

Jeff Huang

Assistant Professor
Computer Science
Brown University

<http://jeffhuang.com>

Education

- 2008 – 2013 **Ph.D. in Information Science**
Dissertation: Modeling User Behavior and Attention in Search
Master of Science, Information Science
University of Washington at Seattle
- 2002 – 2007 **Master of Science, Computer Science**
Bachelor of Science, Computer Science with Business Minor
University of Illinois at Urbana-Champaign

Industry Positions

- 2009 – 2012 **Microsoft** Research 4-time Research Intern
- 2010 – 2011 **World Blender** (Techstars-funded startup) Co-Founder
- 2010 **Google** Ad Planner Software Engineer Intern
- 2007 – 2009 **Yahoo** Cloud Computing Senior Software Engineer
- 2006 **Google** AdSpam Software Engineer Intern
- 2004 – 2005 **Microsoft** Project 2-time Software Engineer Intern
- 2003 – 2004 **Microsoft** University Relations Student Consultant
- 2002 – 2003 **Motorola** GSM 2-time System Test Intern

Teaching Positions

- 2016 **Brown University** Computer Science Instructor
Graduate-level Personal Informatics seminar
- 2014 – 2015, 2018 **Brown University** Computer Science Instructor
Graduate-level Human-Computer Interaction seminar
- 2013 – 2018 **Brown University** Computer Science Instructor
Undergraduate-level User Interface course
- 2010 **University of Washington** Information School Co-Instructor
Graduate-level Information Retrieval course
- 2008 – 2010 **University of Washington** Information School Teaching Assistant
Masters & undergrad classes: HCI, Databases, Information Retrieval, and others
- 2006 **University of Illinois** Computer Science Teaching Assistant
Two Undergraduate-level CS 101 labs (C & Matlab on Linux)

Color coding for papers: **Bolded titles** are papers from my HCI research group that I conceived and guided. Authors are color coded as: **Ph.D. student advisee**, **Masters or undergraduate research assistant in my group**, **other student collaborator**, **faculty or external collaborator**.

Computer Science Conference Papers

A Motion-Based Capture and Replay Platform of Mobile Device Interaction for Remote Usability Testing

Jing Qian, Arielle Chapin, Alexandra Papoutsaki, Fumeng Yang, Klaas Nelissen, Jeff Huang
UbiComp 2018, published through PACM IMWUT, 2(2), Article 77, to appear.

Investigating the Effectiveness of Cohort-Based Sleep Recommendations

Nediyana Daskalova, Bongshin Lee, Jeff Huang, Chester Ni, Jessica Lundin
UbiComp 2018, published through PACM IMWUT, 2(3), to appear.

SEEDE: Simultaneous Execution and Editing in a Development Environment

Steven Reiss, Qi Xin, Jeff Huang
ASE 2018, 270–281. 20% acceptance rate

The Eye of the Typer: A Benchmark and Analysis of Gaze Behavior during Typing

Alexandra Papoutsaki, Aaron Gokaslan, James Tompkin, Yuze He, Jeff Huang
ETRA 2018, Article 16. 34% acceptance rate

Lessons Learned from Two Cohorts of Personal Informatics Self-Experiments

Nediyana Daskalova, Karthik Desingh, Alexandra Papoutsaki, Diane Schulze, Heather Sha, Jeff Huang
UbiComp 2017, published through PACM IMWUT, 1(3), Article 46. 24.9% acceptance rate

Drafty: Enlisting Users to be Editors who Maintain Structured Data

Shaun Wallace, Lucy van Kleunen, Marianne Aubin-Le Quere, Abraham Peterkin, Yirui Huang, Jeff Huang
HCOMP 2017, 186–196. 28.9% acceptance rate

SearchGazer: Scalable Webcam Eye Tracking for Remote Studies of Web Search

Alexandra Papoutsaki, James Laskey, Jeff Huang
CHIIR 2017, 17–26. 42% acceptance rate, **Best Paper Finalist**

SleepCoacher: A Personalized Automated Self-Experimentation System for Sleep Recommendations

Nediyana Daskalova, Danaë Metaxa-Kakavouli, Adrienne Tran, Nicole Nugent, Julie Boergers, John McGeary, Jeff Huang
UIST 2016, 347–358. 20.6% acceptance rate

Masters of Control: Behavioral Patterns of Simultaneous Unit Group Manipulation in StarCraft 2

Eddie Yan, Jeff Huang, Gifford Cheung
CHI 2015, 3711–3720. 23% acceptance rate

WebGazer: Scalable Webcam Eye Tracking Using User Interactions

Alexandra Papoutsaki, Patsorn Sangkloy, James Laskey, Nediyana Daskalova, Jeff Huang, James Hays
IJCAI 2016, 3839–3845. 25% acceptance rate

Crowdsourcing from Scratch: A Pragmatic Experiment in Data Collection by Novice Requesters

Alexandra Papoutsaki, Hua Guo, Danae Metaxa-Kakavouli, Connor Gramazio, Jeff Rasley, Wenting Xie, Guan Wang, Jeff Huang
HCOMP 2015, 140–149. 30% acceptance rate, **Best Paper Finalist**

A Strategy-Aware Technique for Learning Behaviors from Discrete Human Feedback

Robert Loftin, James MacGlashan, Bei Peng, Matthew Taylor, Michael Littman, Jeff Huang, David Roberts
AAAI 2014, 937–943. 28% acceptance rate

Mastering the Art of War: How Patterns of Gameplay Influence Skill in Halo

Jeff Huang, [Thomas Zimmermann](#), [Nachiappan Nagappan](#), [Charles Harrison](#), [Bruce Phillips](#)
CHI 2013, 695–704. 20% acceptance rate, **Best Paper Finalist**

RevMiner: An Extractive Interface for Navigating Reviews on a Smartphone

Jeff Huang, [Oren Etzioni](#), [Luke Zettlemoyer](#), [Kevin Clark](#), [Christian Lee](#)
UIST 2012, 3–12. 21.5% acceptance rate

Improving Searcher Models Using Mouse Cursor Activity

Jeff Huang, [Ryen White](#), [Georg Buscher](#), [Kuansan Wang](#)
SIGIR 2012, 195–204. 20% acceptance rate

User See, User Point: Gaze and Cursor Alignment in Web Search

Jeff Huang, [Ryen White](#), [Georg Buscher](#)
CHI 2012, 1341–1350. 23% acceptance rate

No Search Result Left Behind: Branching Behavior with Browser Tabs

Jeff Huang, [Thomas Lin](#), [Ryen White](#)
WSDM 2012, 203–212. 20.7% acceptance rate

Large-Scale Analysis of Individual and Task Differences in Search Result Page Examination Strategies

[Georg Buscher](#), [Ryen White](#), [Susan Dumais](#), Jeff Huang
WSDM 2012, 373–382. 20.7% acceptance rate

Remix and Play: Lessons from Rule Variants in Texas Hold'em and Halo 2

[Gifford Cheung](#), Jeff Huang
CSCW 2012, 559–586. 39% acceptance rate

Interactive Search Support for Difficult Web Queries

[Abdigani Diriye](#), [Giridhar Kumaran](#), Jeff Huang
ECIR 2012, 37–49. 21% acceptance rate

No Clicks, No Problem: Using Cursor Movements to Understand and Improve Search

Jeff Huang, [Ryen White](#), [Susan Dumais](#)
CHI 2011, 1225–1234. 26% acceptance rate, **Best Paper Finalist**

Starcraft from the Stands: Understanding the Game Spectator

[Gifford Cheung](#), Jeff Huang
CHI 2011, 763–772. 26% acceptance rate

Optimal Strategies for Reviewing Search Results

Jeff Huang, [Anna Kazeykina](#)
AAAI 2010, 1321–1326. 26.9% acceptance rate

Assessing the Scenic Route: Measuring the Value of Search Trails in Web Logs

[Ryen White](#), Jeff Huang
SIGIR 2010, 587–594. 16.7% acceptance rate, **Best Paper Award**

Studying Trailfinding Algorithms for Enhanced Web Search

[Adish Singla](#), [Ryen White](#), Jeff Huang
SIGIR 2010, 443–450. 16.7% acceptance rate

Conversational Tagging in Twitter

Jeff Huang, [Katherine Thornton](#), [Efthimis Efthimiadis](#)
Hypertext 2010, 173–177. 35% acceptance rate

Parallel Browsing Behavior on the Web

Jeff Huang, [Ryen White](#)

Hypertext 2010, 13–17. 35% acceptance rate

Analyzing and Evaluating Query Reformulation Strategies in Web Search Logs

Jeff Huang, [Efthimis Efthimiadis](#)

CIKM 2009, 77–86. 14.5% acceptance rate, **Best Student Paper Finalist**

Graphstrat: Minimal Graphical Help for Computers

Jeff Huang, [Michael Twidale](#)

UIST 2007, 203–212. 17% acceptance rate

Computer Science Journal Papers

An Analysis of Automated Visual Analysis Classification: Interactive Visualization Task Inference of Cancer Genomics Domain Experts

[Connor Gramazio](#), Jeff Huang, [David Laidlaw](#)

Transactions on Visualization and Computer Graphics (2017), 24(8), 2270–2283.

Master Maker: Understanding Gaming Skill through Practice and Habit from Gameplay Behavior

Jeff Huang, [Eddie Yan](#), [Gifford Cheung](#), [Nachiappan Nagappan](#), [Thomas Zimmerman](#)

Topics in Cognitive Science (2017), 9(2), 437–466.

Strokes of Insight: User Intent Detection and Kinematic Compression of Mouse Cursor Trails

[Daniel Martín-Albo](#), [Luis Leiva](#), Jeff Huang, [Réjean Plamondon](#)

Information Processing & Management (2016), 52(6), 989–1003.

Learning Behaviors via Human-Delivered Discrete Feedback

[Robert Loftin](#), [Bei Peng](#), [James MacGlashan](#), [Michael Littman](#), [Matthew Taylor](#), Jeff Huang, [David Roberts](#)

Journal of Autonomous Agents and Multi-Agent Systems (2016), 30(1), 30–59.

Representing Uncertainty in Graph Edges: An Evaluation of Paired Visual Variables

[Hua Guo](#), Jeff Huang, [David Laidlaw](#)

Transactions on Visualization and Computer Graphics (2015), 21(10), 1173–1186.

Building a Better Mousetrap: Compressing Mouse Cursor Activity for Web Analytics

[Luia A. Leiva](#), Jeff Huang

Information Processing & Management (2015), 51(2), 114–129.

Other Publications

EasyPZ.js: A Library For Pan and Zoom Visualizations

Michail Schwab, James Tompkin, Jeff Huang, Michelle Borkin

Vis Poster 2018

Mobile Health Intervention Development Principles: Lessons from an Adolescent Cyberbullying Intervention

Megan Ranney, Sarah Pittman, Alison Riese, Michele Ybarra, Jeff Huang, Anthony Spirito, Rochelle Rosen

Proceedings of HICSS 2018

Gameplay Data Plays Nicer When Divided into Cohorts

Jeff Huang

Chapter in Perspectives on Data Science for Software Engineering (2016), Morgan Kaufmann

Understanding the Role of Social Environment and Early Symptoms of PTSD in Adolescents Following Physical Trauma
Anjali Chandra, Megan Ranney, Jeff Huang, Thomas Chun, Anthony Spirito, Susan Duffy, Nicole Nugent
American College of Physicians National Meeting 2016

Learning Something from Nothing: Leveraging Implicit Human Feedback Strategies
Robert Loftin, Bei Peng, James MacGlashan, Michael Littman, Matthew Taylor, Jeff Huang, David Roberts
RO-MAN 2014

Influence of Gameplay on Skill in Halo Reach
Jeff Huang, Thomas Zimmermann, Nachiappan Nagappan, Charles Harrison, Bruce Phillips
CHI Games User Research Workshop 2013

Web User Interaction Mining from Touch-Enabled Mobile Devices
Jeff Huang, Abdigani Diriye
HCIR Workshop 2012

On the Value of Page-Level Interactions in Web Search
Jeff Huang
HCIR Workshop 2011

Studying Query Reformulation Strategies in Search Logs
Jeff Huang, Efthimis Efthimiadis
ASIS&T 2009 Poster Paper

Query Formulation in Web Search
Efthimis Efthimiadis, Jeff Huang, Amanda Spink, Jim Jansen
ASIS&T 2009 Panel

Mystery Meat revisited: Spam, Anti-Spam Measures and Digital Redlining
Christopher Lueg, Jeff Huang, Michael Twidale
Webology 5(1), 2007

Mystery Meat: Where does spam come from, and why does it matter?
Christopher Lueg, Jeff Huang, Michael Twidale
EICAR 2006, 150–163

Graphical Abstract Help
Jeff Huang, Bo Lu, Michael Twidale
CHINZ 2005, 83–89

Funding

Center for Vision Research Pilot Grant 2018. *Online webcam eye tracking for clinical psychology*. PI, with Co-PI James Tompkin, \$15,000.

NIH R01 2017. *Non-Suicidal Self-Injury in children: Brain/behavior alterations and risk for Suicidal Behavior*. Co-I, with Daniel Dickstein, Subaward amount: \$240,000.

Balsamiq 2017. User Interfaces and User Experience Sponsorship. Sole PI, \$1000.

NSF 2017. *EAGER: Computationally and Socially Guided Self-Experiments*. Sole PI, \$292,972.

Seed Award 2017. *Automated Sleep Recommendations Over a 10 Year Sleep Study*. Sole PI, \$42,500.

Adobe and Balsamiq 2016. User Interfaces and User Experience Sponsorship. Sole PI, \$5,000.

Fidelity Foundation 2016. *Fidelity Research Project on User Experience*. Sole PI, \$30,027.

NIH R21 2016. *Bullying Prevention Intervention for Adolescent Primary Care Patients*. Co-I, with Megan Ranney, Subaward amount: \$7,874.

NIH Administrative Supplement 2016. *Biomarkers, Social and Affective Predictors of Suicidal Thoughts and Behaviors in Adolescents*. Co-I, with Nicole Nugent, Subaward amount: \$74,202.

NIH R01 2016. *Understanding the Interplay of Social Context and Physiology on Psychological Outcomes in Trauma-Exposed Adolescents*. Co-I, with Nicole Nugent, Subaward amount: \$388,050.

NSF CAREER Award 2016. *Modeling User Touch and Motion Behaviors for Adaptive Interfaces in Mobile Devices*. Sole PI, \$501,235.

NSF CRII 2015. *Scalable Webcam Eyetracking by Learning from User Interactions*. Sole PI, \$175,000.

Salomon Award 2015. *Learning Eye Tracking Through User Interactions on Mobile Devices*. Sole PI, \$14,967.

Google Research Award 2012. *Cursor Mining in Web Search*. Co-PI, with Jacob Wobbrock, \$47,807.

Microryza Crowdfunding 2012. *How do spammers harvest your e-mail address?*. Sole PI, \$5,191.

Awards

CHIIR 2017 Best Paper Finalist

NSF CAREER Award 2016

HCOMP 2015 Best Paper Finalist

Facebook Graduate Fellowship 2012–2013 “Mining Richer Interactions from Web Users”

CHI 2013 Best Paper Finalist (top 5% of submitted papers)

CHI 2011 Best Paper Finalist (top 5% of submitted papers)

SIGIR 2010 Best Paper Award (top 1 of 520 submitted papers)

CIKM 2009 Best Student Paper Finalist

Professional Service

Conference Paper Chair: CHIIR 2018

Conference Track Chair: SIGIR 2018

Conference Local Chair: WSDM 2012

Editorial Board: Journal of the American Society for Information Science and Technology (JASIST)

Program Committee: CHIIR 2017 & 2016, CHI 2016, SIGIR 2016 & 2010, WWW 2015 & 2013 & 2011, SIGIR Best Paper Award Committee 2015, ICWSM Posters 2011, SIGIR Posters 2009

Conference Reviewing: UIST 2018, DIS 2018, CHI 2017, UIST 2016 & 2015, CHI 2015, CHI 2014, CSCW 2014, IUI 2013, CHI 2013, CHI 2013 Posters, HCIR 2011, HICSS 2011, InfoVis 2011, CIKM 2009, ECIR 2009

Journal Reviewing: ACM Transactions on the Web (TWEB), Journal of the American Society for Information Science and Technology (JASIST), ACM Transactions on Knowledge and Data Engineering (TKDE), Topics of Cognitive Science (TopiCS), Transactions of Information Systems (ToIS), International Journal of Human-Computer Interaction (IJHCI)

NSF Review Panel: 2016, 2018

Student Volunteer: WWW 2012, CHI 2012 & 2007, CSCW 2012, AoIR 2011, AAI 2010, ASIST 2009