SOUMYAJIT CHAKRABORTY

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Software Developer with Rapid Prototyping, Ambitious Researcher, Strong Interdisciplinary Collaborator, and Have Expertise with Virtual and Augmented Reality Experiments in The Field of Human-Computer Interaction

EDUCATION

· **Doctor of Philosophy in Computer Science** — August 2019 – Anticipated May 2025
Vanderbilt University, Nashville, TN

· **Master's in Computer Science** — August 2017 - May 2019
The University of Iowa, Iowa City, IA

· **Bachelor of Technology in Computer Science & Engineering** — September 2012 – August 2016
Narula Institute of Technology, affiliated to Maulana Abul Kalam Azad
University of Technology, West Bengal, India

TECHNICAL QUALIFICATIONS

· **Game Engine –** Unity 3D Game Engine
· **Programming Languages –** C# (Unity Scripting), R (Data Analysis), Latex (Paper Writing)
· **Designing Software –** Adobe Photoshop

PROFESSIONAL EXPERIENCES

GRADUATE RESEARCHER

Department of Electrical Engineering and Computer Science, Vanderbilt University	Fall 2019 – present

· Looking at the effect of asymmetric locomotion methods on collaborative navigation and wayfinding in a shared virtual environment	Spring 2022 - present
· Generated real-time full body motion captured high fidelity avatars for another graduate student for his study	Summer 2022 – Summer 2023
· Investigated whether Inter-Pupillary Distance of a VR HMD has any effect on perceived distance in VR	Fall 2021 – Spring 2022
· Helped another graduate student in her research to find the latency of the HTC Vive Pro system	Fall 2021
· Conducted remote experiments to perceive distances through mobile AR displays using various avatar animations as cues	Summer 2020 – Spring 2021
· Ran an experiment to perceive distances through Microsoft HoloLens using animated avatars as a cue	Fall 2019 – Spring 2020

Department of Computer Science, The University of Iowa	Fall 2017 – Summer 2019

· Generated a real-time full body motion captured pedestrian avatar and connected it with the driving simulator at National Advanced Driving Simulator, University of Iowa	August 2018 – July 2019
· Developed a real-time head motion captured pedestrian avatar and connected it with the driving simulator at the University of Wisconsin, Madison	September 2017 – July 2018

GRADUATE TEACHING ASSISTANT

Department of Electrical Engineering and Computer Science, Vanderbilt University	Fall 2019 – present

· Created online tutorials for the students taking the Projects in Virtual Reality Design (CS-4249/5249) course in Fall 2020, and 2023, and have become the TA of this course for five consecutive years since Fall 2019
· Graded homework, provided meaningful feedback, and cleared doubts of 40-60 students on average for Computer Networks (CS-4283/5283), Principles of Software Engineering (CS-4278/5278), and Projects in Virtual Reality Design (CS-4249/5249) courses

Department of Computer Science, The University of Iowa	Fall 2017 – Spring 2018

· Evaluated assessments and cleared doubts of 60 students for Algorithms (CS-3330) course for two consecutive semesters

GRADUATE RESEARCH MENTOR

Department of Electrical Engineering and Computer Science, Vanderbilt University	Summer 2021 – Summer 2023

· Mentored several undergraduate students on different research projects related to human perception in virtual reality, navigation and wayfinding in virtual reality, and eye tracking in head mounted displays

UNDERGRADUATE RESEARCH ASSISTANT

Department of Computer Science, Narula Institute of Technology	Fall 2015 – Spring 2016

· Designed a web-based voting system using Aadhar Card (biometrics enabled government ID card for each citizen of India) to allow people to vote securely using their fingerprints for authentication

CONFERENCE PRESENTATIONS AND PUBLICATIONS

· Effects of Asymmetric Locomotion Methods on Collaborative Navigation and Wayfinding in Shared Virtual Environments, presented at **Doctoral Consortium** at **IEEE VR** conference — March 2022

· Distance Estimation with Social Distancing: A Mobile Augmented Reality Study, presented at **PERCxR** Workshop at **ISMAR** Conference — September 2021

· Using Mobile Augmented Reality for Spatial Cognition, presented at 8th International Conference on Spatial Cognition (**ICSC**) — September 2021

· Distance Estimation with Mobile Augmented Reality in Action Space: Effects of Animated Cues, presented at **VHCIE** Workshop at **IEEE VR** Conference — March 2021

· Distance Perception in Augmented Reality with Animated Avatars as a Cue, presented at **VHCIE** Workshop at **IEEE VR** Conference — March 2020

OTHER PUBLICATIONS

· Lauren E Buck, **Soumyajit Chakraborty**, Bobby Bodenheimer. "The Impact of Embodiment and Avatar Sizing on Personal Space in Immersive Virtual Environments". IEEE Transactions on Visualization & Computer Graphics 01 (2022): 1-1.

· Yu Zhao, **Soumyajit Chakraborty,** Jeanine K. Stefanucci, Sarah H. Creem-Regehr, & Bobby Bodenheimer. "Remote Mobile Augmented Reality for Spatial Cognition". *Accepted at Remote XR Studies: Exploring Three Key Challenges of Remote XR Experimentation Workshop in The ACM Conference on Human Factors in Computing Systems (CHI) 2021.*

· Joseph K Kearney, David A Noyce, Kelvin R Santiago-Chaparro, **Soumyajit Chakraborty**, & Yuanyuan Jiang (2018). "Multi-Modal Distributed Simulation Combining Cars, Bicyclists, and Pedestrians". *Safety Research Using Simulation (SAFER-SIM) University Transportation Center.*

· **Soumyajit Chakraborty**, Siddhartha Mukherjee, Bhaswati Sadhukhan, & Kazi Tanvi Yasmin (2016). "Biometric voting system using aadhar card in India". *International journal of Innovative research in Computer and Communication Engineering*, *4(4).*

HONORS AND AWARDS

· Mentored and collaborated with student groups in the VR course (2022 – 2023), leading **two groups** to win **First Prizes in 2022 and 2023**, and **one group** to secure a **Second Prize in 2023** at Vanderbilt University's final showcase competition

· Awarded **Russel G. Hamilton Fellowship** for **three years** (2019 – 2022) and **Engineering Graduate Fellowship** at Vanderbilt University

· **1st Runner Up** of "*Design Your Learning Curve*" contest held by Narula Institute of Technology for **drawing**

· **Winner** of the **drawing contest** in the Senior Division of "*Uday Sangha Club"* in my locality in West Bengal, India

HOBBIES

· Photography
· Driving

· Writing stories and poems
· Painting