

Experience

Production Engineering Lead: *Jan-2011 to Dec-2013*

Weta Digital: Wellington, New Zealand

- Leading a team of 10-15 software developers tasked with providing frameworks, APIs, and services to support the efforts of Production development teams. Maintaining a high level view of the working pipeline. Working with development teams and department heads to incorporate new tools into their pipelines. Identifying areas that suffer from too much organic growth resulting in large amounts of technical debt. Meeting with department leads to ensure future pipeline goals are within the scope of current development efforts. Replacing giant legacy systems with smaller, more efficient, and lightweight toolsets.
- Integrating new software development strategies into existing workflows and build pipelines. Promoting proper development practices, version control, documentation, testing, and code review processes.
- Supervising developers through the design processes for new and experimental systems. Collecting requirements, testing prototypes, and formulating integration strategies. Collaborating with stakeholders across multiple domains to manage expectations and reduce unexpected side effects. Overseeing pipeline development projects in the areas of:

Software Deployment Management - Subversion, Git, MySQL, Python, dpkg, JIRA

Software Environment Management - MySQL, Postgres, Python, Tcsh, Bash, Zsh

Asset Management - Postgres, Thrift, Elasticsearch, Java, C++, Python, PyQt

Large-scale Data Tracking - Varnish, nginx, Tornado, Python, Cassandra

Imaging & Delivery Formats - Nuke, FFmpeg, YAML, Python

Remote Data Synchronization - Aspera, Python, http

Event Notifications - RabbitMQ, Python

- Growing the team by working with recruitment, interviewing candidates, managing internship programs, and hiring talent. Working with team members to promote opportunities for growth in their current roles, conduct performance reviews, and mitigate conflict.

Production Engineer: *Jan-2009 to Jan-2011*

Weta Digital: Wellington, New Zealand

- Developing and integrating software designed to operate in large scale computing environments: clustered render farm with 40,000+ cores, 1.5+ petabytes of storage.
- Application adoption specialist. Working with technical artists to redesign, refactor, reengineer, and reintegrate prototyped applications. Introducing source control, unit tests, coding standards, and deployment strategies to convert prototypes into Production ready applications.
- Designing and implementing a software deployment system prototype to support a wide range of project requirements, including a Sphinx based documentation pipeline.
- Replacing large legacy Perl based APIs with flexible Python toolsets. General ticket triage, debugging, and trouble shooting of existing toolsets across multiple production domains.

Software Developer: *Aug-2008 to Jan-2009*

Tippett Studio: Berkeley, CA

- Updating and maintaining existing proprietary C++ Maya plug-ins.
- Wrapping existing proprietary C/C++ libraries using boost/python to be compiled for use in Python as a shared library.
- Implementing a PyQt application prototype to support artist workflow for viewing and editing proprietary file formats used to bind surface shaders with scene geometry.

Render Technical Assistant: *May-2007 to Aug-2008*

Tippett Studio: Berkeley, CA

- Providing technical support to all of Production in the areas of rendering and resource management. Monitoring render trends during the course of production and suggested possible solutions to any problems. Regularly working with production, systems, and the code department to address technical issues in these overlapping areas.
- Analyzing and implementing new methods to approach the highest efficiency of resource utilization. Developing tools to streamline repetitive tasks, manipulate render farm resources and provide quantifiable metrics regarding rendering.
- Converting legacy tools from Perl into Python. Integrating source control, testing, and a centralized deployment areas.
- Assisting the software development team in the process of decoupling highly integrated components of the pipeline. Identifying potential bugs, planning integration strategies, testing changes, and implementing new logic to existing pipeline tools.

Technologies

Experienced: Python, Linux, Tcsh, Bash, Git, Subversion

Familiar: PyQt, Perl, C++, RabbitMQ, MySQL, JIRA

Hobby: Erlang, Blender, L^AT_EX

Education

The Art Institute of California: San Francisco

2007. BS, Visual and Game Programming

Film Credits

The Hobbit: The Desolation of Smaug(2013), *Production Engineering Lead.*

The Hobbit: An Unexpected Journey(2012), *Production Engineering Lead.*

The Avengers(2012), *Department Heads & Supervisors.*

The Adventures of Tintin(2011), *Production Engineer.*

Rise of the Planet of the Apes(2011), *Production Engineer.*

Avatar(2009), *Production Engineer.*

Cloverfield(2008), *Render Technical Assistant.*

Conferences

2013. **SIGGRAPH** (*attendee/presenter*), Anaheim, CA.

"BOF: Global VFX Pipelines."

2012. **SIGGRAPH** (*attendee*), Los Angeles, CA.

2011. **KiwiCon** (*attendee*), Wellington, NZ.

2011. **Kiwi PyCon** (*speaker*), Wellington, NZ.

"Python in the VFX Pipeline at Weta Digital."

2011. **SIGGRAPH** (*attendee*), Vancouver, BC.

2009. **SIGGRAPH Asia** (*attendee*), Yokohama, JP.

2008. **SIGGRAPH** (*attendee*), Los Angeles, CA.