

Darren Guinness

ACCESSIBLE USER EXPERIENCE RESEARCHER

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Research Experience

Research Assistant

UNIVERSITY OF COLORADO BOULDER

Boulder, U.S.A

2015-Present

- Initiated research which focuses on the use of robot toys as haptic interfaces to communicate information non-visually.
- Designed new interactive displays and toolkits which connect consumer robots with existing applications and online media.
- Coordinated and conducted multi-site user studies with blind stakeholders.
- Engaged in recruitment and mentoring within the newly formed Superhuman Computing Lab.

Research Intern

ERICSSON RESEARCH

Santa Clara, U.S.A.

Summer 2018

- Designed local and remote crowd-sourced experiments examining spatial audio integrity and perceived localization.
- Implemented a client-server web system which allowed users to perform experiments remotely in a small team.
- Deployed experiments on an online crowd-sourcing platform.

Research Intern

MICROSOFT RESEARCH

Redmond, U.S.A.

Summer 2017

- Designed a new pipeline to supply text captions for images in a web page to a screen-reader user using a web crawler and existing search APIs.
- Created a web server which finds and serves existing captions available on the web to the user's browser via a custom extension.
- Developed an automated system to crawl, cache, and analyze accessibility metadata coverage on the most popular websites.
- Designed initial surveys to assess caption quality and preference with sighted and blind participants.
- This system went on to become the [Caption Crawler](#) product which is currently in Beta.

Research Assistant

BAYLOR UNIVERSITY

Waco, U.S.A.

2013 - 2015

- Initiated research in mid-air gestural interaction as an assistive technology.
- Implemented different approaches for gestural cursor control for people with decreased mobility or pain related impairments.
- Engaged in recruitment and mentoring within the newly formed HCI Research Group.

Work Experience

Technology Support Specialist

BOWLING GREEN STATE UNIVERSITY

Bowling Green, U.S.A.

2009-2013

- Designed, developed, and maintained modules across two content management systems used by the university.
- Met with direct users and stakeholders to scope out and define project goals and requirements.
- Implemented modules including staff evaluations, room reservations, real-time inventory of campus hardware, IT ticketing & scheduling, and more.
- Trained junior student developers in their transition to lead developer.

Skills

- Prototyping** Node.js, C#, Python, PHP, Java, C++, Android, OpenCV, OpenGL, R, Matlab, HTML, CSS, SQL, Laser Cutting, Browser Extensions
- Frameworks** Azure Cloud Services, Bootstrap, Express, React, WebSockets, Cylon.js
- Accessibility** Tactile Media Production, Screen Reading Technologies, Spatial Audio, GUI Automation, Accessible Captioning, Blind Guidance
- Methods** Interviews, Lab Study Design, Survey Design, Statistical Analysis, Repeated Measures Design, Crowdsourcing

Education

University of Colorado

PH.D. IN COMPUTER SCIENCE - ADVISED BY SHAUN KANE

Boulder, CO

(exp) May 2021

Baylor University

M.S. IN COMPUTER SCIENCE - ADVISED BY G. MICHAEL POOR

Waco, TX

July 2015

Bowling Green State University

B.S. IN COMPUTER SCIENCE

Bowling Green, OH

May 2013