Lane Spangler

Software Engineer

Education

University of Virginia Expected Graduation: May 2018
B.S., Computer Science Major GPA: 3.66

Technical Skills

- C#, Java, C/C++, Javascript, Python
- Unity, Blender, Modo
- Linux, OSX, Windows
- HTML, CSS, Git
- Vue.js, Angular

Projects

- **Entanglement** (2017)- Led a team of 3 to develop a virtual reality game for Oculus Rift using C# and Unity. The game features procedural audio/haptics as well as original music. It won judge's choice at the end of semester expo.
- **ComposeVR** (2017)- For my capstone research project, I am developing a system for creating electronic music in VR. I use Protocol Buffers to pass messages between a Unity VR application and a plugin for Bitwig Studio 2, which handles the audio functionality. The VR interface features a wiring system which allows users to connect VR instruments to software synthesizers.
- **Dual Contouring** (2016)- Implemented the dual contouring algorithm for extracting isosurfaces in javascript. A small chunk of 3D landscape is procedurally generated, and users can modify it in realtime using boolean operations with cube and sphere brushes.
- **Networked ECS** (2016)- Created a networked implementation of the entity-component-system architecture for game engines using a node.js, websockets, and THREE.js.
- Visit my website for more details about my projects

Work Experience

Microstrategy, Tysons, VA. Summer 2017.
- Used javascript, HTML, and CSS to develop a new solution for displaying large sets of hierarchical data in a grid.
- Eliminated lag on the front-end by implementing virtual scrolling
- Added drag-and-drop functionality for rearranging data in the grid

Coshx Labs, Charlottesville, VA. Summer 2016.
- Worked as a part of a team with Scenethink, a client of Coshx, to develop an event management web application using AngularJS and Ruby on Rails.

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