Ian Dunn
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SKILLS & TOOLS

- **Graphics Industry Experience:** worked for Microsoft on the DirectX team and for 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. Developed own rendering and game engine, ionEngine. Exploration of procedural content generation.
- **Technical Depth:** strong working knowledge of C++, OpenGL, and DirectX. Experience profiling both CPU and GPU performance. Software testing evangelist. Have implemented a plethora of real-time graphics techniques including geometry clipmaps, deferred shading, refraction/refraction, particle systems, skinned animation.

Tools

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

EXPERIENCE

Head Teaching Assistant [Cal Poly]
Developed material and taught classes *Game Design* and *Advanced Rendering Techniques*. Winter 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 1 month working abroad exploring cisterns and other water features in Malta and Sicily. Primary roles: graphics 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 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