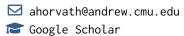
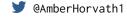
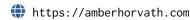
Amber Horvath







Education

2018 – 2024	Ph.D. in Human-Computer Interaction, Carnegie Mellon University
	Thesis title: Meta-Information to Support Sensemaking by Developers.
	Advisor: Brad A. Myers
	Committee: Laura Dabbish, Elena Glassman, Aniket Kittur, Andrew Macvean
2018 – 2021	M.Sc. in Human-Computer Interaction, Carnegie Mellon University
2013 – 2018	B.Sc. Computer Science, Oregon State University

Professional Experience

2018 – 2024	Carnegie Mellon University, Research Assistant with Brad A. Myers Understanding discovery, comprehension, and usage of APIs [8, 18, 10]; Using annotations to support developer sensemaking [6, 7]; Using meta-information for developer documentation [5]; Automatic capture and exploration of developer meta-information [4].
2019	Google, Research Intern with Emerson Murphy-Hill Exploring gender equity in completion of code reviews [1].
2017	Intel, User-Experience Intern
2012 – 2017	Oregon State University, Undergraduate Researcher with Margaret Burnett Creation and usage of GenderMag, a method for discovering inclusivity bugs [2, 11, 13]; Development of Idea Garden, an end-user development tool [3, 14, 16]; Understanding developer debugging behaviors using information foraging theory [15].
2016	Carnegie Mellon University, Undergraduate Researcher with Brad A. Myers and Mary Beth Kery Tooling for data scientists to support lightweight versioning of code [12].
2015	Hewlett-Packard Inc., User-Experience Intern

Research Publications

Journal Articles

- Emerson Murphy-Hill, Jillian Dicker, **Amber Horvath**, Maggie Morrow Hodges, Carolyn D. Egelman, Laurie R. Weingart, Ciera Jaspan, Collin Green, and Nina Chen. "Systemic Gender Inequities in Who Reviews Code". In: *Proc. ACM Hum.-Comput. Interact.* 7.CSCW1 (Apr. 2023). **Q** *Diversity and Inclusion Award.* ODOI: 10.1145/3579527.
- Hema Susmita Padala, Christopher Mendez, Felipe Fronchetti, Igor Steinmacher, Zoe Steine-Hanson, Claudia Hilderbrand, **Amber Horvath**, Charles Hill, Logan Simpson, Margaret Burnett, Marco Gerosa, and Anita Sarma. "How Gender-Biased Tools Shape Newcomer Experiences in OSS Projects". In: *IEEE Transactions on Software Engineering* 48.1 (2022), pp. 241–259. *§* DOI: 10.1109/TSE.2020.2984173.

William Jernigan, Amber Horvath, Michael Lee, Margaret Burnett, Taylor Cuilty, Sandeep Kuttal, Anicia Peters, Irwin Kwan, Faezeh Bahmani, Amy Ko, Christopher J. Mendez, and Alannah Oleson. "General principles for a Generalized Idea GardenImage 1". In: *Journal of Visual Languages Computing* 39 (2017). Special Issue on Programming and Modelling Tools, pp. 51–65. ISSN: 1045-926X. ODOI: https://doi.org/10.1016/j.jvlc.2017.04.005.

Conference Proceedings

- Amber Horvath, Andrew Macvean, and Brad A. Myers. "Meta-Manager: A Tool for Collecting and Exploring Meta Information about Code". In: *Proceedings of the CHI Conference on Human Factors in Computing Systems (CHI '24), May 11–16, 2024, Honolulu, HI, USA*. CHI '24. Honolulu, HI, USA: Association for Computing Machinery, 2024. ODI: 10.1145/3613904.3642676.
- Amber Horvath, Andrew Macvean, and Brad A. Myers. "Support for Long-Form Documentation Authoring and Maintenance". In: 2023 IEEE Symposium on Visual Languages and Human-Centric Computing (VL/HCC). 2023, pp. 109–114. ODOI: 10.1109/VL-HCC57772.2023.00020.
- Amber Horvath, Michael Xieyang Liu, River Hendriksen, Connor Shannon, Emma Paterson, Kazi Jawad, Andrew Macvean, and Brad A. Myers. "Understanding How Programmers Can Use Annotations on Documentation". In: Proceedings of the 2022 CHI Conference on Human Factors in Computing Systems. CHI '22. New Orleans, LA, USA: Association for Computing Machinery, 2022.

 DOI: 10.1145/3491102.3502095.
- Amber Horvath, Brad Myers, Andrew Macvean, and Imtiaz Rahman. "Using Annotations for Sensemaking About Code". In: *Proceedings of the 35th Annual ACM Symposium on User Interface Software and Technology*. UIST '22. Bend, OR, USA: Association for Computing Machinery, 2022. ISBN: 9781450393201. ODI: 10.1145/3526113.3545667.
- Amber Horvath, Sachin Grover, Sihan Dong, Emily Zhou, Finn Voichick, Mary Beth Kery, Shwetha Shinju, Daye Nam, Mariann Nagy, and Brad Myers. "The Long Tail: Understanding the Discoverability of API Functionality". In: *VLHCC 2019*. New York, NY, USA: IEEE, 2019, pp. 157–161.
 DOI: 10.1109/VLHCC.2019.8818681.
- 9 Mary Beth Kery, Bonnie E. John, Patrick O'Flaherty, **Amber Horvath**, and Brad A. Myers. "Towards Effective Foraging by Data Scientists to Find Past Analysis Choices". In: *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems*. CHI '19. Glasgow, Scotland Uk: Association for Computing Machinery, 2019, pp. 1–13. ISBN: 9781450359702. ODI: 10.1145/3290605.3300322.
- Daye Nam, **Amber Horvath**, Andrew Macvean, Brad Myers, and Bogdan Vasilescu. "MARBLE: Mining for Boilerplate Code to Identify API Usability Problems". In: 2019 34th IEEE/ACM International Conference on Automated Software Engineering (ASE). 2019, pp. 615–627. © DOI: 10.1109/ASE.2019.00063.
- Christopher Mendez, Hema Susmita Padala, Zoe Steine-Hanson, Claudia Hilderbrand, Amber Horvath, Charles Hill, Logan Simpson, Nupoor Patil, Anita Sarma, and Margaret Burnett. "Open Source Barriers to Entry, Revisited: A Sociotechnical Perspective". In: *Proceedings of the 40th International Conference on Software Engineering*. ICSE '18. Gothenburg, Sweden: Association for Computing Machinery, 2018, pp. 1004–1015. ISBN: 9781450356381. © DOI: 10.1145/3180155.3180241.
- Mary Beth Kery, **Amber Horvath**, and Brad Myers. "Variolite: Supporting Exploratory Programming by Data Scientists". In: *Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems*. CHI '17. ☐ Best Paper Honorable Mention. Denver, Colorado, USA: Association for Computing Machinery, 2017, pp. 1265–1276. ISBN: 9781450346559. ❷ DOI: 10.1145/3025453.3025626.
- Charles Hill, Shannon Ernst, Alannah Oleson, **Amber Horvath**, and Margaret Burnett. "GenderMag experiences in the field: The whole, the parts, and the workload". In: 2016 IEEE Symposium on Visual Languages and Human-Centric Computing (VL/HCC). 2016, pp. 199–207. © DOI: 10.1109/VLHCC.2016.7739685.

- Will Jernigan, Amber Horvath, Michael Lee, Margaret Burnett, Taylor Cuilty, Sandeep Kuttal, Anicia Peters, Irwin Kwan, Faezeh Bahmani, and Amy Ko. "A principled evaluation for a principled idea garden". In: 2015 IEEE Symposium on Visual Languages and Human-Centric Computing (VL/HCC). 2015, pp. 235–243. O DOI: 10.1109/VLHCC.2015.7357222.
- David Piorkowski, Scott D. Fleming, Christopher Scaffidi, Margaret Burnett, Irwin Kwan, Austin Z. Henley, Jamie Macbeth, Charles Hill, and **Amber Horvath**. "To fix or to learn? How production bias affects developers' information foraging during debugging". In: 2015 IEEE International Conference on Software Maintenance and Evolution (ICSME). 2015, pp. 11–20. © DOI: 10.1109/ICSM.2015.7332447.
- Michael J. Lee, Faezeh Bahmani, Irwin Kwan, Jilian LaFerte, Polina Charters, **Amber Horvath**, Fanny Luor, Jill Cao, Catherine Law, Michael Beswetherick, Sheridan Long, Margaret Burnett, and Amy J. Ko. "Principles of a debugging-first puzzle game for computing education". In: 2014 IEEE Symposium on Visual Languages and Human-Centric Computing (VL/HCC). 2014, pp. 57–64. DOI: 10.1109/VLHCC.2014.6883023.
- Jill Cao, Irwin Kwan, Faezeh Bahmani, Margaret Burnett, Scott D. Fleming, Josh Jordahl, **Amber Horvath**, and Sherry Yang. "End-user programmers in trouble: Can the Idea Garden help them to help themselves?" In: 2013 IEEE Symposium on Visual Languages and Human Centric Computing. 2013, pp. 151–158. DOI: 10.1109/VLHCC.2013.6645260.

Posters, Extended Abstracts, Workshop Papers, and Technical Reports

Amber Horvath, Mariann Nagy, Finn Voichick, Mary Beth Kery, and Brad A. Myers. Methods for Investigating Mental Models for Learners of APIs. CHI EA '19. Glasgow, Scotland Uk, 2019. ODI: 10.1145/3290607.3312897.

Awards and Honors

- **Diversity and Inclusion Award**, from Proceedings of the ACM on Human-Computer Interaction (CSCW '23) for our paper "Systemic Gender Inequities in Who Reviews Code" [1].
- 2018 2021 **ARCS Fellowship**. Awarded by the ARCS Foundation.
 - Best Paper Honorable Mention, from Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems (CHI '17) for our paper "Variolite: Supporting exploratory programming by data scientists" [12].
- 2015 2017 **CBT Nuggets Scholarship**. Awarded by CBT Nuggets for excellence in engineering.
 - Honorable Mention Undergraduate Researcher of the Year. Awarded by Oregon State University.
- 2013 2015 College of Engineering Dean's Scholarship. Awarded by Oregon State University.
 - Aspirations in Computing Award. Awarded by National Center for Women in Information Technology.

Teaching Experience

2022 05-410 & 05-610, User-Centered Research & Evaluation

Human-Computer Interaction Institute, Carnegie Mellon University. Mixed undergraduate-and-graduate-level course. Taught and designed weekly labs.

Teaching Experience (continued)

2020 05-430 & 05-630, Programming Usable Interfaces

Human-Computer Interaction Institute, Carnegie Mellon University.

Mixed undergraduate-and-graduate-level course. Taught and designed weekly labs remotely during the COVID19 pandemic.

2014 – 2018 CS 160, 161, & 162, Introduction to Programming

School of Electrical Engineering and Computer Science, Oregon State University.

Series of undergraduate courses for primarily freshman in computer science. Taught weekly recitations and managed labs.

Mentorship Experience

Shannon Bonet (Undergraduate student from University of California, Berkeley)

Developed more robust anchoring for the Catseye project.

Matthew Shu (Undergraduate student from Yale University)

Developed annotation curation methods for the Catseye project.

2021 **Connor Shannon** (CMU HCII'21 Master's student)

Assisted in the engineering of the Adamite system along with data analysis in the Adamite user studies [6].

Emma Paterson (Undergraduate student from Harvey Mudd University)

Assisted in the creation of an Adamite website along with data analysis in the Adamite user studies [6].

Imtiaz Rahman (Undergraduate student from Hunter College)

Assisted in the initial development of Catseye [7].

Kazi Jawad (Undergraduate student from Carnegie Mellon University)

Assisted in the initial development of the Adamite website [6].

2020 Lai Wei (CMU HCII'20 Master's student)

Assisted in the user interface design of Adamite [6].

Professional Service

Community Service

2023 – 2019	Reviewer and Review Coordinator , CMU HCII summer REU (research experience for
	undergraduate) application reviewer and coordinator.
2022 - 2018	Reviewer, CMU S ₃ D summer REU (research experience for undergraduate) application

reviewer.

Speaker, Apprenticeships in Science and Engineering (ASE) discussion about former intern success stories.

Speaker, Oregon State University senior capstone discussion about post-undergraduate career paths.

Student Committee Member, CMU HCII director search.

2021 – 2022 **Ombudsman**, with Samantha Reig.

Speaker, Bit by Bit conference, an outreach event for high school girls to learn about computer science.

Application Reviewer, for underrepresented students applying to graduate programs.

2020 – 2021 **Member**, CMU HCII anti-racism group.

Professional Service (continued)

2019 – 2020 **Student Participant**, Software Developer Diversity and Inclusion summit.

Paper Reviewing

ACM CHI 2022-24 - 5 papers, with an additional 1 paper in the PLAY track and 2 in the Late-Breaking

Works track.

ACM UIST 2021/2023 - 2 papers, with special recognition for an outstanding review for UIST 2021.

ESE 2021 - 1 paper.

ACM TOCE 2020 - 1 paper.

References

Brad A. Myers

Professor

Human-Computer Interaction Institute,

Carnegie Mellon University,

5000 Forbes Ave, Pittsburgh, PA 15213

bam@cs.cmu.edu

Laura Dabbish

Professor

Human-Computer Interaction Institute,

Carnegie Mellon University,

5000 Forbes Ave, Pittsburgh, PA 15213

☑ dabbish@andrew.cmu.edu

Andrew Macvean

Senior User-Experience Researcher

Google,

Seattle, WA 98103

amacvean@google.com

Margaret Burnett

Professor

Oregon State University,

2500 NW Monroe Ave, Corvallis, OR 97331

burnett@engr.oregonstate.edu

Aniket (Niki) Kittur

Professor

Human-Computer Interaction Institute,

Carnegie Mellon University,

5000 Forbes Ave, Pittsburgh, PA 15213

□ nkittur@andrew.cmu.edu

Elena Glassman

Professor

Harvard University,

Massachusetts Hall, Cambridge, MA 02138

☑ glassman@seas.harvard.edu

Emerson Murphy-Hill

Research Scientist

Google,

Sunnyvale, CA 94085