

MORGAN DIXON

morgan.dixon@gmail.com
morgandixon.net

EDUCATION

- 2015 **University of Washington**, Seattle, WA
Ph.D. Candidate in Computer Science & Engineering
Advisor: James Fogarty
- 2010 **University of Washington**, Seattle, WA
M.S. Computer Science & Engineering
Advisor: James Fogarty
- 2008 **University of Maryland**, College Park, MD
B.S. Computer Science and Mathematics
Computer Science Departmental Honors
Advisor: Francois Guimbretière

PROFESSIONAL EXPERIENCE

- 2018-2021 **Appsheet (Acquired by Google January 2020)**, Seattle, WA
UX Engineer
Design, build, and test new UX features for the platform, which enables people to build mobile and web applications without programming. Focusing on the customer's experience, design, and infrastructure that enables a more helpful, delightful, and expressive UI.
- 2017-2018 **Cheeseburger Therapy**, Seattle, WA
Founder, social art project
Designing, researching, and deploying a free community-based website where members can learn and practice thought skills (new and existing mental health practices that traditionally would be taught in counseling or psychotherapy).
- 2016-2017 **Adobe Systems**, Seattle, WA
Researcher in the Creative Technologies Lab
Designed, tested, and deployed new tools for building interfaces and new interaction capabilities enabled by these advances. Also conducted advanced R&D for Adobe Experience Design (XD).
- 2008-2015 **University of Washington**, Seattle, WA
Computer Science & Engineering
Graduate Research Assistant
With Professor James Fogarty.
Researched and developed new tools for building interfaces. Designing and evaluating new interaction capabilities enabled by these advances.

- 2012 **Microsoft Research**, Redmond, WA
Research Intern
 With Desney Tan, Scott Saponas, and Dan Morris. Designed and prototyped methods for continuously monitoring blood pressure using commodity hardware (e.g., webcams and mobile devices).
- 2011 **IBM Research**, Almaden, CA
Research Intern
 With Jeff Nichols and Tessa Lau. Explored a crowdsourcing-based system for reverse-engineering the underlying data model of existing web pages, and for using these model to enable interface re-authoring and mashups.
- 2008 **Microsoft Research**, Redmond, WA
Research Intern
 With Ken Hinckley, Raman Sarin, Francois Guimbretiere and Ravin Balakrishnan. Designed, prototyped, programmed, and evaluated Codex, a dual-surface tablet computer for individual and collaborative use. Awarded the Microsoft Productivity Fair Thought Leadership Award.
- 2005 **Microsoft**, Redmond, WA
Intern
 Designed, implemented, and evaluated peer-to-peer games for the MSN Messenger (now Windows Live Messenger). Collaborated with MSN to critique and design future instant messenger client interfaces.

CONFERENCE ARTICLES

- [C.13] Amanda Swearngin, Mira Dontcheva, Wilmont Li, Joel Brandt, **Morgan Dixon**, Andrew J. Ko. Rewire: Interface Design Assistance from Examples. *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (CHI 2018).
- [C.12] Jasper O’Leary, Holder Winnemöller, Wilmont Li, Mira Dontcheva, **Morgan Dixon**. Charette: Supporting In-Person Discussions around Iterations in User Interface Design. *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (CHI 2018).
- [C.11] **Morgan Dixon**, Conrad Nied, and James Fogarty (2014). Prefab Layers and Prefab Annotations: Extensible Pixel-Based Interpretation of Graphical Interfaces. *Proceedings of the ACM Symposium on User Interface Software and Technology* (UIST 2014). 221-230. 22.2% acceptance rate.
- [C.10] **Morgan Dixon**, Gierad Laput, and James Fogarty (2014). PixelBased Methods for Widget State and Style in a Runtime Implementation of Sliding Widgets. *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (CHI 2014). 2231-2240. 23% acceptance rate.
- [C.9] **Morgan Dixon**, James Fogarty, and Jacob O. Wobbrock (2012). A GeneralPurpose Target-Aware Pointing Enhancement Using Pixel-Level Analysis of Graphical Interfaces. *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (CHI 2012). 3167-3176. 23% acceptance rate.

- [C.8] **Morgan Dixon**, Daniel Leventhal, James Fogarty (2011). Content and Hierarchy in Pixel-Based Methods for Reverse Engineering Interface Structure. *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (CHI 2011), 969-978. 26% acceptance rate.
- [C.7] Leah Findlater, Alex Jansen, Kristen Shinohara, **Morgan Dixon**, Peter Kamb, Joshua Rakita, and Jacob O. Wobbrock. (2010). Enhanced Area Cursors: Reducing Fine-Pointing Demands for People with Motor Impairments. *Proceedings of the ACM Symposium on User Interface Software and Technology* (UIST 2010), 153-162. 18% acceptance rate.
- [C.6] **Morgan Dixon** and James Fogarty. (2010). Prefab: Implementing
BEST Advanced Behaviors Using Pixel-Based Reverse Engineering of
PAPER Interface Structure. *Proceedings of the SIGCHI Conference on Human Factors*
WINNER *in Computing Systems* (CHI 2010), 1525-1534. 22% acceptance rate.
- [C.5] Yang Li, Xiang Cao, Katherine Everitt, **Morgan Dixon**, and James Landay (2010). Framewire: A Tool for Automatically Extracting Interaction Logic from Paper Prototyping Tests. *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (CHI 2010), 503-512. 22% acceptance rate.
- [C.4] Ken Hinckley, **Morgan Dixon**, Raman Sarin, François Guimbretière, and Ravin Balakrishnan. (2009). Codex: A Dual Screen Tablet Computer. *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (CHI 2009), 1933-1942. 24% acceptance rate.
- [C.3] **Morgan Dixon**, François Guimbretière, and Nick Chen. (2008). Optimal Parameters for Efficient Crossing-Based Dialog Boxes. *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (CHI 2008), 1623-1632. 22% acceptance rate.
- [C.2] Nick Chen, François Guimbretière, **Morgan Dixon**, Cassandra Lewis, and Maneesh Agrawala. (2008). Navigation Techniques for Dual-Display E-Book Readers. *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (CHI 2008), 1779-1788. 22% acceptance rate.
- [C.1] François Guimbretière, **Morgan Dixon**, and Ken Hinckley. (2007). ExperiScope: An Analysis Tool for Interaction Data. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (CHI 2007), 1333-1342. 24% acceptance rate.

WORKSHOP PAPERS

- [W.1] **Morgan Dixon** and James Fogarty (2010). Prefab: What if Every GUI were Open-Source. Presented at the *ACM Conference on Human Factors in Computing Systems Workshop on the Future of FLOSS in CHI Research and Practice* (CHI 2010).

PATENTS

User Interface Creation from Screenshots
Morgan Dixon, Lubomira Dontcheva, Joel Brandt, Amanda Swearngin
US Patent No. 10,360,473 · Issued July 23, 2019

Systems and Methods for Implementing Pixel-Based Reverse
Engineering of Interface Structure
US Patent No. 45088.03US2 Issued Nov 10, 2015

RELATED PRESS

- [P.9] Prefab May Give Any Software Open Sourciness. Katherine Noyes. *LinuxInsider*, April 2, 2010.
- [P.8] Giving Users the Power to Customize Proprietary Software. Jon Gordon. *Future Tense*, April 1, 2010.
- [P.7] University of Washington's Prefab Tool Promises to 'Unlock the Desktop.' Donald Melanson. *Engadget*, April 1, 2010.
- [P.6] Re-Inventing the Graphical User Interface. *Computing Community Consortium Highlight of the Week*, March 31, 2010.
- [P.5] Software Customized By Users: UW Prof Wants to Revolutionize UI. Ted Bishop. *Tech Flash*, March 31, 2010.
- [P.4] New Application Could Make All Software 'Open Source.' Nick Barber. *PCWorld*, March 31, 2010.
- [P.3] UW Researchers Look to Reinvent the Graphical User Interface. Nick Eaton. *Seattle PI*, March 30, 2010.
- [P.2] Codex and InkSeine – The Roots of Microsoft's Courier? Joshua Topolsky. *Engadget*, September 23, 2009.
- [P.1] Microsoft Research Codex Project Tries Two Screens on for Size. Donald Melanson. *Engadget*, October 1, 2008.

TEACHING EXPERIENCE

- 2013 **University of Washington**, Seattle, WA
Computer Science & Engineering
Instructor
Undergraduate Introduction to HCI.
Prepared and conducted lectures on the fundamental aspects of HCI and iterative design, and mentored student teams in the iterative design of novel personal informatics applications. [Course website](#). [Student projects page](#).

- 2009 **University of Washington**, Seattle, WA
 Computer Science & Engineering
Teaching Assistant
 Undergraduate Introduction to HCI with Professor James A. Fogarty.
 Mentored student teams in their iterative design of novel mobile applications.
- 2007 **University of Maryland**, College Park, MD
Instructor for the Passport Program
 Introduction to Programming
 Primarily responsible for 88 underrepresented middle school students.

INVITED TALKS AND GUEST LECTURES

- 2015 “Unlocking Interaction via Pixel-Based Reverse Engineering”
 Job talks at: Adobe Systems, Cornell University, Georgia Tech, Google, Harvard University, MIT, Princeton University, Stanford University, University of Wisconsin
- 2014 “Pixel-Based Reverse Engineering of Graphical Interfaces”
 PhD Thesis Defense, University of Washington
- “Prefab Layers and Prefab Annotations”
 ACM symposium on User Interface Software and Technology (UIST 2014).
- “Unlocking Interaction by Pixel-Based Reverse Engineering Graphical Interfaces”
 University of Washington Affiliates Day 2014
- 2013 “Prefab: Pixel-Based Reverse Engineering of Graphical Interfaces”
 Doctoral Consortium at the ACM symposium on User Interface Software and Technology (UIST 2013).
- 2012 “Prefab: Modifying Any Graphical Interface”
 University of Washington Industrial Affiliates Day 2012
- “A GeneralPurpose Target-Aware Pointing Enhancement”
 SIGCHI Conference on Human Factors in Computing (CHI 2012).
- 2011 “Content and Hierarchy in Pixel-Based Reverse Engineering”
 SIGCHI Conference on Human Factors in Computing (CHI 2011).
- “Content and Hierarchy in Pixel-Based Reverse Engineering”
 University of Washington Affiliates Day 2011
- “What if we could modify any computer program?”
 Summer Academy for Advancing Deaf and Hard of Hearing in Computing
- “Prefab: Implementing Advanced Behaviors Using Pixel-Based Reverse Engineering of Interface Structure”
 UW iSchool Undergraduate Input and Interaction Course

- 2010 “Prefab: Pixel-Based Reverse Engineering of Graphical Interfaces”
SIGCHI Conference on Human Factors in Computing (CHI 2010).
- 2008 “Optimal Parameters for Efficient Crossing-Based Dialog Boxes”
SIGCHI Conference on Human Factors in Computing (CHI 2008).
- 2007 ExperiScope: An Analysis Tool for Interaction Data.
SIGCHI Conference on Human Factors in Computing (CHI 2007).

ADVISING AND MENTORSHIP

- 2016-2017 Jasper O’Leary, B.S. Computer Science. Intern at Adobe.
Amanda Swearngin, PhD in Computer Science. Intern at Adobe.
- 2012-2013 Stephen Joe, B.S. Computer Science and Engineering (2014)
2010-2011 Cullen Walsh, B.S. Computer Science and Engineering (2012)
- 2010-2011 Orkhan Muradov, B.S. Computer Science & Engineering (2011)
2014-2015 Jennifer Kang, B.S. Information Science (2016)

PROFESSIONAL SERVICE

- 2014 **CHI 2014 Technical Program Committee Member**
CHI 2014, Toronto, CA
- 2009 **Assistant to CHI 2009 Technical Program Chairs**
CHI 2009, Boston, MA
With Ken Hinckley and Meredith Ringel Morris.
- 2008-PRESENT **Reviewer**
UIST 2015 CHI2015 UIST 2014 CHI 2014 UIST 2013 CHI 2013
UIST 2012 CHI 2012 UIST 2011 CHI 2011 CHI 2010 CHI 2009
CHI 2008 Tabletop 2009
- 2007-2008 **Education Committee Undergraduate Representative**
Computer Science Department, University of Maryland, College Park,
MD
Collaborated with Education Committee members to improve the
undergraduate computer science curriculum.

AWARDS AND HONORS

- 2011-2013 Microsoft Research Ph.D. Fellowship
2010 UW CSE Industrial Affiliates Madrona Prize
2010-2011 UW College of Engineering Osberg Fellowship
2008-2010 NSF Graduate Research Fellowship: Honorable Mention
2008-2011 ARCS Fellowship
2008-2009 Hacherl Graduate Fellowship in Computer Science & Engineering
2008 CRA Outstanding Undergraduate Award: Honorable Mention
2008 Microsoft Productivity Fair Thought Leadership Award
2004-2008 IBM Thomas J. Watson Memorial Scholarship