Christopher S. Ho

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Objective

To enter the gaming industry as a rendering or gameplay programmer

Education

University of California Davis

B.A.S, Computer Science and Philosophy, December 2009
(Upper Division GPA: 3.28 CS, 3.1 Philosophy)

Honors and Awards

SciDAC OASCR for Visualization of Electron-Scale Turbulence in Strongly Shaped Fusion Plasma video

Related Coursework

- Computer Graphics
- Visualization and Graduate Visualization
- Programming Languages
- Software Engineering

Experience

Visualization and Interface Design Innovation, Davis, CA

Undergraduate Researcher **June, 2008 - Present**

A research lab on campus. Developed several cross-platform renderers with Qt and OpenGL for a variety of data sets, specializing in ray-casting volume data of all kinds, from regular grids to AMR to irregular grids. Renders from one plasma data project were featured in Discover Magazine, and won a SciDAC OASCR. Had to handle problems such as volumes not fitting into graphics memory. Also do stream line visualization, with more traditional techniques such as soft shadow mapping and ambient occlusion.

Computer Skills

- Languages: C/C++, C#, Java, PHP, Lua
- Frameworks and APIs: Qt, OpenGL 3.2, CUDA
- Developed applications to work across Windows, Linux and Mac OS X
- Familiar with various IDEs such as Visual Studio, Eclipse and Xcode

Personal Projects

Software Raytracer

Originally developed as a class project, I've added more features than were required by the professor and multi-threading support. In the future, I plan to add photon mapping and OpenCL/CUDA support.

iPhone Ray-caster

The iPhone 3GS now supports OpenGL ES 2.0, and with it more powerful shaders. While 3D-texturing is not available, it can be emulated with multiple samples from a 2D texture, and with a pre-integration table it's possible to do reasonable-quality ray-casting in a reasonable amount of time.

Tile-based Tactical RPG

Planned project, not fully functional yet. It was originally conceived as a Final Fantasy Tactics style tactical RPG, and so far the characters move around the map, but little more.