Dan Knowlton CG Software Engineer

dtknowlton@gmail.com | (540) 846-8378 | danknowlton.com

EXPERIENCE

Fabrica Software, LLC Los Angeles, CA

Founder & Technical Lead, iograft   Aug 2019 - Present

- Led the development of iograft, a node-based workflow automation tool for Python built with C++ and Qt, from initial design to final implementation.
- Extended the core architecture with a flexible Python API to support workflows running within and between third-party DCCs such as Maya, Unreal, Blender, and Houdini.
- Established a development pipeline utilizing Git, ReviewBoard, and Jenkins to build iograft for Linux, Windows, and MacOS and distribute to a global user base.
- Collaborated with client studios to identify pain points and prioritize feature requests to maximize the impact of new releases.

Industrial Light & Magic San Francisco, CA

Production Engineer I   Jan 2017 - Aug 2019

- Researched, designed, and prototyped USD support within Zeno for artist-facing set authoring tools that enabled layered editing and efficient export workflows.
- Conducted live demos of set authoring workflows for the global team of CG supervisors to raise awareness and demonstrate the impact of USD initiatives.
- Provided pipeline support for shows in production and worked directly with artists to identify issues and ensure smooth asset handoffs between departments.
- Refactored the asset transfer tool to automate restoring and reusing complex assets with hundreds of nested sub-assets, saving artists days of manual work.

Technical Assistant   Jul 2015 - Jan 2017

- Implemented an optimized version of the studio render monitoring tool to manage renders with 1000s of jobs, increasing transparency and artist confidence in the tool.
- Managed studio render resources, monitored render-farm utilization, and coordinated with production teams to diagnose and resolve issues limiting render-farm throughput.

Blizzard Entertainment Irvine, CA

Software Engineer Intern, Cinematics R&D   May 2013 - Aug 2013

- Designed and implemented a PySide-based desktop notification tool for Shotgun to alert producers and artists of task assignments without needing to manually check the web client.

Lucasfilm Animation San Francisco, CA

Production Engineering Intern   May 2012 - Aug 2012

- Developed a set of annotation tools for RV that increased the efficiency of the episodic review process and cut the number of hours required to finish a review in half.

EDUCATION

Cornell University Ithaca, NY

Master of Science in Computer Graphics   Aug 2013 - Jul 2015

University of Pennsylvania Philadelphia, PA

Bachelor of Science in Engineering, Digital Media Design   Sept 2009 - May 2013

- *Courses*: Linear Algebra, Advanced Graphics (Maya API), Data Structures/Algorithms

TECHNICAL SKILLS

Python	Perforce/Git	Maya
C++	Linux/Windows Development	USD
PySide/Qt	Jenkins	CMake