# Jeremy Warner

jeremy.warner@berkeley.edu · jeremywrnr.com

354 Hearst Memorial Mining Building
UC Berkeley, Berkeley, CA 94720

Interests

*Human-Computer Interaction, Computer Vision, Computer Graphics, Vector Graphics, Style Transfer, 3D Vision, Design Tools, Collaboration, Debugging, Electronics, Education*

Education

**University of California, Berkeley**                                                      2023
Ph.D. in Electrical Engineering and Computer Science
Berkeley AI Research Lab · Berkeley Institute of Design

Dissertation: *Enhancing Visual Media Through Reflection and Recomposition*
Advisor: Björn Hartmann, Committee: Alexei Efros, Marti Hearst, Valentina Shin

**University of Rochester**                                                                  2016
M.S. in Computer Science
Advisor: Philip J. Guo

B.S. in Electrical and Computer Engineering, *cum laude*                      2015
Advisors: Wendi Heinzelman and Philip J. Guo

**Selected Graduate Coursework**
*CV/Graphics* – Computer Vision, Computer Graphics, Computational Photography
*HCI* – UI Design and Development, HCI Methods, Interactive Device Design

Publications

**Peer-reviewed Conference and Journal Proceedings**

[1]   Interactive Flexible Style Transfer for Vector Graphics ⊡
      **Jeremy Warner**, Kyu Won Kim, Björn Hartmann
      *ACM Symposium on User Interface Software and Technology (UIST 2023)*

[2]   Interactively Optimizing Layout Transfer for Vector Graphics ⊡
      **Jeremy Warner**, Shuyao Zhou, Björn Hartmann
      *International Conference on Machine Learning (ICML 2023)*

[3]   SlideSpecs: Automatic and Interactive Presentation Feedback Collation ⊡
      **Jeremy Warner**, Amy Pavel, Tonya Nguyen, Maneesh Agarwala, Björn Hartmann
      *ACM Conference on Intelligent User Interfaces (IUI 2023)*

[4]   Visual Design Reuse Through Style Recognition and Transfer ⊡
      **Jeremy Warner**
      *ACM Symposium on User Interface Software and Technology (UIST DC 2021)*

[5]     Multi-level Correspondence via Graph Kernels for Editing Vector Graphics Designs
        Valentina Shin, **Jeremy Warner**, Björn Hartmann, Celso Gomes, Holger Winnemoeller, Wilmot Li
        *Proceedings of the Graphics Interface Conference (GI 2021)*

[6]     ElectroTutor: Test-Driven Physical Computing Tutorials ⧉
        **Jeremy Warner**, Ben Lafreniere, George Fitzmaurice, Tovi Grossman
        *ACM Symposium on User Interface Software and Technology (UIST 2018)*

[7]     Bridging the Information Gap for Debugging of Networked Embedded Systems ⧉
        Will McGrath, **Jeremy Warner**, Mitchell Karchemsky, Andrew Head, Daniel Drew, Björn Hartmann
        *ACM Symposium on User Interface Software and Technology (UIST 2018)*

[8]     MatchSticks: Woodworking through Improvisational Digital Fabrication ⧉
        Rundong Tian, Ethan Chiou, Sarah Sterman, **Jeremy Warner**, Eric Paulos
        *ACM Conference on Human Factors in Computing Systems (CHI 2018)* – Honorable Mention Paper

[9]     Bifröst: Visualizing and Checking Behavior of Embedded Systems across Hardware and Software ⧉
        Will McGrath, Daniel Drew, **Jeremy Warner**, Majeed Kazemitabaar, Mitchell Karchemsky, David Mellis, Bjoern Hartmann
        *ACM Symposium on User Interface Software and Technology (UIST 2017)*

[10]    Hack.edu: Examining How College Hackathons Are Perceived By Student Attendees and Non-Attendees ⧉
        **Jeremy Warner** and Philip J. Guo
        *ACM International Computing Education Research conference (ICER 2017)*

[11]    CodePilot: Scaffolding End-to-End Collaborative Software Development for Novice Programmers ⧉
        **Jeremy Warner** and Philip J. Guo
        *ACM Conference on Human Factors in Computing Systems (CHI 2017)*

[12]    How High School, College, and Online Students Differentially Engage with an Interactive Digital Textbook ⧉
        **Jeremy Warner**, John Doorenbos, Bradley Miller, Philip J. Guo
        *International Conference on Educational Data Mining (EDM 2015)*

[13]    MH-REACH-Mote: Supporting Multi-hop Passive Radio Wake-up for Wireless Sensor Network ⧉
        Li Chen, **Jeremy Warner**, Wendi Heinzelman, Ilker Demirkol
        *IEEE International Conference on Communications (ICC 2015)*

[14]    REACH2-Mote: A range extending passive wake-up wireless sensor node ⧉
        Li Chen, **Jeremy Warner**, Pak Lam Yung, Dawei Zhou, Wendi Heinzelman, Ilker Demirkol, Ufuk Muncuk, Kaushik Chowdhury, Stefano Basagni
        *ACM Transactions on Sensor Networks (TOSN 2015)*

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| EXPERIENCE | Graduate Researcher, **UC Berkeley – Hartmann Group** | 2016 – |
| | *Graphic design tools, presentation tools, electronics debugging.* | |
| | Advised by Björn Hartmann | |
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| | Research Scientist Intern, **Apple – AI/ML** | 2020 – 2021 |
| | *3D scene capture, annotation, and traversal for AR accessibility.* | |
| | Advised by Jeff Bigham, Amy Pavel and Javier Reyes | |
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| | Research Scientist Intern, **Adobe – Creative Intelligence Lab** | 2019 |
| | *Multi-level graph kernel correspondences for vector graphics.* | |
| | Advised by Wilmot Li, Valentina Shin and Holger Winnemöller | |
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| | Research Scientist Intern, **Autodesk – User Interface Group** | 2018 |
| | *Electronics prototyping and test support (ElectroTutor).* | |
| | Advised by Tovi Grossman and Benjamin Lafreniere | |
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| | Gradauate Researcher, **U. of Rochester – ROCHCI** | 2015 – 2016 |
| | *Live collaborative programming with asynchronous versioning.* | |
| | Advised by Philip J. Guo | |
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| | Visiting Researcher, **U. of Washington – Ko Group** | 2015 |
| | *Collaborative online programming tool for novices.* | |
| | Advised by Philip J. Guo | |
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| | Undergraduate Researcher, **U. of Rochester – ROCHCI** | 2014 – 2015 |
| | *Hackathon participation study, online textbook analysis.* | |
| | Advised by Philip J. Guo | |
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| | Lab Assistant, **U. of Rochester – Wireless Network Group** | 2013 – 2014 |
| | *Design, testing, and write-up for low-power wireless sensors.* | |
| | Advised by Wendi Heinzelman | |
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| | NSF REU Intern, **U. of Rochester – Wireless Networking Group** | 2013 |
| | *Designed and built a wireless control system to test RFID tags.* | |
| | Advised by Wendi Heinzelman | |
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| MENTORSHIP | Shuyao Zhou | 2022 – |
| | *Focus: Layout transfer. Mentor through Jacobs Design Scholar program.* | |
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| | Angela Zhang (now at Two Sigma) | 2021 – 2022 |
| | *Focus: Laplacian flow analysis and graph matching.* | |
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| | Frederick Kim (now M.S. at Berkeley EECS) | 2021 – 2022 |
| | *Co-authored Vector Graphics Style Transfer paper.* | |
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| | Tonya Nguyen (now Ph.D. at Berkeley iSchool) | 2018 – 2020 |
| | *Co-authored SlideSpecs (Presentation Feedback) paper.* | |

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| TEACHING | GSI for DI 202, **Technology Design Foundations**<br>*Graduate student instructor: support Master's students' projects.* | F2021 |
| | Head GSI for CSC 160, **User Interface Design and Development**<br>*Led discussion sections, gave feedback on student UI prototypes.* | S2020 |
| | Head GSI for CSC 169, **Software Engineering**<br>*Led discussion sections, design exam questions, guide team projects.* | F2019 |
| | Head GSI for CSC 160, **User Interface Design and Development**<br>*Create and grade programming assignments, give technical lectures.* | F2017 |
| | Teaching Assistant for ECE 112, **Introduction to Logic Design** | S2015 |
| | Teaching Assistant for ECE 112, **Introduction to Logic Design** | S2014 |
| | Teaching Assistant for ECE 230, **Electromagnetic Waves** | F2014 |
| | Teaching Assistant for ECE 112, **Introduction to Logic Design** | S2013 |

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| SERVICE | **Professional** | |
| | Program Committee, ICML AI/HCI Workshop | 2023 |
| | Organizing Committee, ACM UIST Conference | 2023 |
| | Reviewer for CHI, UIST, ICML, CSCW, ISS, CNC, TEI<br>*Recognition for outstanding reviews: 5x (3 CHI, 2 UIST)*<br>*Completed 32 total conference paper reviews.* | 2018 – 2023 |
| | Feature Editor, ACM XRDS Student Magazine | 2019 |
| | Student Volunteer, ACM IUI Conference<br>Student Volunteer, ACM CHI Conference | 2023<br>2017 |
| | **University of Calfornia, Berkeley** | |
| | WiCSE Peer Mentoring (2 grad students)<br>*Meet 1-2x per semester to provide support.* | 2021 – 2022 |
| | BiD Seminar (Berkeley HCI) Speaker Coordinator | 2018 – 2020 |
| | UC Berkeley HCI PhD Admit Weekend Organizer | 2017 – 2018 |
| | **University of Rochester** | |
| | President, IEEE Student Branch<br>*Organized middle school outreach events with interactive EM demos.*<br>*Hosted professional speakers, fix-it nights, and joint CSUG events.* | 2013 – 2015 |
| | Volunteer Tutor, Computer Science Undergraduate Group | 2014 – 2015 |
| | Volunteer Tutor, Tau Beta Pi Engineering Honor Society | 2013 – 2014 |
| | Vice President, IEEE Student Branch | 2012 – 2013 |

| Awards | | |
|---|---|---|
| | Google-Berkeley AI Research (BAIR) Commons Grant | 2023 |
| | UC Berkeley EECS Departmental Fellowship | 2022 |
| | UC Berkeley Graduate Student Travel Grant (UIST) | 2022 |
| | Outstanding Conference Paper Reviews<br>*(2x for CHI 2021 Papers, 2x UIST 2022, 1x CHI 2023)* | 2021 – 2023 |
| | Nominated for Microsoft PhD Fellowship (1 of 3), UC Berkeley | 2018 |
| | NSF Graduate Research Fellowship – Honorable Mention | 2017 |
| | University of Rochester – Barnard Engineering Award<br>*Given to graduating engineering students on the basis of personal qualifications and achievements (8 of roughly 1k eligible students).* | 2015 |
| | Inducted into the Phi Beta Kappa Honor Society | 2015 |
| | Dean's Award for Engineering and Applied Sciences Research | 2015 |
| | IEEE National Power and Energy Society (PES) Scholarship | 2014 |
| | Inducted into the Tau Beta Pi Engineering Honor Society | 2013 |
| | Graduate Engineering At Rochester (GEAR) Scholarship<br>*Guaranteed admission and 75% off tuition for 5th year MS.* | 2011 |

| Other work | | |
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| | Hardware Intern, **Teradyne** – North Reading, MA<br>Developed a toolchain to upgrade semiconductor tests. | 2014 |
| | Assistant Carpenter, **North Fork Woodworks** – Mattituck, NY<br>Home construction and renovation (summers). | 2011 – 2012 |

Skills

**Programming Languages**
Proficient: Python, Javascript, Ruby
Familiar: C++, TypeScript, Java

**Tools and Frameworks**
Software: PyTorch, OpenCV, W&B, React, Redux, Meteor, Rails, Jekyll
Digital: Colab, Logic Pro, Camtasia, Photoshop, Illustrator, Figma
Physical: Soldering, Woodworking, 3D Printing, Laser Cutting

Personal

I enjoy trail running. I play guitar in a math-rock band (Airplug).
A video of a friend and I covering a song with guitars is here.
Throughout undergrad, I rowed on the varsity rowing team.