

Rachael Shields

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EDUCATION

- 2019 **University of Georgia**
Master of Landscape Architecture
- 2016 **University of Cincinnati**
Bachelor of Science in Architecture

EXPERIENCE

Academic

2022-Pres

University of Wisconsin - Madison

Project Assistant – Aging in Place Lab

- Mobile App UI/UX Project Coordinator for Augmented Reality Home Assessment Tool (ARHAT)
 - Crafting an intuitive user interface and user experience for an application tailored to older adults.
 - Creating graphics and producing demonstration videos.
 - Developing the app's content and navigation sequence to ensure a seamless user journey.
 - Ensuring compliance with Web Content Accessibility Guidelines (WCAG) for maximum accessibility.
 - Serving as the pivotal coordinator between design, development, and occupational therapist teams, fostering cross-functional collaboration and ensuring cohesive project development.
- Qualitative and Quantitative Usability Research
 - Assisted with participants, data capture, and qualitative data analysis using NVivo for a usability study of augmented reality measurement tools.
- Mobile App Review Research
 - Developed methods to assess mobile health apps and conducted an analysis of mobile health apps for home assessment.

Project Assistant – School of Human Ecology Makerspace

- Makerspace Manager
 - Directed training, oversaw maintenance, and created tutorials for the laser cutter, 3D printers, and the plotter.
 - Administered the management of undergraduate assistants and the procurement of equipment.
 - Provided support for student design projects and continually enhanced the makerspace environment.

Grader/Reader

- Course: Entrepreneurialism and Society
- Course: Interior Design II

Hourly Research Assistant

- Independent Mobility and Play in Informal Settlements
 - Survey Data
 - SPSS Statistical Analysis
- University Building Post-Occupancy Evaluation: Biophilic Patterns, LEED Requirements, Perceived Restorativeness, and Green Building Knowledge
 - SPSS Statistical Analysis
 - Dedoose - Qualitative Analysis

2018-2019

Carl Vinson Institute of Government

University of Georgia Graduate Assistantship (Athens, Georgia)

- Provided masterplanning and visioning for various Georgia municipalities.

2018

Landscape Architecture Foundation

Research Assistant (Athens, Georgia)

- Conducted a Case Study Investigation for Historic Fourth Ward Park in Atlanta, Georgia, and UGA's Science Learning Center in Athens, GA.
- Developed methods of research in landscape architecture to quantify social, economic, and environmental benefits.
- Employed a variety of methods including intercept surveys analyzed statistically with JMP, examination of census data and Zillow real estate information, as well as assessments of water quality, among others.

2018

AgLanta

University of Georgia Graduate Assistantship (Athens, Georgia)

- Creating free and accessible construction guides for DIY farm structures.

Professional

2022-2024

Civil & Environmental Consultants, Inc.

Staff Consultant (Remote)

- 3D Modeling

2019-2022

LandDesign

Landscape Designer (Charlotte, North Carolina)

- Construction Documents and Design of Masterplanned Communities
- Robotic Prototyping
- Drone Operation
- 3D Modeling and Rendering
- Signage Design

2019

Streamline Architects

Landscape Designer (East Moline, Illinois)

- Assisted in launching the landscape architecture division of the firm.

2018-2019

Cambardella LLC | Environmental Planning + Landscape Architecture

Designer (Athens, Georgia)

- Wayfinding and Signage Standards
- Product Development – Shipping Container Indoor Environment Control System

2016-2017

Terra Tectonics Design Group

Landscape Designer (Clearwater, Florida)

- Residential Site Plans

- Irrigation and Planting Plans
 - Streetscape and Highway Projects
- 2015 **Quezada Architecture**
 Architecture Intern (San Francisco, California)
- 3D Modeling (high-end residential)
 - Construction Document Production
- 2014 **Lauck Group**
 Interior Design Intern (Dallas, Texas)
- Rendering Production
 - Material Details
- 2014 **Gilmore Group**
 Architecture Intern (New York, New York)
- ADA Compliance
 - Branding

PUBLICATIONS

- [1] Meera, B., Skrove, Z., Kinney, L., Lee, J., **Shields, R.**, Sprecher, B., Tredinnick, R., Ponto, K., Shin, J., Fields, B (Under Review). *The Usability of the Augmented Reality Home Assessment Tool (ARHAT): A Survey Study*. Journal of Aging and Environment. (2024).
- [2] Shin, J., **Shields, R.**, Lee, J., Skrove, Z., Tredinnick, R., Ponto, K., & Fields, B. (2024). *mHealth Apps for Home Assessment for Community Living: A Systematic Quality Appraisal and Accessibility Review*. JMIR mHealth and uHealth.
- [3] Ponto, K., Deniz, H., Tredinnick, R., Çağiltay, B., **Shields, R.**, Sprecher, B., ... & Shin, J. (2023, October). The Benefits of Utilizing Augmented Reality as a Tool for Assessments. *2023 IEEE International Symposium on Mixed and Augmented Reality Adjunct (ISMAR-Adjunct)* (pp. 393-398). IEEE.
- [4] Ponto, K., Tredinnick, R., **Shields, R.**, Fields, B., & Shin, J. (2023, October). Utilizing AR as a Tool for Assessing Accessibility in the Home. *Proceedings of the 29th ACM Symposium on Virtual Reality Software and Technology* (pp. 1-2).
- [5] Fields, B., Skrove, Z., Tredinnick, R., Sprecher, B., Lee, J., **Shields, R.**, Ponto, K., & Shin, J. (2023). *The Usability and Acceptability of the Augmented Reality Home Assessment Tool (ARHAT)*. Innovation in Aging, 7(Supplement_1), 1142-1143. <https://doi.org/10.1093/geroni/igad104.3668>
- [6] **Shields, R.** (2019). *The advancement of the application of kinetics in landscape architecture*. (MLA Thesis) University of Georgia. https://getd.libs.uga.edu/pdfs/shields_rachael_m_201908_mla.pdf
- [7] **Shields, R.**, Calabria, J., Orland, B., & Vick, A. (2018). *Historic Fourth Ward Park, Phase 1 Methods*. The Landscape Performance Series. Landscape Architecture Foundation. <https://doi.org/10.31353/cs1381>
- [8] **Shields, R.**, Calabria, J., Orland, B., & Vick, A. (2018). *University of Georgia Science Learning Center Methods*. The Landscape Performance Series. Landscape Architecture Foundation. <https://doi.org/10.31353/cs1391>

CONFERENCE PRESENTATIONS

- 2018 **AgLanta** (Atlanta, Georgia)
DIY Farm Structure Construction
- 2023 **Environmental Design Research Association (EDRA)**
Usability Test of Mobile-Based Augmented Reality Tool for Assessing Building Accessibility:
A Qualitative Approach

LICENSES AND CREDENTIALS

- 2023 **Registered Landscape Architect**
State of Wisconsin No. 864-14
- 2021 **Remote Pilot License**
Unmanned Aircraft Systems, #4521365
- 2016 **LEED Green Associate**

HONORS, AWARDS, GRANTS

- 2021 **Matterlab Research Grant**
Prototyping Movement: Using C++ and Arduino, 1st Place Award
- 2019 **Georgia ASLA Honor Award – Research: Evaluating Historic Fourth Ward Park**
- 2016 **SparkUC Innovation Challenge Finalist**
- 2012 **FFA State of Michigan Public Speaking Finalist**