

# Woodbury Shortridge

HUMAN-COMPUTER INTERACTION ENGINEER  
1530 Beacon St. Apt. 406, Brookline, MA, 02446

☎ (678) 925 7344 | ✉ whshortridge@gmail.com | 🏠 woodburyshortridge.github.io | 📷 woodburyshortridge | 🌐 woodbury-shortridge-8a9013b1

## Summary

I like to research, design, prototype, and develop technology-based experiences. I am fascinated by human interaction with technology with a special appreciation for multi-sensory experiences. I'm dedicated to shaping emerging technologies with the end-user in mind, and have expertise working with users of varied abilities and in complex task environments. My work spans the fields of human-computer interaction, user experience, user interface research & design, and accessibility.

## Education

### Tufts School of Engineering

Medford, Massachusetts

HUMAN-COMPUTER INTERACTION, CERT

Aug. 2017 - Exp. May. 2019

HCI Certificate graduate program, focusing on the study of new interaction styles, user interface software, display design and perception.

- Coursework: Human-machine system design, Computer Interface Design, Object-oriented programming for Interfaces, Human-computer Interaction
- Advisor: Daniel Hannon, Ph.D

### Georgia Institute of Technology

Atlanta, Georgia

B.S. IN PSYCHOLOGY, WITH HONOR

Aug. 2009 - May. 2016

B.S. Psychology with Honor, giving special attention to sensation & perception, human-computer interaction, and cognitive psychology.

- Coursework: Research methods, Human-factors, Cognitive psychology, Sensation & perception, Music technology, Python for multimedia
- Thesis: Auditory and Head-Up Displays for Eco-Driving Interfaces
- Advisor: Bruce Walker, Ph.D.

## Experience

### The Institute for Human Centered Design

Boston, Massachusetts

LEAD HUMAN-COMPUTER INTERACTION ENGINEER

Aug. 2016 - PRESENT

Lead a broad range of consulting and educational projects with a mission to develop accessible and inclusive technology. Responsibilities include contextual inquiry research with an emphasis on multisensory experience, prototyping, front-end development, and user-centered design. Select projects:

- National Endowment for the Arts | User-centered web app design and development
- ADA National Network | Web accessibility prototyping, user-testing, and development
- Massachusetts Bay Transportation Authority | Inclusive UI design guidance for transit web apps
- Smithsonian Institution | Inclusive touch interactives, digital immersions, and way-finding tools

### Georgia Institute of Technology

Atlanta, Georgia

RESEARCH ASSISTANT, SONIFICATION LAB

Dec. 2014 - Aug. 2016

Worked with multiple interdisciplinary research teams developing multimodal interfaces displaying information for complex task environments. Select projects:

- Conducted participatory design studies and development of auditory and head-up in-vehicle interfaces to allow safer completion of secondary tasks (ICAD'2017)
- Research-driven development of a weather app with a talk-back UI and created earcons that provide the 'glanceable' function of visual weather icons to screen reader dependent users (MobileHCI'2016)
- Assisted research and development of interfaces displaying reliability and confidence for autonomous vehicles (AutomotiveUI '17)

## Publications

### Auditory and Head-Up Displays for Eco-Driving Interfaces

Pennsylvania, PA

THE 23RD INTERNATIONAL CONFERENCE ON AUDITORY DISPLAY

Jun. 2017

Shortridge, W., Gable, T. M., Noah, B. E., & Walker, B. N.

### Talkin'about the weather:

### Incorporating TalkBack functionality and sonifications for accessible app design

Florence, Italy

THE 18TH INTERNATIONAL CONFERENCE ON HUMAN-COMPUTER INTERACTION WITH MOBILE DEVICES AND SERVICES

Sept. 2016

Tomlinson, B. J., Schuett, J. H., Shortridge, W., Chandran, J., & Walker, B. N.

## Invited Talks

2018	<b>HubWeek</b> , Inclusive Design + Innovation Immersion	Boston, MA
2018	<b>American Alliance of Museums</b> , Multi-Sensory Technologies for Inclusion in Museum Exhibits	Phoenix, AZ
2018	<b>Smithsonian Institution</b> , Design for Accessible Digital Surfaces	Washington, DC
2017	<b>American Alliance of Museums</b> , Multi-sensory Technology for Accessibility & Inclusion	St. Louis, MO

## Competitions

<b>Microsoft’s Machine Learning for Accessibility</b>	Cambridge, MA
PARTNERS KALLI RETZEPI, DANIEL LEVINE, AND JUDY SHEN	Jun. 2018
Re-imagined the web-browsing experience with a voice and tangible interface, and leveraging natural language processing to deliver text-summarisation with an easy to navigate, interactive semantic mapping of contents	

<b>Tufts University Sonos Design Challenge</b>	Boston, MA
PARTNER ALI DECKER	Oct. 2017
Winning project: A design exploration into human-AI collaboration, built a mobile app that curates a music play-list based on user supplied photos	

## Mentorship

2018	<b>Tufts University Senior Capstone Sponsor</b> , Inclusive design for the visually impaired	IHCD, Boston, MA
2018	<b>Internship Supervisor</b> , Dorothy Qu   Designer, Dartmouth College	IHCD, Boston, MA
2018	<b>Internship Supervisor</b> , Shuangxing Liu   Engineer, Nanyang Technological University	IHCD, Boston, MA

## Skills

<b>Design</b>	Ableton, Adobe Suite, Sketch
<b>Machine Learning</b>	dLib, Keras, OpenCV,Tensorflow
<b>Programming</b>	C++, Java, Python
<b>Prototyping</b>	Arduino, inVision, MaxMSP, Raspberry Pi, Proto.io
<b>Methods</b>	Biometrics, Contextual inquiry, Personas/scenarios, Usability testing, Storyboarding
<b>Web Technologies</b>	AWS, GraphQL, JavaScript, Node.js, PHP, React.js, SASS, SQL
<b>Statistics</b>	SPSS, R

## Professional Service

<b>UXPA Boston</b>	Volunteer
<b>Boston CHI</b>	Member