

OBJECTIVE

Full-time employment as a software developer or technical director. Particular interests include feature and commercial animation and effects, video games, graphics programming, shader writing, and effects pipeline development.

WORK

Industrial Light and Magic

2011–Present

EXPERIENCE

Effects Technical Director

Created particle and fluid simulations for feature films including *Pacific Rim*, *The Lone Ranger*, and *The Avengers*. Also designed and implemented ILM's Houdini asset pipeline, allowing artists to import and export production assets via alembic as well as share Houdini digital assets between shots in a consistent way. Extensive use of the Houdini python API and C++ plugin development.

Blue Sky Studios

2008-2011

Effects Technical Director, Sequence Lead

Created visual effects for the animated feature films *Ice Age 4*, *Rio*, *Ice Age 3*, and related marketing. Typical shot work included particle, fluid and rigid body simulation, shader development and development of effects pipelines. Sequence lead responsibilities included interacting with other departments as effects representative, overseeing effects shot work on sequences, resource management, and development of reusable effects systems.

PDI/Dreamworks

2002–2007

Visual Effects Animator (after 2004)

Technical Director—Lighting and Effects (until 2004)

Created visual effects for the animated feature films *Madagascar 2*, *Shrek the Third*, *Over The Hedge*, *Madagascar*, *Shrek 2*, and related marketing. Typical shot work included shader development, particle and fluid simulation, crowd simulation, rendering, compositing, render optimization, resource management, and development of reusable effects systems. Larger projects included design of shader networks for crowd surfacing, and implementation of pipelines for PDI's global illumination and volume shadowing systems.

Industrial Light and Magic

Summer 2000

Research and Development Technical Director (Intern)

Designed and implemented Maya plugins using the Maya API and OpenGL.

**TECHNICAL
SKILLS**

Programming experience in C, C++, Python, Perl, Ruby, OpenGL, GLSL, tcsh. Knowledge of Maya/Maya API, Houdini/HDK, Nuke, RenderMan, Processing. Extensive experience with rendering, shader writing, compositing, simulation. Strong knowledge of computer graphics rendering theory, techniques and programming with particular emphasis on film and video games.

EDUCATION

Brown University, Providence RI

B.A. with Honors in Computer Science

Graduated May 2002

Honors Thesis—studying and implementing physically-correct Monte Carlo rendering architectures, including an implementation of the Metropolis Light Transport algorithm.

UTRA Fellowship—studying spacetime constraint-based animation techniques.