

Jeff Huang

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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 University of Illinois at Urbana-Champaign

Teaching

2013 – 2020, 2022	Brown University Computer Science CSCI 1300: User Interfaces and User Experience	Instructor
2014, 2015, 2018 2020, 2023	Brown University Computer Science CSCI 2300: Human-Computer Interaction Seminar	Instructor
2016, 2021	Brown University Computer Science <i>Special topics courses</i> CSCI 2951R: Personal Informatics Seminar, CSCI 1301: Livestreaming Reinvented	Instructor
2019	Brown University Computer Science CSCI 2000: Computer Science Research Methods	Instructor
2010	University of Washington Information School INSC 544: Information Retrieval	Co-Instructor
2008 – 2010	University of Washington Information School Masters & undergrad classes: HCI, Databases, Information Retrieval, and others	Teaching Assistant
2006	University of Illinois Computer Science Two undergraduate-level CS 101 labs (C & MATLAB on Linux)	Teaching Assistant

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

Color coding for papers: Authors are colored coded as: **Ph.D. student advisee**, **Masters research assistant**, **undergraduate research assistant**, **faculty or external collaborator**, **graduate student collaborator**.

Papers from my Research Group (that I directed)

Negotiating Dyadic Interactions through the Lens of Augmented Reality Glasses

Ji Won Chung, Jenny Fu, Zachary Deocadiz-Smith, Malte Jung, Jeff Huang

DIS 2023, 493–508.

filtered.ink: Creating Dynamic Illustrations with SVG Filters

Tongyu Zhou, Connie Liu, Joshua Yang, Jeff Huang

CHI 2023, Article 129.

"Together but not together": Evaluating Typing Indicators for Interaction Rich Communication

Zainab Iftikhar, Yumeng Ma, Jeff Huang

CHI 2023, Article 724.

FocalPoint: Adaptive Direct Manipulation for Selecting Small 3D Virtual Objects

Jiaju Ma, Jing Qian, Tongyu Zhou, Jeff Huang

IMWUT 2023, 7(1), Article 22.

Bridging the Social Distance: Offline to Online Social Support during the COVID-19 Pandemic

Gabriela Hofer, Talie Massachi, Neil Xu, Nicole Nugent, Jeff Huang

CSCW 2022, Article 429.

The UX Factor: Using Comparative Peer Review to Evaluate Designs through User Preferences

Sarah Bawabe, Laura Wilson, Tongyu Zhou, Ezra Marks, Jeff Huang

CSCW 2021, Article 476. 38% acceptance rate, **Impact Recognition**, and **Honorable Mention**

Case Studies on the Motivation and Performance of Contributors Who Verify and Maintain In-Flux Tabular Datasets

Shaun Wallace, Alexandra Papoutsaki, Neilly Tan, Hua Guo, Jeff Huang

CSCW 2021, Article 448. 38% acceptance rate

Portalware: Exploring Free-Hand AR Drawing with a Dual-Display Smartphone-Wearable Paradigm

Jing Qian, Tongyu Zhou, Meredith Young-Ng, Jiaju Ma, Angel Cheung, Xiangyu Li, Ian Gonsler, Jeff Huang.

DIS 2021, 205–219. 26.8% acceptance rate

Self-E: Smartphone-Supported Guidance for Customizable Self-Experimentation

Nediyana Daskalova, Eindra Kyi, Kevin Ouyang, Arthur Borem, Sally Chen, Sung Hyun Park, Nicole Nugent, Jeff Huang

CHI 2021, Article 227. 26.3% acceptance rate

Sochiatrist: Signals of Affect in Messaging Data

Talie Massachi, Grant Fong, Varun Mathur, Sachin Pendse, Gabriela Hofer, Jessica Fu, Chong Wang, Nikita Ramoji, Nicole Nugent, Megan Ranney, Daniel Dickstein, Michael Armey, Ellie Pavlick, Jeff Huang

CSCW 2020, Article 111. 41% acceptance rate

Sketchy: Drawing Inspiration from the Crowd

Shaun Wallace, Brendan Le, Luis Leiva, Aman Haq, Ari Kintisch, Gabrielle Bufrem, Linda Chang, Jeff Huang

CSCW 2020, Article 172. 41% acceptance rate

SleepBandits: Guided Flexible Self-Experiments for Sleep

Nediyana Daskalova, Jina Yoon, Lisa Wang, Cintia Araujo, Guillermo Beltran, Nicole Nugent, John McGeary, Joseph Jay Williams, Jeff Huang

CHI 2020, Article 457. 24.3% acceptance rate

Portal-ble: Intuitive Free-Hand Manipulation in Unbounded Smartphone-based Augmented Reality

Jing Qian, Jiaju Ma, Xiangyu Li, Benjamin Attal, Haoming Lai, James Tompkin, John Hughes, Jeff Huang

UIST 2019, 133–145. 24.4% acceptance rate

Rewind: Automatically Reconstructing Everyday Memories with First-Person Perspectives

Neilly Tan, Han Sha, Eda Celen, Phucanh Tran, Kelly Wang, Gifford Cheung, Philip Hinch, Jeff Huang

IMWUT 2019, 2(4), Article 191. 26.2% acceptance rate

Remotion: 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

IMWUT 2018, 2(2), Article 77. 27.9% 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, Han Sha, Jeff Huang

IMWUT 2017, 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**

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.

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**

Papers Led by Collaborators

Understanding the Needs of Enterprise Users in Collaborative Python Notebooks

Catherine Li, Talie Massachi, Jordan Eschler, Jeff Huang

CHI 2023 case study.

Increased sleep duration and delayed sleep timing during the COVID-19 pandemic

Robin K. Yuan, Robin K. Yuan, Liyaan Maskati, Jeff Huang

Scientific Reports (2022), 12, 10937.

Personalized Font Recommendations: Combining ML and Typographic Guidelines to Optimize Readability

Tianyuan Cai, Shaun Wallace, Tina Rezvanian, Jonathan Dobres, Bernard Kerr, Samuel Berlow, Jeff Huang, Ben D. Sawyer, Zoya Bylinskii

DIS 2022. 21.5% acceptance rate

Dually Noted: Layout-Aware Annotations with Smartphone Augmented Reality

Jing Qian, Qi Sun, Curtis Wigington, Han L. Han, Tong Sun, Jennifer Healey, James Tompkin, Jeff Huang

CHI 2022, Article 552. 24.6% acceptance rate

Days with and without self-injurious thoughts and behaviors: Impact of childhood maltreatment on adolescent online social networking

Lauren R. Grocott, Anneliese Mair, Janine N. Galione, Michael F. Armey, Jeff Huang, Nicole R. Nugent

Journal of Adolescence (2022), 94(5), 748–762.

Towards Individuated Reading Experiences: Different Fonts Increase Reading Speed for Different Individuals

Shaun Wallace, Zoya Bylinskii, Jonathan Dobres, Bernard Kerr, Sam Berlow, Rick Treitman, Nirmal Kumawat, Kathleen Arpin, David B. Miller, Jeff Huang, Ben D. Sawyer

Transactions on Computer-Human Interaction (2022), 29(4), Article 38.

Scalable Scalable Vector Graphics: Automatic Translation of Interactive SVGs to a Multithread VDOM for Fast Rendering

Michail Schwab, David Saffo, Nicholas Bond, Shash Sinha, Cody Dunne, Jeff Huang, James Tompkin, Michelle Borkin

Transactions on Visualization and Computer Graphics (2022), 29(4).

EasyPZ.js: Interaction Binding For Pan and Zoom Visualizations

Michail Schwab, James Tompkin, Jeff Huang, Michelle Borkin

VIS 2019, short paper. 31.7% acceptance rate

Evaluating Pan and Zoom Timelines and Sliders

Michail Schwab, Sicheng Hao, Olga Vitek, James Tompkin, Jeff Huang, Michelle Borkin

CHI 2019, Article 556. 23.8% acceptance rate

Investigating the Effectiveness of Cohort-Based Sleep Recommendations

Nediyana Daskalova, Bongshin Lee, Jeff Huang, Chester Ni, Jessica Lundin

IMWUT 2018, 2(3), Article 101. 27.9% acceptance rate

SEEDE: Simultaneous Execution and Editing in a Development Environment

Steven Reiss, Qi Xin, Jeff Huang

ASE 2018, 270–281. 20% acceptance rate

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.

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.

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

Papers as a Student

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, short paper, 173–177. 35% acceptance rate

Parallel Browsing Behavior on the Web

Jeff Huang, [Ryen White](#)

Hypertext 2010, short paper, 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**

Graphstract: Minimal Graphical Help for Computers

Jeff Huang, [Michael Twidale](#)

UIST 2007, 203–212. 17% acceptance rate

Other Assorted Publications

Evaluation of intervention components to maximize outcomes of behavioral obesity treatment delivered online: A factorial experiment following the multiphase optimization strategy framework

Thomas, J. Graham, Carly M. Goldstein, Dale S. Bond, Jason Lillis, Eric B. Hekler, Jessica A. Emerson, Hallie M. Espel-Huynh, Stephanie P Goldstein, Shira I Dunsiger, E Whitney Evans, Meghan L Butryn, Jeff Huang, Rena R Wing
Contemporary Clinical Trials, 100, 2021

Individual Differences in Font Preference & Effectiveness as Applied to Interlude Reading in the Digital Age

Shaun Wallace, Rick Treitman, Nirmal Kumawat, Kathleen Arpin, Jeff Huang, Ben Sawyer, Zoya Bylinskii
Vision Sciences Society Annual Meeting, 20(11), 2020

Insights into Adolescent Online Conflict through Qualitative Analysis of Online Messages

Megan Ranney, Kyler Lehrbach, Nicholas A. Scott, Nicole Nugent, Alison Riese, Jeff Huang, Grant Fong, Rochelle Rosen
Proceedings of HICSS 2020, Best Paper Award

HeyPillow: Computationally Guided Sleep Behavior Study Through Sensing

Nediyana Daskalova, Jiaju Ma, Tiffany Chen, Valerie Nguon, Jing Qian, Chonghui Chen, Jeff Huang
Workgroup on Interactive Systems in Healthcare (WISH) Poster 2019

Post-Traumatic Stress Disorder: The Role of Online Social Networking

Nicole Nugent, Grant Fong, Sara Schulwolf, Jeff Huang
ISTSS 2019 Poster

Exploring Agreement in Substance-Use Reporting Between Online Social Networking Data Analysis, Clinical Interview, and Self-Report Survey

Sara Schulwolf, Grant Fong, Soyeong Kim, Leslie Brick, Jeff Huang, Nicole Nugent
ISTSS 2019 Poster

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

NIH R01 2023. *Social Media Use, Sleep, and Suicidality in Adolescents*. Co-I, with PI Nicole Nugent.

Facebook 2021. Gift Funds. Sole PI.

NIH R01 2020. *Dynamic Impacts of Sleep Disruption on Ecologically Assessed Affective, Behavioral, and Cognitive Risk Factors for Suicide*. Co-I, with PI Michael Arney.

NIH R01 2020. *Social Media, Violence, and Social Isolation Among At-Risk Adolescents: Exploring Ground Truth*. Co-I, with PIs Megan Ranney and Nicole Nugent.

Adobe 2016, 2019, 2020, 2021. Gift Funds. Sole PI.

Google exploreCSR 2020. An Immersive Preview of CS Research: Socially-Responsible AI for Computational Creativity. Co-PI with PI Daniel Ritchie.

Figma 2019. User Interfaces and User Experience Sponsorship. Sole PI.

Catalyst Grant Program 2019. *A Mobile App for Designing and Analyzing Data from Personalized Experiments*. Co-PI, with PI Christopher Schmid.

Army Research Office Young Investigator Program 2019. *Automatically Predicting Emotion from Social Messaging Data*. Sole PI.

SMAHRT Technology and Adolescent Mental Wellness (TAM) 2019. *IMPACT (Intervention Media to Prevent Adolescent Cyber-conflict through Technology)*. Co-I, with PI Megan Ranney.

NIH R01 2019. *Dating Violence Perpetration among Juvenile Justice Youth: The Role of Social, Behavioral, and Ecological Processes*. Co-I, with PI Christie Rizzo.

Data Science Institute Research Grant 2019. *Sleeping in the Wild: Perception versus Computation of Sleep Quality over 10,000,000 Nights*. PI, with Co-PI Nediya Daskalova.

Balsamiq 2016 – 2018. User Interfaces and User Experience Sponsorship. Sole PI.

Center for Vision Research Pilot Grant 2018. *Online webcam eye tracking for clinical psychology*. PI, with Co-PIs James Tompkin and Nicole Nugent.

NIH R01 2017. *Non-Suicidal Self-Injury in children: Brain/behavior alterations and risk for Suicidal Behavior*. Co-I, with PI Daniel Dickstein.

NSF 2017. *EAGER: Computationally and Socially Guided Self-Experiments*. Sole PI.

Seed Award 2017. *Automated Sleep Recommendations Over a 10 Year Sleep Study*. Sole PI.

Fidelity Foundation 2016. *Fidelity Research Project on User Experience*. Sole PI.

NIH R21 2016. *Bullying Prevention Intervention for Adolescent Primary Care Patients*. Co-I, with PI Megan Ranney.

NIH Administrative Supplement 2016. *Biomarkers, Social and Affective Predictors of Suicidal Thoughts and Behaviors in Adolescents*. Co-I, with PI Nicole Nugent.

NIH R01 2016. *Understanding the Interplay of Social Context and Physiology on Psychological Outcomes in Trauma-Exposed Adolescents*. Co-I, with PI Nicole Nugent.

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

NSF CRII 2015. *Scalable Webcam Eyetracking by Learning from User Interactions*. Sole PI.

Salomon Award 2015. *Learning Eye Tracking Through User Interactions on Mobile Devices*. Sole PI.

Facebook Graduate Fellowship 2012. *Mining Richer Interactions from Web Users*. Sole Recipient.

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

Microryza Crowdfunding 2012. *How do spammers harvest your e-mail address?*. Sole PI.