Siyi Zhang

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Education

University of California, Santa Cruz Sep. 2023 – Present

Computational Media M.S.

University of California, Santa Cruz Graduated in: Jun. 2023

Computer Science: Computer Science Game Design B.S., Minor in Computer Science GPA: 3.81/4.00

Experience

Graduate Researcher, UCSC ASSIST Lab Jun. 2023 - Present

- Contributed to the Smile-Train VR Project, adding new functionalities based on user feedback and requests.
- Designed and conducted user studies, including interviews and thematic analysis of collected data.
- Developed VR interactable scenarios and storylines for social-emotional skill development in children with cleft lip and palate.
- Collaborated with external organizations and facilitated connections for research and development efforts.

Exchange Student Researcher, Zhejiang University, Brain Inspired Education Lab Jun. 2024 - Aug. 2024

- Selected as an exchange student to Zhejiang University through the Global Research Immersion Program for Young Scientists (GripS) program, which connects young scientists from global universities with top institutions in the Yangtze River Delta, China.
- Led the design and organization of game-based activities in a primary school to introduce students to brain science and enhance their engagement in learning.
- Conducted activities aimed at fostering students' interest in future participation in brain-related studies, collaborating closely with educators to tailor the process to the students' developmental levels.
- Contributed to the data analysis portion of a larger study on computational thinking, examining the impact of age, gender, and socioeconomic status (SES) on cognitive development. Applied concepts from psychology and education learned during the program to enhance my ongoing research in social-emotional training games for children with Autistic Spectrum Disorders (ASD) and ADHD.

Undergraduate Research Assistant, UCSC ASSIST Lab Sep. 2021 - Jun. 2023

- Assisted in the development of the Smile Proud VR Project, a game designed for children with cleft lip and palate to improve their social-emotional skills.
- Built game scenes using Unity and C#, contributing to both technical and narrative elements of the project.
- Published a paper with a Ph.D. researcher in IEEE, detailing the impact of VR tools on children's social-emotional learning.
- Led small team meetings, delegated tasks, and ensured project timelines were met.

Projects

TERI 360-Degree Video Project Sep. 2024 - Present

- Developed a VR-based social-emotional training tool for children with ASD.
- Conducted interviews with teachers from TERI Campus of Life, a non-profit organization serving individuals with autism and other developmental disabilities.
- Performed thematic analysis on interview transcripts to guide the creation of a story-driven game prototype that simulates everyday social situations for ASD children.
- Built the prototype in VR as a two-player interactive experience, allowing children to engage with simulated environments for social learning.

ADHD Education Game Project | Collaboration with UC Berkeley May 2024 - Present

- Working on a story-based educational game aimed at helping children with ADHD and their parents better understand emotional regulation for improved social interactions.
- UC Berkeley is collecting and analyzing data to build user profiles and explore the correlation of ADHD with various factors, providing valuable insights for story and game design.
- Conducting literature reviews to explore ADHD-related challenges and integrate psychological insights into the game mechanics.

Smile Proud Project Sep. 2021 - Jul. 2024

- Built VR scenes using Unity for a project focused on helping children with cleft lip and palate improve their social-emotional skills.
- Developed C# scripts and game logic, contributing to both the technical and narrative structure.
- Published findings in IEEE based on project outcomes and its impact on children's emotional learning.

Dream Chaser | twixyuu.itch.io/dreamchaser

- Developed a platform game about a girl, Lucy, who travels through dreams to recover her lost memories.
- Coded core game mechanics using JavaScript and the Phaser game framework.
- Assisted in map and storyline design, contributing to the game's overall aesthetic and flow.

The Great Firewall of Santa Cruz | github.com/szhan253/The-Great-Firewall-of-Santa-Cruz

- Created a program that filters out inappropriate language using a bloom filter and hash table.
- Built the system to detect and replace "oldspeak" with "newspeak" from user input

Publications

Designing a VR Game for the Psychosocial Support of Adolescents with Orofacial Cleft Lip and/or Palate 2023

T. Thang, A. Mishra, ***S. Zhang***, G. Peters, C. Henry, S. Kurniawan

2023 IEEE International Conference on Digital Health (ICDH), Chicago, IL, USA, 2023, pp. 169-176
10.1109/ICDH60066.2023.00032

Usage of Virtual Reality in Combating Social Anxiety Disorders in Non-Native English Speakers: A Survey 2024

S. Zhang, A. Khalid

arXiv preprint, 2024

Technologies

Languages: C#, C/C++, Java, JavaScript, Python

Technologies: Microsoft Office Suite, Adobe Premiere, Adobe

Game Engine/ Frameworks: HTML/CSS, Unity, Unreal, Phaser, Construct 3

Language: Mandarin, English