

Spencer Lin

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Education

University of Southern California (2020-2024 Spring)

Los Angeles, CA

Major: Computer Science

Minor: Immersive Media

GPA: 3.33

Relevant Coursework

Data Structures and Object Oriented Design

Introduction to AI

Principles of Software Development

Video Game Programming

Experience

The Aerospace Corporation | Software Engineering Intern

May 2022 - August 2022

- Developed a collaborative AR terrestrial exploration application on the HoloLens 2 that enables gps-enabled navigation, and dynamic loading of photogrammetric UAV maps
- Developed and documented a pipeline for porting Digital Terrain Models to multiple visualization projects
- Prototyped a networked Desktop/AR to AR application for the HoloLens 2 that enables real time collaboration with digital assets specifically for use in environments without access to the world wide web
- Developed a VR application that is connected to a unified database which allows for easy on-demand VR simulations of satellite concept designs

For Traum | Game Director

July 2020 - Present

- Recruited and leads a team of 44 multidisciplinary students from USC, Pasadena ArtCenter, UCLA, and NEU to work on an F2P 2.5D fast-paced platformer for PC/Mac built in Unity
- Directs vision and implementation of the game, communicating with programming, game design, illustrations, animations, sound, UI, and marketing divisions
- Implemented an Agile development cycle with a controlled-decentralized command structure to boost efficiency and morale, culminating in a highly organized and effective cross-functional team with great member retention
- Created detailed documentation of programming and standard practices to streamline production
- Rapidly prototyped core gameplay functions in two weeks

NASA SUITS Team Aegis | Lead Developer

January 2022 - June 2022

- Led multiple interdisciplinary divisions to create an AR HUD for HoloLens 2 to assist astronauts on lunar EVAs by minimizing cognitive load and improving safety using terrain sensing, vitals monitoring, and smart navigations
- Documented a streamlined toolchain setup process to expedite development on the HoloLens 2
- Sourced Windows PCs from USC through Planet Save to enable macOS team members to develop for HoloLens 2

Planet Save | Co-Founder & Project Manager

May 2017 - Present

- Runs a 501(c)(3) environmental nonprofit by leading engineering projects and coordinating with sponsors
- Created a phone AR experience using Unity and Vuforia which projects a holographic character that responds to voice input, offering booth visitors an interactive learning experience to raise awareness about global warming
- Developed an interactive educational kiosk in Unity and Live2D for Planet Save events. Users use voice and touch-screen input to interact with a virtual character, significantly enhancing learning experiences
- Gave a keynote speech about aquaponics at Alibaba's 2018 Xin Philanthropy Conference in China to a live audience of two hundred as well as networks including CCTV which aired the event internationally
- Engineered two sUAS for the San Gabriel Valley Water District to optimize irrigation of municipal green spaces

USC Makers Club | Software Team

January 2021 - Present

- Programmed a voice recognition script to handle wakewords to control a rover-type robot that retrieves objects
- Programmed an object recognition script using OpenCV to identify fruits for a robotic arm to cut

USC Information Technology Services | IT Student Worker

August 2021 - Present

- Images and deploys Mac and Windows computers

Skills & Interests

Coding Languages

Proficient

C#, C++, Java

Intermediate

Python, HTML, CSS

Exploring

Batch, Javascript, Ruby

Software

Unity game engine, MRTK, OpenXR, Vuforia, OpenCV, Git, RenderDoc, Blender, Fusion 360, Cura, ChituBox, MySQL, Pix4D, Bootstrap, Jekyll, JetBrains Suite, Visual Studio, Live2D, any OS

Hardware

Soldering, FDM and SLA 3D printing, CNC laser cutting

Interests

HoloLens 2, AR, VR, autonomous robotics, sustainability, NLP, drone racing, 80's music, sci-fi