Char Stiles

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EXPERIENCE

Aug'20-Pres	**Software Engineer** at Looking Glass Factory Developing and maintaining core components of a C++ production app. Created a tool to allow customers easily edit and upload 3D iPhone Portrait photos and videos to the display. Creating novel rendering techniques for the Looking Glass holographic display. Investigating and prototyping new ML research for the display, e.g. contextual infill
May'17-Mar'20	**Freelance Unity Programmer** at Beside Digital of MAS, Deeplocal Inc., and Tin Drum Inc. Created Unity driven software for real-time AR experiences, integrating cutting-edge hardware and sensor data to create novel interactions. Developed an AR iOS app among other components of an internationally exhibited AR short. Created a game for Google's Internet Awesome Day in a custom built kiosk.
Sep'18-Oct'19	**Research Associate** at Carnegie Mellon University Robotics Institute Created an augmented reality iOS application in Unity and deployed it to Test Flight. Implemented an on-device image classifier using CoreML. Worked on a small team lead by Jessica Hodgins and James Duesing.
MAY'19-AUG'19	**Research Assistant** at CMU's Human Computer Interaction Institute Worked in Professor Jessica Hammer's lab, on Verizon-funded research into the potentials of virtual reality and 5G technology. Worked on a concept to create a shared living room space, and created tools in Unity, integrating the HTC Vive headset, the RealSense depth camera, and Leap Motion hand tracking. .
Feb'18-Jul'18	**Content Technology Intern** at Nvidia Worked on a small team lead by Omer Shapira to create a Node.js web app for an (unreleased) on-stage demo about ray tracing. This entailed developing a 3D drawing tool in Javascript and WebGL, as well as helping iterate on the story of the demo.
May'16-Aug'16	**Researcher at the Community Robotics Education and Technology Empowerment Lab** at Carnegie Mellon University Robotics Institute Worked with their EarthDev Team, lead by Randy Sargent from Google Earth, on the Explorables project to create data visualizations with maps.

EDUCATION

May '18	**Carnegie Mellon University**, Pittsburgh, Pennsylvania Bachelor of Computer Science and Arts with a minor in Media Design

SKILLS

Programming:	C++, Unity C#, C, WebGL, GLSL, OpenGL ES, HTML/CSS, SML, Python, JavaScript, p5.js, Bash, GIT
Software:	Unity, MatLab, Xcode, Maya, Visual Studio/Code, Adobe CC, Agisoft Photoscan
Prototyping:	3D printing, CNC Routing, lasercutting, welding, woodworking

INTERESTS AND ACTIVITIES

- **Attended the Recurse Center**, a self-lead residency for programmers, from August '19 to October '19. Co-created an AR livecoding WebGL app, lead a series of workshops on GLSL shader programming, learned about category theory, and created a mischievous email server.

- **Performs livecoded visuals and music**, as a founder of Livecode Pittsburgh and a member of Livecode NYC, writes shaders set to algorithmic music on stage as a performance.