

# KATRIN SCHMID

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*EU citizen, Australian Permanent Resident, H1B USA*

I am an experienced software engineer with a proven track record in computer graphics, geometry and 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 centric films like Avatar 2, Mortal Engines, War for Planet of the Apes, Deadpool, Ice Age 4, Independence Day 2, Harry Potter 7, Rio 2 and Captain America.

## 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
- Curve and extrusion based mesh and web procedurals, geometry OpenGL visualization for weavings
- 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

- 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, 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 3d 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, data base

**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, SQL, XML, Json, UML, Linux shells, used Java in University
- 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 render farm 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