch. Developed their selfefficacy through providing a personalized curriculum, an environment where
their questions were heard, and where they could learn at their own pace.

Volunteering

Oct. 2019 - present

Radio DJ

Oregon State University, Corvallis, OR, USA

 Co-hosting an educational radio show on KBVR-FM about the lives of different musicians covering how and why they started their careers, as well as, what their impact was on the music genre and industry.