

YU ZHAO

☎ (+1) 615-423-3732 | ✉ yu.zhao@vanderbilt.edu | 🏠 <https://zy0531.github.io/yuzhao.github.io/>

RESEARCH INTERESTS

Virtual & Augmented Reality | Human-Computer Interaction | Spatial Perception & Cognition

EDUCATION

Vanderbilt University

Doctoral of Philosophy in Computer Science

Advisor: Dr. Bobby Bodenheimer

Nashville, TN, US

2019 - Present

Beijing Language and Culture University

Bachelor of Science in Digital Media Technology

Bachelor of Science in Finance(Double Major)

Beijing, CN

2015 - 2019

PROFESSIONAL EXPERIENCE

Graduate Research Assistant

Department of Computer Science, Vanderbilt University

Nashville, TN, US

2020 - present

- Project 1: Assessed people's affordance judgments on augmented reality (AR) stimulus by deploying apps on Android & iOS mobile phones and conducting remote user study.
- Project 2: Investigated the role of restricted field of view in mixed reality on action affordances.
- Project 3: Developed global-scale outdoor AR navigation experience on HoloLens 2 by combining GNSS global positioning data.
- Project 4: Investigated the effects of AR cues on human spatial learning and visual attention with mixed reality simulation and eye-tracking to inform cognition-driven navigation system design.

Intern, Analytics and Information Management

Deloitte Consulting (Shanghai) Ltd. Beijing Branch

Beijing, CN

07/2018 - 12/2018

- Understood stakeholders' business needs and identified related information system features
- Analyzed data for business insights and visualized data by Tableau.

PUBLICATIONS

First Author & Representative

- **Yu Zhao**, Jeanine Stefanucci, Sarah Creem-Regehr, and Bobby Bodenheimer. "Evaluating Augmented Reality Landmark Cues and Frame of Reference Displays with Virtual Reality" IEEE VR 2023. (In submission)
- **Yu Zhao**, Jeanine Stefanucci, Sarah Creem-Regehr, and Bobby Bodenheimer. "The Perception of Affordances in Mobile Augmented Reality." ACM Symposium on Applied Perception 2021.
- **Yu Zhao**, Chakraborty Soumyajit, Jeanine Stefanucci, Sarah Creem-Regehr, and Bobby Bodenheimer. "Remote Mobile Augmented Reality for Spatial Cognition." 2021 CHI Conference on Human Factors in Computing Systems - Remote XR Workshop, 2021.
- **Yu Zhao**, Jeanine Stefanucci, Sarah Creem-Regehr, and Bobby Bodenheimer. "Improving Wayfinding with Augmented Reality: Opportunities and Challenges." 24th Agile Conference of the Association of Geographic Information Laboratories in Europe - 1st Intl. Workshop on Spatial-HCI and Geographic-Aware Technologies, 2021.

- **Yu Zhao**, Jeanine Stefanucci, Sarah Creem-Regehr, and Bobby Bodenheimer. "Affordance Judgments in Mobile Augmented Reality with Cues." In 2021 IEEE Conference on Virtual Reality and 3D User Interfaces Abstracts and Workshops (VRW). 2021.

Journal & Conference Proceedings

- Gagnon, Holly C., **Yu Zhao**, Matthew Richardson, Grant D. Pointon, Jeanine K. Stefanucci, Sarah H. Creem-Regehr, and Bobby Bodenheimer. "Gap Affordance Judgments in Mixed Reality: Testing the Role of Display Weight and Field of View." *Frontiers in Virtual Reality*. 2021.
- Gagnon, Holly C., Taren Rohovit, Hunter Finney, **Yu Zhao**, John M. Franchak, Jeanine K. Stefanucci, Bobby Bodenheimer, and Sarah H. Creem-Regehr. "The Effect of Feedback on Estimates of Reaching Ability in Virtual Reality." In 2021 IEEE Virtual Reality and 3D User Interfaces (VR). 2021.
- Rohovit, Taren, Holly Gagnon, Hunter Finney, **Yu Zhao**, John Franchak, Jeanine Stefanucci, Sarah Creem-Regehr, and Bobby Bodenheimer. "Integrating feedback to improve reaching estimates in virtual reality." *Journal of Vision* 21, no. 9 (2021)
- Barhorst-Cates, Erica M., Chiara Meneghetti, **Yu Zhao**, Francesca Pazzaglia, and Sarah H. Creem-Regehr. "Effects of home environment structure on navigation preference and performance: A comparison in Veneto, Italy and Utah, USA." *Journal of Environmental Psychology*. 2021.

TEACHING EXPERIENCE

Graduate Teaching Assistant

Nashville, TN, US

Department of Electrical Engineering and Computer Science, Vanderbilt University

- Scientific Computing Toolbox *2019 Fall*
Instructor: Dr. Bobby Bodenheimer, Dr. Thomas Palmeri, & Dr. D. Greg Walker
- Intermediate Software Design *2020 Spring*
Instructor: Dr. Graham Hemingway
- Algorithms *2020 Fall - 2021 Spring*
Instructor: Dr. Julie Johnson

TECHNICAL SKILLS

Programming Languages

- C#, C++, PYTHON, R, MATLAB, LATEX, Javascript, HTML5, CSS

3D and 2D Design

- Unity3D, Blender, 3dMax, Adobe Illustrator, Adobe Photoshop

Mixed Reality Experience

- HoloLens 1 & 2, Varjo XR-3, Oculus Quest 2, HTC VIVE Pro, ARKit, ARCore

HONORS & AWARDS

- University Graduate Fellowships, Vanderbilt University *2019 - present*
- National Scholarship, Ministry of Education of the People's Republic of China *2018*
- Honorable Mention, 2018 Interdisciplinary Contest in Modeling *2018*