Shwetha Rajaram

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shwetharajaram.github.io

University of Michigan, Ann Arbor

School of Information

Overview

My research explores how to enable non-technical users to create AR/VR experiences while guiding them towards safer and more privacy-friendly design. To do this, I develop and evaluate AR/VR authoring tools and design methods that educate users about potential safety, security & privacy harms and equip them with tools to mitigate these issues.

Research interests: human-computer interaction (HCI), augmented & virtual reality (AR/VR), creativity support tools, privacy & security

Education

University of Michigan, Ann Arbor   SEPT 2020 - present
Ph.D. in Information
Advisor: Prof. Michael Nebeling

University of Michigan, Ann Arbor   SEPT 2015 - MAY 2019
B.S.E. in Computer Science & Engineering

Publications

Peer-Reviewed Full Papers

<u>Shwetha Rajaram</u>, Michael Nebeling. *Paper Trail: An Immersive Authoring*   CHI 2022
System for Augmented Reality Instructional Experiences.

Michael Nebeling, <u>Shwetha Rajaram</u>, Liwei Wu, Yifei Cheng, Jaylin Herskovitz.   CHI 2021
XRStudio: A Virtual Production and Live Streaming System for Immersive
Instructional Experiences.

Michael Nebeling, Maximillian Speicher, Xizi Wang, <u>Shwetha Rajaram</u>, Brian D. Hall, Zijian Xie, Alexander R. E. Raistrick, Michelle Aebersold, Edward G. Happ, Jiayin Wang, Yanan Sun, Lotus Zhang, Leah E. Ramsier, Rhea Kulkarni. *MRAT: The Mixed Reality Analytics Toolkit.* Best Paper Award

CHI 2020

Workshop Papers

<u>Shwetha Rajaram</u>, Michael Nebeling. *Extending AR Authoring Tools with Built-in Support for Privacy and Security Analysis.*

SSPXR @ CHI 2022

<u>Shwetha Rajaram</u>, Franziska Roesner, Michael Nebeling. *Designing Privacy-Informed Sharing Techniques for Multi-User Augmented Reality.*

VR4Sec @ SOUPS 2021

Teaching Experience

University of Michigan, Ann Arbor

Graduate Student Instructor, SI 659: Developing AR/VR Experiences

JAN 2022 - present

Graduate Student Instructor, SI 559: Introduction to AR/VR Application Design

SEPT - DEC 2021

Instructional Aide, EECS 493: User Interface Development

JAN 2019 - MAY 2019

Professional Experience

JP Morgan Chase, Jersey City, NJ
Software Engineering Intern

JAN - DEC 2018

John Deere, Moline, IL
Information Technology Intern

MAY - AUG 2017

Awards

CHI 2020 Best Paper Award

MAY 2020

Society of Women Engineers Outstanding Collegiate Member

OCT 2019

MLK Spirit Award, UM College of Engineering   JAN 2019

Service

Assistant to Program Chairs   UIST 2021

Reviewing

ACM Conference on Human Factors in Computing Systems **(CHI)**   2021-2022

IEEE International Symposium on Mixed and Augmented Reality **(ISMAR)**   2021

Leadership & Outreach

Washtenaw Elementary Science Olympiad (WESO)   SEP 2011 - present
Event Supervisor

Society of Women Engineers (SWE) at UMich   APR 2016 - APR 2019
President, Executive Board
Secretary, Executive Board
Summer Engineering Exploration Camp Director
Elementary Outreach Officer

Women+ Excelling More in Mathematics, Engineering and   APR 2016 - present
Science (F.E.M.M.E.S.)
Website Developer
Capstone Activities Coordinator
Volunteer

Academic Mentoring

Jihee Yoon, University of Michigan School of Information *(Masters)*   JAN 2022 - APR 2020

Chen Chen, University of Michigan School of Information *(Masters)*   JUNE 2021 - APR 2020

Sereen Kallerackal, University of Michigan School of Information   FEB - APR 2021
(Masters)

Maya Subramanian, University of Michigan Computer Science   JAN - MAR 2021
(Undergraduate)

Skills

Research Methods: HCI systems research, mixed-methods user studies, user-driven elicitation, interviews, focus groups

Programming Languages: C#, HTML/Javascript, C++, Python

AR/VR Technologies
SDKs: Unity Engine (ARFoundation, Vuforia, MRTK) and A-Frame
Devices: mobile AR, HoloLens 1/2, Oculus Rift, Windows Mixed Reality headsets

Coursework

Ph.D. Courses

Privacy in Information Technology, Human-Computer Interaction, Research Methods, Human-AI Interaction, Algorithms & Societal Implications, Introduction to Statistics and Data Analysis, Doctoral Foundation Seminar *(Information Science Theory)*, Educational Technology Design

Masters in Information Courses

Developing AR/VR Experiences, Engineering Interactive Systems, Contextual Inquiry, Graphic Design, Fundamentals of Human Behavior, Game Development Research, Independent Study (AR/VR)

Selected Undergraduate Courses

Game Development, User Interface Development, Web Systems, Intro to Computer Security, Intro to Machine Learning, Data Structures and Algorithms, Intro to Computer Organization, Intro to Computer Science Theory, Interaction Design, Drawing