Jasmine Joyce DeGuzman

PhD Student · Computer Science

+1 407-520-9033 | jasdeg@ucf.edu | jjbdg.netlify.app

Education

University of Central Florida *Orlando, FL, USA*

PhD Computer Science *Aug. 2024 - Present*

- Research Interests: Virtual/Augmented Reality, Human Perception, Computer Graphics
- Advised by Gregory F. Welch, Gerd Bruder

University of Minnesota *Minneapolis, MN, USA*

BS Computer Science *Graduated May 2024*

- Asian and Middle Eastern Studies Minor, Chinese Concentration
- Advised by Evan Suma Rosenberg

Honors & Awards

2025 **Best Paper (Top 1% of papers)**
IEEE Conference on Virtual Reality and 3D User Interfaces
Graduate Presentation Fellowship
University of Central Florida College of Graduate Studies

2023 **Outstanding Undergraduate Researcher Honorable Mention**
Computing Research Association
Medtronic SWEnet Scholarship
Society of Women Engineers Minnesota Section
Excellence in DEI Leadership Nominee
University of Minnesota College of Science and Engineering
Bhimani Family Scholarship
University of Minnesota Department of Computer Science & Engineering
Dean's List
University of Minnesota College of Science and Engineering

2022 **Bhimani Family Scholarship**
University of Minnesota Department of Computer Science & Engineering

2021 **Best in Category**
MinneHack, University of Minnesota

2020 **Dean's List**
University of Minnesota College of Science and Engineering

Research Experience

Graduate Research Assistant *Orlando, FL*

University of Central Florida *Aug. 2024 - Present*

- Coordinated experimental collaborations with research teams during the development of the Virtual Experience Research Accelerator (VERA), an NSF-funded remote human-subjects research platform for mixed reality.
- Conducted human-subjects experiments capturing quantitative and qualitative data.
- Analyzed results and shared findings through peer-reviewed publications and conference presentations.

Undergraduate Research Fellow *Minneapolis, MN*

University of Minnesota *Jan. 2023-Aug.2024*

- Collaborated with a multi-disciplinary team of Kinesiology and Cognitive Science researchers to investigate how virtual reality exposure impacts the relationship between body movement and motion sickness.
- Investigated using motion data as an objective indicator of simulator sickness in virtual reality by developing and evaluating a statistical model relating head movement complexity to discomfort severity.
- Conducted human-subjects experiments capturing quantitative and qualitative data.
- Analyzed results and shared findings through peer-reviewed publications and conference presentations.

Publications

Note: Asterisk (*) indicates equal contribution

Refereed Journal Papers

[J.1] Tongyu Nie, Courtney Hutton Pospick, Ville Cantory, Danhua Zhang, **Jasmine Joyce DeGuzman**, Isayas Berhe Adhanom, Victoria Interrante, Evan Suma Rosenberg. "Peripheral Teleportation: A Rest Frame Design to Mitigate Cybersickness." In *IEEE Transactions on Visualization and Computer Graphics (TVCG)*, pp. 1-10, 2025. ***Best Paper Award***

Refereed Conference Papers

[C.1] Taylor Laird*, **Jasmine Joyce DeGuzman***, Gerd Bruder, Carolina Cruz-Neira, Dirk Reiners. "You Have Arrived...Kind of: Investigating the Limits of Undetectable Destination Displacement During Teleportation." In *Proceedings of the ACM Symposium on Virtual Reality Software and Technology (VRST)*, pp. 1-11, 2025.

[C.2] **Jasmine Joyce DeGuzman***, Kaori Hirano*, Alice Guth, Tabitha Peck, Evan Suma Rosenberg, Tongyu Nie. " Reduction of Motion Complexity as an Objective Indicator of Cybersickness in Virtual Reality." In *Proceedings of the IEEE Conference on Virtual Reality and 3D User Interfaces (VR)*, pp. 1-9, 2025.

[C.3] Hiroshi Furuya, Zubin Datta Choudhary, **Jasmine Joyce DeGuzman**, Matt Gottsacker, Gerd Bruder, Greg Welch. "Using Simuated Real-world Terrain in VR to Study Outdoor AR Topographic Map Interfaces." In *Proceedings of the Interfantional Conference on Artificial Reality and Telexistence and Eurographics Symposium on Virtual Environments (ICAT-EGVE)*, pp. 1-10, 2024.

Workshop Papers & Extended Abstracts

[W.1] Hiroshi Furuya, **Jasmine Joyce DeGuzman**, Zubin Datta Choudhary, Matt Gottsacker, Gerd Bruder, Greg Welch. "How Can Real-World Feedback and Priming Affect Trust in Simulated Autonomous Agents¿' In *IEEE Conference on Virtual Reality and 3D User Interfaces Abstracts and Workshops (VRW)*, pp. 1-2, 2025.

[W.2] **Jasmine Joyce DeGuzman**, Erik DeVries Smith, Samyok Nepal, Kalinda Miller, Courtney Hutton Pospick, Tongyu Nie, Evan Suma Rosenberg. "Walk Me Through It: Using Impossible Spaces to Embody Graph Traversal Algorithms." In *IEEE Conference on Virtual Reality and 3D User Interfaces Abstracts and Workshops (VRW)*, pp. 1-2, 2024.

[W.3] Jarod Pivovar, **Jasmine DeGuzman**, Evan Suma Rosenberg. "Virtual Reality on a SWIM: Scalable World in Miniature." In *IEEE Conference on Virtual Reality and 3D User Interfaces Abstracts and Workshops (VRW)*, pp. 1-2, 2022.

Industry Experience

Software Engineering Intern *Redmond, WA*

Microsoft – Xbox Player Services *May 2023 - Aug. 2023*

- Designed and developed a React web interface with a Python backend that systematically prompts Large Language Models.
- Experimented with Large Language Models to generate structured datasets of text aligned with company defined taxonomy in order to refine current content moderation platform rules and policies for Gaming spaces.

Software Engineering Intern *Redmond, WA*

Microsoft – Xbox Player Services *May 2022 - Aug. 2022*

- Implemented new machine learning models using Python capable of differentiating sans serif font styles to expand and accelerate automated Gaming compliance testing in line with rigorous company accessibility standards.
- Responsible for updating the JavaScript web user interface that identifies whether an image's text components follow Gaming accessibility compliance standards to incorporate the font style classifier.

Explore Intern (SWE & PM) *Redmond, WA*

Microsoft – Xbox Product Services *May 2021 - Aug. 2021*

- Streamlined the detection of service availability spikes for Xbox customers by spearheading the creation of a new alerting tool with C# and Python designed to reduce the time spent on root cause analysis by identifying the source of service outages.
- Acquired project management and software development experience by directing the project from initial design and development through production; final service ran on +35,000 machines.

Teaching Experience

Summer'24	**NSF REU Site - Human-Centered Computing for Social Good** Graduate Teaching Assistant *University of Minnesota*
Spring'24	**CSCI 4611: Programming Interactive Computer Graphics and Games** Undergraduate Teaching Assistant *University of Minneosta*
Fall'22	**CSCI 4203: Computer Architecture and Machine Organization** Undergraduate Teaching Assistant *University of Minnesota*
Fall'22	**CSCI 2041: Advanced Programming Principles** Undergraduate Teaching Assistant *University of Minnesota*
Spring'22	**CSCI 2041: Advanced Programming Principles** Undergraduate Teaching Assistant *University of Minnesota*
Fall'21	**CSCI 1913: Introduction to Algorithms and Data Structures** Undergraduate Teaching Assistant *University of Minnesota*
Spring'21	**CSCI 1913: Introduction to Algorithms and Data Structures** Undergraduate Teaching Assistant *University of Minnesota*

Mentoring Experience

2024	**Kaori Hirano** Summer REU Student from Carleton College *University of Minnesota*

Professional Service & Community Involvement

Leadership

2025	**IEEE Conference on Virtual Reality and 3D User Interfaces (VR)** Student Volunteer *Saint-Malo, France*
2024	**IEEE Symposium on Mixed and Augmented Reality (ISMAR)** Student Volunteer *Greater Seattle Area, USA*
2023-2024	**Association for Computing Machinery (ACM) Student Chapter** Treasurer *University of Minnesota*
2022-2023	**Association for Computing Machinery (ACM) Student Chapter** Board Member *University of Minnesota*

Peer Reviewing

2025	**Symposium on User Interface Software and Technology (UIST)** Association for Computing Machinery (ACM)
2025	**Symposium on Virtual Reality Software and Technology (VRST)** Association for Computing Machinery (ACM)

Committees

2026	**5th Workshop on Locomotion and Wayfinding in XR** Program Committee *IEEE Conference on Virtual Reality and 3D User Interfaces*

Outreach

2022-2024	**Major Exploration Mentor** University of Minnesota Center for Academic Planning and Exploration (CAPE)
2020-2024	**First-Year Student Mentor** University of Minnesota College of Science and Engineering Ambassadors
2020-2022	**Student Ambassador** University of Minnesota College of Science and Engineering

Professional Memberships

Association for Computing Machinery (ACM): Student Member
Institute of Electrical and Electronics Engineers (IEEE): Student Member