Jack Atherton

jack@jack-atherton.com • (925) 487-6158 • jack-atherton.com

Education

Stanford University **2015 – 2022**

Ph.D., HCI & Design, Center for Computer Research in Music and Acoustics.
Thesis: Tool-Building for Amateur Creativity in Virtual Reality.
Ph.D. Minor, Computer Science.

M.A., Music, Science, and Technology.

University of California, Berkeley **2011 – 2015**

B.A., Computer Science (Highest Honors).

Skills

Programming: C++, C# (Unity), JavaScript, Python, C, PHP, Matlab, Java, ChucK.

Research Methods: Research Through Design (HCI), Interactive Machine Learning, Rapid Prototyping, Design Ethnography, Cross-Group/Discipline Collaboration.

Research and Work Experience

Adobe: Research Intern – HCI **June – December 2021**

- Planned and executed novel research agenda on authoring paradigms for AR audio.
- Developed technology stack and prototypes for embodied and remote authoring.

Reality by Example **2019 – 2021**

- Designed tool for environment creation in VR using interactive machine learning.
- Developed tools for personalizing terrain, animation, and music from user actions.
- Created and evaluated communication tools for social connection between creators.

12 Sentiments for VR **2018 – 2019**

- Designed 90-minute narrative VR experience with 12 novel audiovisual interactions.
- Created theory of *doing vs. being* to emphasize thoughtful reflection and calm in VR.
- Published 18 design principles for VR interaction in *Audio-First VR* journal issue.

VRAPL (VR Audio Programming Language) **2017**

- Designed block-based sculptural language for audio, physics, and events in VR.
- Developed room-scale function blocks using embodied three-scale UX design theory.
- Implemented extensible architecture in Unity, allowing new blocks to be added.

Chunity **2016 – Present**

- Created library for real-time sound synthesis and "strongly timed" events in Unity.
- Refactored large ChucK code base to add embedding bridge for C++ programs.

Shazam: Research & Development Intern **2016**

- Created algorithms for playlist generation using musical similarity and social data.

Twilio: Software Engineer Intern, Video Platform Team **2014**

- Architected and built full-stack video conferencing web apps to test infrastructure.

Facebook: Software Engineer Intern, Videos Team **2013**

- Redesigned, rewrote, and maintained the video encoder, increasing efficiency by 8%.