# Tiffany D. Do

Ph.D. Candidate · Computer Science (HCI)

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## Education

**University of Central Florida** — *Orlando, FL*
Ph.D. Computer Science — *2020 - present*
- Advisor: Dr. Ryan P. McMahan
- Research Interests: Virtual Agents, Human-AI Interactions, Virtual Reality and Augmented Reality

**University of Texas at Dallas** — *Richardson, TX*
M.S. Computer Science — *2018 - 2019*

**University of Texas at Dallas** — *Richardson, TX*
B.S. Computer Science — *2016 - 2018*

## Research Experience

2023 **Ph.D. Research Intern**, Ability Team, HCAIX Group, Microsoft Research (MSR)
2020-Pres **Graduate Research Assistant**, eXtended Reality and Training (XRT) Lab, University of Central Florida
2018-2019 **Undergraduate Research Assistant (REU)**, University of Texas at Dallas

## Publications

### Journal Proceedings

1. **Tiffany D. Do**, Steve Zelenty, Mar Gonzalez-Franco, and Ryan P. McMahan. "VALID: A perceptually validated Virtual Avatar Library for Inclusion and Diversity." *To appear in Front. Virtual Reality and Human Behaviour.* https://research.google/pubs/pub52638/

### Conference Proceedings

1. Alec G. Moore, **Tiffany D. Do**, Nicholas Ruozzi, and Ryan P. McMahan (2023). "Identifying Virtual Reality Users Across Domain-Specific Tasks: A Systematic Investigation of Tracked Features for Assembly." *In Proceedings of 2023 IEEE International Symposium on Mixed and Augmented Reality (ISMAR)*, 2023, pp. 1-10. Acceptance rate: 21.2%
2. Jacob Belga, **Tiffany D. Do**, Ryan Ghamandi, Ryan P. McMahan, Joseph J. LaViola Jr. (2022). "Carousel: Improving the Accuracy of Virtual Reality Assessments for Inspection Training Tasks." *In ACM Symposium on Virtual Reality Software and Technology (VRST)*, 2022, pp. 1-10. https://doi.org/10.1145/3562939.3565618. Acceptance rate: 26.7%
3. **Tiffany D. Do**, Mamtaj Akter, Zubin Choudhary, Roger Azevedo, and Ryan P. McMahan. (2022). "The Effects of an Embodied Pedagogical Agent's Synthetic Speech Accent on Learning Outcomes." *In Proceedings of the 2022 ACM International Conference on Multimodal Interaction (ICMI)*, 2022, pp. 1-9. https://doi.org/10.1145/3536221.3556587. Acceptance rate: 33%
4. **Tiffany D. Do**, Ryan P. McMahan, and Pamela J. Wisniewski. (2022). "A New Uncanny Valley? The Effects of Speech Fidelity and Human Listener Gender on Social Perceptions of a Virtual-Human Speaker." *In Proceedings of the 2022 CHI Conference on Human Factors in Computing Systems*, 2022, pp. 1-11. https://doi.org/10.1145/3491102.3517564. Acceptance rate: 24.7%
5. **Tiffany D. Do**, Seong Ioi Wang, Dylan S. Yu, Matthew G. McMillian, and Ryan P. McMahan. (2021). "Using Machine Learning to Predict Game Outcomes Based on Player-Champion Experience in League of Legends." *In Proceedings of 2021 International Conference on the Foundations of Digital Games (FDG)*, 2021, pp. 1-5. https://doi.org/10.1145/3472538.3472579
6. **Tiffany D. Do**, Joseph J. LaViola Jr., and Ryan P. McMahan. (2020). "The Effects of Object Shape, Fidelity, Color, and Luminance on Depth Perception in Handheld Mobile Augmented Reality." *In Proceedings of 2020 IEEE International*

*Symposium on Mixed and Augmented Reality (ISMAR)*, 2020, pp. 64-72. https://doi.org/10.1109/ISMAR50242.2020.00026. Acceptance rate: 28.8%

7. **Tiffany D. Do**, Dylan S. Yu, Salman Anwer, and Seong Ioi Wang. (2020). "Using Collaborative Filtering to Recommend Champions in League of Legends." *In Proceedings of 2020 IEEE Conference on Games (CoG)*, 2020, pp. 650-653. https://doi.org/10.1109/CoG47356.2020.9231735.

### Refereed Extended Abstracts and Posters

1. **Tiffany D. Do** (2021). "Designing Virtual Pedagogical Agents and Mentors for Extended Reality". *In Proceedings of 2021 IEEE International Symposium on Mixed and Augmented Reality Adjunct (ISMAR-Adjunct)*, IEEE, 2021, pp. 486-489. https:doi.org/10.1109/ISMAR-Adjunct54149.2021.00112
2. **Tiffany D. Do**, Dylan S. Yu, Alyssa Katz, and Ryan P. McMahan. (2020). "Virtual Reality Training for Proper Recycling Behaviors". *In ICAT-EGVE 2020 - International Conference on Artificial Reality and Telexistence and Eurographics Symposium on Virtual Environments - Posters and Demos*, 2020, pp. 31-32. https://doi.org/10.2312/egve.20201284

## Awards, Fellowships, & Grants

2022 **Computer Science Merit Scholar (Paper Merit Award)**, University of Central Florida
2022 **Graduate Presentation Fellowship**, University of Central Florida
2022 **Doctoral Research Support Fellowship**, University of Central Florida

2020 **Nominated: ECS Award for Excellence by a Graduate TA**, University of Central Florida
2020 **IEEE CIS Student Travel Grant**, IEEE Computer Information Society
2020 **CRA-WP Travel Grant**, Computing Research Association - Widening Participation

2016 - 2019 **Academic Excellence Scholarship Honors (Full scholarship)**, University of Texas at Dallas *$ 72,953*
2018 **Grace Hopper Scholarship**, University of Texas at Dallas

## Professional Experience

**Microsoft Research (MSR)** *Redmond, WA*
Ph.D. Research Intern *May 2023 - Aug 2023*
- Advised by Ed Cutrell, Martez Mott, and John Tang within the HCAIX (Human-Computing AI Experiences) Group at MSR
- Designed inclusive avatars for people with communication and mobility disabilities
- Used LLMs (GPT-4) to drive the affect and emotion of inclusive, expressive avatars
- Conducted a user study with adults with disabilities to improve AI-driven affective avatars

**Axxess Technology Solutions** *Dallas, TX*
Backend Engineering Intern *May 2019 - Aug 2019*
- C#.NET Developer for home healthcare software
- Developed an API in C#.NET for external clients to get/retrieve patient and prescription data
- Designed MySQL database tables for an automated system that connect patients and new prescription data

**OnPoynt Aerial Solutions** *Richardson, TX*
Full-stack Developer Intern *Aug 2018 - Dec 2018*
- Developed a cross platform mobile application for drone racing as a social network using Ionic framework
- Designed all UX in Adobe Experience Design for the application

## Teaching Experience

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| Fall ’23 | **CAP 3104 Foundations of HCI**, Graduate Teaching Assistant |
| July ’21 | **UCF Camp Connect: Advanced Research Camp**, Graduate Advisor |
| Spring ’21 | **CGS 3763 Operating Systems Concepts**, Graduate Teaching Assistant |
| Fall ’20 | **COP 3502 Computer Science 1 in C**, Lab Instructor, Graduate Teaching Assistant |
| Spring ’20 | **COP 3502 Computer Science 1 in C**, Lab Instructor, Graduate Teaching Assistant |

## Academic Service & Outreach

### Peer Review

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| 2024 | **ACM CHI (Emergency Reviewer)**, **IEEE VR** |
| 2023 | **ACM CHI**, **IEEE ISMAR, IEEE VR** |
| 2022 | **IEEE ISMAR, IEEE VR, ACM CHI**, **ACM MM** |
| 2021 | **Springer Virtual Reality (VIRE)**, **ACM MM (Emergency Reviewer)** |

### Professional Outreach

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| 2023 | **UCF Summer Undergraduate Research Fellowship (SURF)**, Fellowship Reviewer |
| 2022 | **Girls Who Code @ UCF**, Vice President, Co-founder |
| 2022 | **ACM Human Factors in Computing Systems (CHI)**, Student Volunteer |
| 2022 | **ACM MM**, Technical Program Committee |
| 2020-2022 | **ACM-Women (ACM-W) at UCF**, Mentor |
| 2018-2023 | **National Center for Women & IT (NCWIT)**, Aspirations in Computing Volunteer |