Zongzhen (Jack) Yang

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Innovative and passionate Mixed Reality (XR) developer with 6+ years' experience in building highly immersive virtual experiences, with a strong background in Human-Computer Interaction design and Social Computing.

EDUCATION

University of Wisconsin Madison | B.A. in Computer Science & Communication Arts   August 2016 - June 2020
University of California San Diego | VR Development Professional Certificate   July 2020 - December 2020
University of London | Specialization in Virtual Reality   January 2020 - June 2020

PUBLICATIONS

Z.Yang*, B. Rubio-Perez*, M.Frising, M. A. Kats, "Oculus visualization of multispectral images", (Forthcoming, Spring 2022)

Z.Yang, B. Rubio-Perez, M. A. Kats, "Breaking Binocular Redundancy Through Virtual Reality", (Forthcoming, Fall 2021)

J. Salman, M. Gangishetty, B. Rubio-Perez, D. Feng, Z. Yu, Z. Yang, C. Wang, A. Shahsafi, D. Congreve, M. A. Kats, "Passive frequency conversion of ultraviolet images into the visible using perovskite nanocrystals", *Journal of Optics,* Vol. 23, No. 5, 054001 (2021)

Featured in: Cameron, Mike, "Effective Leaders: Four Attributes That Underpin The Core Characteristics of Effective Leadership", *SpiritCast Network* (2021)

RESEARCH

Kats Laboratory of Applied Physics   October 2017 - Present
Researcher (Matlab | Unity | Hyperspectral Imaging | Oculus)
- Design and construct chromatic adjustment algorithms on hyperspectral images to simulate color vision deficiency.
- Develop algorithms to simulate human behavior during Color Vision Deficiency Tests such as Farnsworth-Munsell 100 Hue Test and D-15 to examine the accuracy of chromatic adjustment.
- Program Virtual Reality simulations to visualize research findings through color-calibrated Oculus headsets.

UW Computer Graphics Lab   September 2019 - May 2020
Researcher (Unity | ROS | HTC Vive)
- Built a virtual reality system that allows users to remote control robots with their hand and arm gestures by passing ROS (Robot Operating System) data between Unity and the robot through a network socket with little latency.
- Created a motion playback system that dynamically replicates virtual robot arm movement by interpolating actual robotic experiment data in Unity.

EXPERIENCE

Holos Inc.   February 2019 - Present
AR/VR Developer (Unity | Leap Motion | Blender)
- Build interactive networked VR content management and training simulation system with hand tracking interaction.
- Prototype and deploy key features, including multiplayer networking, hand gesture recognition and user onboarding interfaces, that are critical to winning a $750,000 research contract with the U.S. Air Force.
- Formulate and implement new design decisions and product directions based on user testing observations.

CS559 Computer Graphics   Fall 2019 & Spring 2020
Teaching Assistant (THREE.js | GLSL Shader | Git)
- Provided tutoring and support to 350+ students on course content and assignments for 2 semesters.
- Assisted head faculty members with designing classroom material and graded over 500 student projects.