Henrique Foureaux Lee

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Education

Carnegie Mellon University, School of Computer Science (CMU)
B.S in Computer Science with a Concentration in Computer Systems | 2022-Current
GPA: 3.67/4.00 Expected Graduation 05/26
Relevant Coursework: Interactive Extended Reality (05499), Introduction to Computer Systems (15213), Great Ideas in Theoretical Computer Science (15251), Vector Calculus for Computer Science (21266), Principles of Imperative Computation (15122)

Singapore American School (SAS)
High School Diploma, Magna Cum Laude | GPA: 4.30/4.50 | Graduated 05/22
Leadership: Educating Children of Hispanic Origin (President), Computer Science Honor Society (Co-President), Computer Science Tutoring (Head Tutor), Varsity Soccer (Captain)

Skills

Programming Languages: C#, JavaScript, Java, Python, SML, C, HLSL, Swift, HTML/CSS
Game Engines: Unity, GameMaker
Unity XR SDK's: XR Interaction Toolkit, Oculus VR Integration Toolkit, VIVE Wave
Languages: English (Native), Spanish (Native), Portuguese (Native), Mandarin (Advanced)

Projects

Exploring the Limits of AR Body Ownership through Acupuncture Simulation (Ongoing)
Created an augmented reality acupuncture simulation for the Oculus Quest Pro by leveraging Meta's Oculus VR Integration Toolkit for Unity. Collaborating University of Pittsburgh's medical department in planning a medical study exploring whether AR acupuncture can be used as a placebo in acupuncture treatments. (Augmented Perception Lab Research)

Icospheres Capable of Evolution (ICOE)
Designed a framework consisting of ~21 Unity components and backend classes that implement dynamic behavior trees generated using genetic algorithms. The framework allows game developers to create in-game entities whose appearances and behaviors can evolve based on their interactions with other entities as well as their environment. (Personal Project)

XR Lightweight Hand Pose Recognizer
Designed and thoroughly optimized a Unity system that allows developers to create custom hand poses that can be recognized by any Unity compatible XR headset (Oculus Quest, Vive Pro, etc). Developers can then control program behavior when poses are executed, held, and terminated. (Personal Project)

Investigating the Impact of Interaction Techniques on Immersion in VR Environments
Created and tested three virtual reality environments featuring distinct deliberately flawed interaction techniques. Leveraged these environments in a 10-person user study to analyze and quantify the effects that the flaws had on user immersion. (Augmented Perception Lab Research)