Ian Dunn
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SKILLS & TOOLS

- **Graphics Industry Experience:** worked on Microsoft's DirectX team and Intel's game developer relations team. Created development tools for DX11 and DX12. Worked on profiling and metrics.
- **Hobby Game Development:** since 2005, game prototyping and development from text-based games to open-world. Created and maintain a rendering and game engine, ionEngine. Exploration of procedural content generation.
- **Technical Depth:** expert knowledge of C++, OpenGL, strong working knowledge of DirectX. Experience profiling both CPU and GPU performance. Have implemented a plethora of real-time graphics techniques including geometry clipmaps, deferred shading, reflection/refraction, particle systems, skinned animation.

Tools

C++ ▪ C ▪ DirectX 11 and 12 ▪ OpenGL ▪ GLSL & HLSL ▪ Raytracing/Raycasting/Raymarching ▪ Procedural Content Generation ▪ Profiling ▪ CUDA ▪ RenderDoc ▪ Git ▪ Mercurial ▪ OpenMPI ▪ Java ▪ PHP ▪ Bash/UNIX ▪ C#/.NET/WPF ▪ SQL ▪ PhysX ▪ Boost ▪ Python ▪ Javascript ▪ Web (HTML5+CSS3/jQuery/Jekyll+Sass/Node.js) ▪ LaTeX ▪ Visual Studio ▪ Adobe Creative Suite ▪ Cinema4D

EXPERIENCE

Lecturer — Cal Poly
Developed material for and taught classes ***Game Design***, ***Systems Programming***, ***Introduction to Computer Graphics***, ***Advanced Rendering Techniques***, and ***Real-Time 3D Computer Graphics Software***. January 2016-Present

Software Engineer Intern — Microsoft
Direct3D 12 team. Created MultiGPU Affinity Layer for Direct3D 12, tool for engine developers. Presented project results to GAB. June-December 2015

Game Software Engineer Intern — Intel
Generated C++ source from IntelGPA frame captures. Added Intel hardware metrics to open-source Renderdoc project. January-May 2015

SDET Intern — Microsoft
Software development, analysis, and research related to social media data and customer sentiment. Summer 2014

ICEX — Cal Poly
International Computer Engineering Experience. Spent one month working abroad exploring cisterns and other water features in Malta and Sicily. Primary roles: visualization software, hardware diagnosis. March 2013

Teaching Associate — Cal Poly
Instructor for ***Systems Programming*** class. Managed student TA staff, developed assignments and examinations, and administrated automatic grading systems. Inverted instruction model, 1 quarter. Fall 2014

Research Assistant — Cal Poly
Spent two summers (2012, 2013) as a research assistant for Dr. Zoe Wood, graphics professor at Cal Poly. Worked on volumetric visualization and surface reconstruction projects.

EDUCATION

California Polytechnic State University
San Luis Obispo, CA (Graduated Fall 2016)
Computer Science MS, with distinction — GPA: 3.90
Software Engineering BS, summa cum laude — GPA: 3.88