

# 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, geospatial data, geometry and asset and data/render management and for industrial applications, film and the internet. I have been an in-house developer for a long time so I am very used to getting requirements from talking to users and customers. Experience with large and legacy code bases as well as finding ad hoc and long term solutions to our users problems. I also worked internationally on mission-critical software for major animated and visual effects centric films (IMDB filmography [www.imdb.com/name/nm3329081](http://www.imdb.com/name/nm3329081)).

## EMPLOYMENT

### **PropellerAero**

Sydney, Australia 2020 to now

#### Senior Software Engineer

Rendering the real world in a browser: Photogrammetry and 3D mapping software to track, visualize, analyze and measure massive geospatial and time-series data sets from worksites in the AWS cloud and online. Mostly using cesium.js and gltf tiles in node.js and typescript.

### **UTS Rapido**

Sydney, Australia 2019 - 2020

#### Senior Software Engineer

Software for custom 3d printing, robots, drones and other prototypes for industry customers and UTS Center for Autonomous Systems, Distributed database integration for drone swarm navigation

- Path planning and simulation for large scale 3d printing

### **Weta Digital**

Wellington, New Zealand 2016 - 2018

#### Senior Software Engineer

- Fully parametric plant and tree procedural for editing and rendering detailed trees, large scale vegetation and landscapes in new render software with over 100 parameters
- Curve and extrusion based mesh and web procedurals, geometry OpenGL visualization for weavings
- 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

### **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
- Data base centric dependency tracking system for 18 millions+ files per film saving cpu and artist time
- 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, Custom OpenEXR image tools development

**Rising Sun Pictures** Adelaide, Australia 2010

Software Engineer

• Designed plug-ins and added to in-house geometry cache format, 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  
• 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 automatisaton and technical problem solving

**Plan-b media AG** (now MindMatics AG) Cologne, Germany 2004 - 2005

Product Manager, Mobile Video

## EDUCATION

• **Udacity Technology Scholarship**, Machine learning track (pytorch) 2019

• **AWS Certified Solutions Architect - Associate** class, Udemy 2018

**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** Remote 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, Typescript, node.js, Linux shells, used Java in University

• Graphics Software (APIs and Scripting): Aws lambda, Major commercial 3D and 2D packages, scripting and APIs, OpenGL, Renderman and Ray-tracers renders APIs, Cesium.js

• 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 Jobqueue/scheduling and Software configuration systems, SQL