Yujin Ariza

developer

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Education

Carnegie Mellon University, Entertainment Technology Center — 09/2017 – 05/2019 (anticipated)
Master of Entertainment Technology

The Juilliard School — 09/2015 – 05/2017
Master of Music, Violin Performance

Columbia University — 09/2012 – 05/2015
Bachelor of Arts, Computer Science
Columbia-Juilliard Exchange Program Participant

Projects

Music in Motion: ETC, Graphics / Audio Programmer — 01/2018 – present
etc.cmu.edu/projects/music-in-motion/

- Authored custom materials for water and other visual elements, using Unity CG Shaders.
- Designed and implemented interactive virtual instruments and audio effects in SuperCollider.
- Implemented a 12-speaker ambisonic sound setup for use in conjunction with virtual reality.
- Platform: HTC Vive

Vango: Painterly representations of images, Columbia — 10/2015
github.com/yariza/vango

- Implemented an image analyzer and brushstroke renderer to convert pictures to painting representations, in C++ and OpenCV.

Rainborg: GPU-accelerated Position-based Fluid Simulation, Columbia — 05/2015
github.com/yariza/rainborg

- Implemented a position-based fluid simulation in CUDA C/C++, running 60,000 particles at 30 frames per second.

Experience

Unity Technologies (unity3d.com) — 06/2017 – 08/2017, 06/2016 – 08/2016
Software Development Intern, Spotlight Team

- Developed a low-level Memory Profiler for analyzing memory usage and fragmentation in the Unity engine, in C++ and C#.
- Collaborated with a Technical Art Director to create shaders in Unity for translucent materials.

Snapchat (snapchat.com) — 06/2015 – 08/2015
Software Development Intern, Camera Team

- Client and server code related to the scanning of Snapcodes, and other features, in C++, Objective-C, and Java.

Research

Augmented Reality For Maintenance and Repair on Google Glass (ARMAR) — 01/2015 – 05/2015
Columbia University, Computer Graphics and User Interfaces Lab
Steven Feiner, Mengu Sukan, Carmine Elvezio

- Implemented 3D user interfaces for visualizing procedural tasks on motion-tracked Google Glass, using Unity.
- Worked in conjunction with Mengu Sukan and Carmine Elvezio to propose new user interface models for visualizing rotational and translational movement.