

Gabriella Johnson

HCI, Accessibility Researcher

gabriella.johnson@colorado.edu

gabriellamjohnson.com

Research Interests: Human Computer Interaction, Accessibility, Child Computer Interaction, Assistive Robotics

RESEARCH EXPERIENCE

Graduate Research Assistant
University of Colorado Boulder

August 2018 – present
Advisor: Shaun Kane

- Game Changer: Accessible Audio and Tactile Guidance for Board and Card Games
 - Used ArUco markers to track location of game pieces and information on cards
 - Used Computer Vision techniques to detect and track board
 - Created a set of guidelines for accessible board games
 - Evaluated with blind participants
 - Developed a system to empower blind players to be independent players during gameplay
- LabelGen: Automating Braille Label Generation for Card Games
 - Used machine learning techniques to translate symbols into text
 - Developed a mobile application to automatically generate labels for card games

Research Experience for Undergraduates Participant
University of South Florida & Universidad de Oviedo

May 2017 – July 2017
Advisor: Miguel Labrador

- Water Detection in Single Daytime Images for Fall Prevention Systems
 - Worked with a student from the Universidad de Oviedo in Oviedo, Spain
 - Used neural networks to train system to detect water in images; model to be used for fall prevention systems
 - Project was a component of a Ph.D. student's dissertation

Department of Homeland Security Scholar
University of Texas at San Antonio

August 2016 – December 2017
Advisor: Palden Lama

- Analysis and Training in Defense of Biological and Digital Threats
 - Used machine learning techniques to classify digital threats
 - Created guidelines for a digital threat metric system emulating the biological threat system

PROFESSIONAL EXPERIENCE

IT Developer I
Steves & Sons, San Antonio, Texas

May 2016 – August 2016

- Technical Assistant on data entry project
- Constructed data analysis reports using SQL queries
- Constructed C# classes to be included in door classification projects

Intern
BIF Technologies, San Antonio, Texas

June 2015 – May 2016

- Shadowed CEO of company
- Collaborated on several Java projects
- Wrote Software Requirements Specifications for projects

PUBLICATIONS

Gabriella Johnson. *Eye in the Sky: An Audio Description System for Board Games.* Computer Research Association URMD Grad Cohort Workshop. Waikoloa Village, Hawaii. Poster.

Gabriella Johnson & Shaun K. Kane.

Game Changer: Accessible Audio and Tactile Guidance for Board and Card Games. Proceedings of ISS 2019 Daejeon, South Korea. In Review.

EDUCATION

University of Colorado Boulder
Ph.D. in Computer Science

August 2018 – present

University of Texas at San Antonio
B.S. in Computer Science, Minor in Mathematics

August 2015 – December 2017
Summa Cum Laude

HONORS, AWARDS

- Grace Hopper Celebration Scholar, 2019
- GEM Associate Fellow, 2019
- CRA Women Grad Cohort Travel Grant, 2019
- CRA Underrepresented Minorities and Persons with Disabilities Grad Cohort Travel Grant, 2019
- Dean's Summer Research Fellowship, 2018
- Department of Homeland Security Scholar, 2016 – 2017

ACTIVITIES, SERVICE

- ACM CHI Student Volunteer, 2019
- ACM-W Public Relations Officer, 2017
- NCAA Division One Athlete, University of Texas at San Antonio, 2015

PROFESSIONAL DEVELOPMENT

- Grace Hopper Celebration, October 2019
- Computing Research Association Women Workshop, April 2019
- Computing Research Association URMD Workshop, March 2019