

PROFILE

I am an experienced developer with a diverse background including animation, films, and science. I specialize in pipeline, workflow, and collaboration software. I enjoy playing a key role in creating an environment where teams continually evolve and re-imagine. I am self-motivated and excited to expand my knowledge as well as that of others I work with.

EXPERIENCE

PIX | SYSTEM

MAY 2013 - PRESENT

APPS TEAM SOFTWARE DEVELOPER

Develop end-user applications for iOS and Mac OS X connecting film industry professionals around the globe. Provide key insight and leadership in understanding product placement in the film industry. Recommend strategic vision for future technology. Serve as team specialist in media technology.

Key Contributions

- Built video payer in C++ and Objective-C leveraging FFmpeg to address the highly critical needs of content creators
- Used LLDB's Python API to create custom debugger commands tailored to internal data structures
- Worked with account management staff to develop Objective-C and Python app for streamlined upload of data into the PIX System
- Factored code into shared libraries to maximize utility across entire suite of iOS and Mac apps
- Participated in code reviews for Python, Objective-C, and Swift developers to ensure code quality and develop team understanding of the technologies we use
- Deep dives into subjects including QuickTime "fast-start" and FFmpeg to create solutions that work

LUCASFILM ANIMATION

JUNE 2011 - MAY 2013

PIPELINE TECHNICAL DIRECTOR - "STAR WARS: DETOURS"

Oversaw entire data pipeline for an animated TV series ranging from concept art, through storyboarding, editorial, and final delivery of rendered frames. Worked as "boots on the ground" Python developer to solve workflow issues. Designed and phased-in new technical processes to increase efficiency while continuing to meet ambitious production schedule.

Key Contributions

- Lead three-person technical hub for animated production providing mentorship and code review for production Python scripts
- Troubleshoot, maintained, and enhanced mission critical Python-based automated media conversion pipeline responsible for delivery of all content from storyboards to final frames
- Worked with overseas partners and created tech solutions to ensure tracking, delivery, and quality
- Built out Python-driven workflow with PyQt interface for assembling composite assets from a component asset database and targeting an array of output file formats

LUCASFILM ANIMATION

JUNE 2010 - JUNE 2011

JR. SOFTWARE ENGINEER

Contributed to a team building global pipeline solutions in Python for the collective Lucasfilm companies. Collaborated with counterparts across LucasArts and Industrial Light & Magic to deliver shared solutions for shared goals.

Key Contributions

- Maintained and enhanced media management and conversion system tracking shot iterations from story to final
- Worked with team to design and build a filesystem abstraction layer in Python enabling smart disk management and flexible toolchains
- Built a custom Maya node to provide asset level of detail control within the shot production pipeline
- Created custom distributed rendering tool in Python to free up animators and workstations

LUCASFILM ANIMATION

MAR. 2009-JUNE 2010

ASSOCIATE TECHNICAL DIRECTOR - "STAR WARS: THE CLONE WARS"

Provided tech support and Python pipeline development on a dynamic four-person team tasked with giving directors and story artists whatever tools they needed to tell stories fit for review by George Lucas. Worked with Industrial Light & Magic engineers to integrate bleeding edge storytelling software into the pipeline of a fast moving animated television series.

Key Contributions

- Maintained automated media processing to editorial ensuring solid metadata tracking for later conversion from proprietary formats for delivery to external vendors
- Built Python tools to provide detailed metrics from 3D scenes so producers can have early analysis of show complexity and asses budget impact
- Implemented Python pipeline to provide cameras and other scene data to downstream departments
- Worked closely to with artists to develop Python tools to speed up everyday workflow

LUCASFILM ANIMATION

AUG. 2007-FEB. 2008

ASSETS PRODUCTION COORDINATOR - "STAR WARS: THE CLONE WARS"

Served as production liaison for CG models, textures and rigs across Marin County, Singapore, and Taipei offices.

Key Contributions

- Assessed episodic needs to ensure complete and timely delivery of 3D assets through all production phases
- Worked closely with tools and Information Systems groups to design solutions for workflow and production management

**OPTICAL COATING LABS/JDS UNIPHASE
SOFTWARE AUTOMATION PROGRAMMER**

2007-2002

Worked at science and technology company automating test and measurement systems for thin film optical coating R&D and production. Collaborated in a team made up of both hardware and software engineers to co-develop solutions for problems backed by deep science.

Key Contributions

- Maintained and extended spectral analysis library written in LabVIEW
- Factored code built into reusable units usable by other developers on the team
- Automated measurement systems written in LabVIEW to coordinate precision motion control, tunable laser adjustment, optical power meter reading, and spectral measurement

EDUCATION

Brooks Institute of Photography — Film and Video Production

2005

TECHNICAL SKILLS

- Advanced Python developer with a focus on image pipelines including Maya integration, media processing, and editorial workflow
- Expertise with Cocoa/Objective-C for iOS and OS X. Solid experience in shell scripting, C, and C++
- Experienced interfacing with RESTful APIs, and dealing with serialization formats like JSON and XML
- Libraries including FFmpeg, PyQt, Alembic, imath (from ilmbase libraries), flask, and SQLAlchemy
- Detailed expertise with media file formats including QuickTime/mp4, DPX, and OpenEXR
- Development/project management software including Xcode, VIM, Git, Perforce, Jira, and Bamboo
- Media software pipelines including AVID, Maya, Nuke, RV, and proprietary Previz and 3D tools
- Comfortable working on Mac OS X, Linux, and Windows