

Xiaoyi Zhang

xiaoyiz@cs.washington.edu | www.XiaoyiZhang.me

education

- 2014 - Now **PhD Candidate**, Computer Science & Engineering University of Washington, Seattle
Advised by Prof. James Fogarty
- 2011 - 2014 **Bachelor**, Computer Science University of California, Los Angeles
Advised by Prof. Majid Sarrafzadeh
- Research **HCI / Accessibility / Health & Personal Informatics / Applied AI (Computer Vision)**
Familiar with Swift / Kotlin / Python / Javascript, in iOS / Android / Web development

publications (17)

(PDF available at www.XiaoyiZhang.me)

- Conference **Robust Annotation of Mobile Application Interfaces in Methods for Accessibility Repair**
X. Zhang, A. Ross, J. Fogarty
UIST 2018 • [VIDEO](#) • [PAPER](#)
- Interactiles: 3D Printed Tactile Interfaces on Phone to Enhance Mobile Accessibility**
X. Zhang, T. Tran, Y. Sun, I. Culhane, J. Fogarty, J. Mankoff
ASSETS 2018 • [VIDEO](#) • [PAPER](#)
- Examining Image-Based Button Labeling for Accessibility in Apps through Large-Scale Analysis**
A. Ross, X. Zhang, J. Fogarty, J. O. Wobbrock
ASSETS 2018 • [PAPER](#)
- APPINITE: A Multi-Modal Interface for Specifying Data Descriptions in Programming by Demonstration Using Verbal Instructions**
T. Li, I. Labutov, X. Li, X. Zhang, W. Shi, W. Ding, T. Mitchell and B. A. Myers
VL/HCC 2018 • [VIDEO](#) • [PAPER](#)
- Epidemiology as a Framework for Large-Scale Mobile Application Accessibility Assessment**
A. Ross, X. Zhang, J. Fogarty, J. O. Wobbrock
ASSETS 2017 (**Best Paper Nominee**) • [PAPER](#)
- Interaction Proxies for Runtime Repair and Enhancement of Mobile Application Accessibility**
X. Zhang, A. Ross, A. Caspi, J. Fogarty, J. O. Wobbrock
CHI 2017 • [VIDEO](#) • [PAPER](#)
- Smartphone-Based Eye Gesture Communication for People with Motor Disabilities**
X. Zhang, H. Kulkarni, M. R. Morris
CHI 2017 • [VIDEO](#) • [PAPER](#)
- Examining Unlock Journaling with Diaries and Reminders for In Situ Self-Report in Health and Wellness**
X. Zhang, L. Pina, J. Fogarty
CHI 2016 • [VIDEO](#) • [PAPER](#)
- Leveraging Dual-Observable Input for Fine-Grained Thumb Interaction Using Forearm EMG**
D. Huang, X. Zhang, S. Saponas, J. Fogarty, S. Gollakota
UIST 2015 • [VIDEO](#) • [PAPER](#)
- See UV on Your Skin: An Ultraviolet Sensing and Visualization System**
X. Zhang, W. Xu, M-C. Huang, F. Ren, N. Amini
BodyNets 2013
- Proper Running Posture Guide: A Wearable Biomechanics Capture System**
X. Zhang, M-C. Huang, F. Ren, W. Xu, N. Guan, W. Yi
BodyNets 2013

Journal **Beacon: Designing a Portable Device for Self-Administering a Measure of Critical Flicker Frequency**
R. Karkar, R. Kocielnik, X. Zhang, J. Fogarty, G N. Ioannou, S A. Munson, J. Zia
 IMWUT (UbiComp) 2018

FridgeNet: A Nutrition and Social Activity Promotion Platform for Aging Population
Y. Lee, M-C Huang, X. Zhang, W. Xu
 Intelligent Systems, IEEE 30 (4), 2015

BreathSens: A Continuous On-Bed Respiratory Monitoring System With Torso Localization Using an Unobtrusive Pressure Sensing Array
J. Liu, M-C Huang, W. Xu, X. Zhang, L. Stevens, N. Alshurafa, M. Sarrafzadeh
 Biomedical and Health Informatics, IEEE Journal of 19 (5), 2014

Using Pressure Map Sequences for Recognition of On Bed Rehabilitation Exercises
M-C. Huang, J. Liu, W. Xu, N. Alshurafa, X. Zhang, M. Sarrafzadeh
 Biomedical and Health Informatics, IEEE Journal of 18 (2), 2014

Workshop **Toward a Portable, Self-administered Critical Flicker Frequency Test**
R. Karkar, R. Kocielnik, X. Zhang, J. Fogarty, G N. Ioannou, S A. Munson, J. Zia
 Ubicomp Mental Health Workshop 2016

EZwakeup: A Sleep Environment Design for Sleep Quality Improvement
M-C. Huang, X. Zhang, W. Xu, J. Liu, M. Sarrafzadeh
 CHI Extended Abstract 2014

experience

2017 **MICROSOFT RESEARCH** Redmond, WA
Research Intern in Enable Team
 Released SwipeSpeak, a communication app for people with ALS ([iOS Store](#) / [Github](#)).

2016 **MICROSOFT RESEARCH** Redmond, WA
Research Intern in Enable Team
 Built a low-cost eye gesture recognition system on phone powered by computer vision (patent pending).

2015 **GOOGLE RESEARCH** Mountain View, CA
Research Intern in Machine Intelligence group
 Developed notebook presentation modes in [coLaboratory](#) (Collborative iPython Notebook).

2013 **GOOGLE RESEARCH** Mountain View, CA
Research Intern in Computer Vision & HCI group
 Built patented non-rigid face features detection, pose & gaze tracking, used by 3 Google teams.

2012 **APPLE** Cupertino, CA
Software Engineering Intern in iCloud
 Implemented Contacts web app, improved the UX of iCloud web apps and fixed 47 bugs.

2011 - 2012 **TALKWAYS** Beijing, China
Co-founder & ex-CTO
 Received \$1 million investment for a video-chat platform of "learning language with culture".

Patent **USER INTERFACE CONTROL USING GAZE TRACKING**
 WO 2015164584, US 20150309569

Paper Review **2018 - CHI / TEI / MobileHCI** **2017 - CHI / MobileHCI / DIS / SUI** **2016 - UIST / CHI LBW**
 Reviewed 17 conference papers.

media coverage

02/2017 **Microsoft App Helps People with ALS Speak Using Just Their Eyes**
 Editor's Pick. <https://www.newscientist.com/article/2121579>
 Reported by [Newsweek](#) / [The Telegraph](#) / [New Scientist](#) / [BGR](#) / [Business Standard](#) and 50+ medias.

awards

- 02/2018 **Funding from** Jones+Foster Accelerator
Team ShopSight met milestones to receive \$25,000 as startup funding.
- 12/2017 **Grant** from Washington Research Foundation
Team ShopSight received \$15,000 as research funding.
- 10/2017 **Best Paper Nominee** in ASSETS Conference
Epidemiology as a Framework for Large-Scale Mobile Application Accessibility Assessment.
- 09/2017 **Second Place** in GIX Innovation Competition
Team ShopSight won \$20,000 as gift money.
- 09/2014 **Corin Anderson Endowed Fellowship** from University of Washington
One recipient in UW CSE.
- 04/2013 **Grand Prize, Best Mobile App & Best Data Viz Prize** in LA Hacks (40+ teams)
Project EyeWeight won \$7,500; selected by Eytan Elbaz (Google AdSense founder).
- 04/2013 **Second Place** in Facebook Hackathon (250+ participants)
Project AResume was selected by Facebook recruiter.
- 10/2012 **Grand Prize & Tech Difficulty Prize** in HackUCLA (20+ teams)
Project Music++ won \$33,000; selected by Howard Marks (Activision founder).