

# KATRIN SCHMID

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EU citizen, Australian Permanent Resident, H1B USA

I am an experienced software engineer developing applications in computer graphics, asset and render management. I have worked with large and legacy code bases as well as finding ad hoc and long term solutions to our users problems.

In the past decade I have mostly worked internationally on mission-critical software for major animated and visual effects heavy films like Mortal Engines, War for the Planet of the Apes, Deadpool, Ice Age 4, Independence Day 2, X-Men: Apocalypse, Harry Potter 7, Captain America, Thor and Rio 2.

## EMPLOYMENT

**Weta Digital Wellington**      New Zealand      since 2016

### Senior Software Engineer

- Fully parametric plant and tree procedural for editing and rendering detailed trees and large scale vegetation and landscapes in new render software, some geometry OpenGL visualization
- Developer for the lighting and rendering pipeline, in charge of the crowd render system
- Set up departments software testing automation and CI framework

**Digital Domain Vancouver**      Canada      2015 - 2016

### Senior Software Engineer

- Modernize, extend and speed optimize deferred rendering, crowd and environment system for very large scene rendering to allow consistent results across multiple production sites
- Distributed rendering setup for Vray and Mantra renderers
- Involved in introducing test driven development work flow and code standards

**Dreamworks Animation**      Glendale, USA      2014 - 2015

### Senior Software Engineer

- New custom Look development, Surfacing and Modeling pipeline for Oriental Dreamworks
- Full Mari (texture paint) to Katana bridge to allow fast Arnold rendering with asset system integration and UDIM support through all stages of the pipeline

**Blue Sky Studios - 20th Century Fox Greenwich**, USA      2011 - 2014

### Software Engineer

- Adapted and extended open source Alembic geometry file format for the studio's needs
- Improved lighting and render pipeline to enable efficient parallel production of 3 feature films
- Data base centric dependency tracking system for 18 millions+ files per film reducing time for data caching, rendering and streamlining hand-offs. Coordinated data integration with departments.
- Mentored new developers and trainees

**Fuel VFX** (now part of Animal Logic), Sydney, Australia      2010 - 2011

### Senior Effects Pipeline Engineer

- Lead the transition of Windows based tools pipeline to Linux
- Optimized render farm management and software to unify administration, ease of usage and reduction of render times, designed pipeline for new 3D visual effects software package
- Custom OpenEXR image tools development

**Rising Sun Pictures**      Adelaide, Australia      2010

### Software Engineer

- Designed plug-ins and added to in-house geometry cache format for data exchange between departments, commercial software packages and cloud render farm
- Significantly optimized speed of in-house OpenGL viewer for the Maya viewport

**Dr. D Studios** Sydney, Australia 2008 - 2009  
Software Engineer  
• Developed general and motion capture data tool set, plug-ins for geometric constraints and pre-visualization shot management system  
• Created Preview, Movie player and Editing system integration for streamlined review

**Ilion Animation Studios** Madrid, Spain 2008  
Software Engineer  
Developed visual effects tools and file translator plug-ins in C++

**Realtime Technology AG**, now 3DEXCITE  
(part of Dassault Systèmes) Munich, Germany 2005 - 2008  
Tool Developer  
Workflow automatisisation and technical problem solving

**Plan-b media AG** (now MindMatics AG) Cologne, Germany 2004 - 2005  
Product Manager, Mobile Video

## EDUCATION

**University of Newcastle Newcastle** Australia 2012 - 2013  
Master degree in Information Technology with Distinction  
Focus on Data Analysis and Statistics, Data Mining,  
Requirement Analysis and Project Management. GPA: 7 (out of 7)

**University of Sydney** Australia 2011  
Graduate Certificate in Information Technology  
Focus on Analysis, Modeling, Algorithms and Complexity, Java

**Harvard University Extension School** Boston, USA 2010 - 2011  
Postgraduate student in Parallel Computing and Computer Graphics

**Bauhaus Universität Weimar** Germany 1999 - 2003  
Bachelor in Media Engineering

**Fern-Universität Hagen** Germany 1997 - 2003  
Bachelor in Economics, distance education part-time

## TECHNICAL SKILLS

- Languages: C++, Python, MS and SQL, XML, Yaml, Json, UML
- Graphics Software (APIs and Scripting): Major commercial 3D and 2D packages, scripting and APIs (Maya, Katana, Nuke, Mari), OpenGL, Editorial and image player software, several Renderman and Ray-tracers renders APIs
- Technologies: STL, Boost, Qt/PySide, Local and distributed Asset and Project tracking database software and systems, common image and geometry formats like Alembic, OpenEXR, various Renderfarm and Software configuration systems, SPSS

## FREELANCE AND OPEN SOURCE PROJECTS

- Motion control camera import plug-ins for Houdini for Robot VFX
- Freelance Developer for Remote Render Service of Skeej S.r.l.
- Contributor to openPipeline by Kickstand