

## RESUME

## DANIELA HASENBRING

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DANIELA@KOSHIGAYA.DE  
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### Expertise

- In-depth C/C++ experience (20 years) including plug-in development for Maya, Katana, Nuke and more.
- Expert in Realtime Rendering using OpenGL, Vulkan and Metal since OpenGL 1.2.
- Experienced in GPU Acceleration (e.g. OpenCL, CUDA), CPU Intrinsics and Multithreading.
- Excellent knowledge in Maya API (14 years) and many other APIs.
- Great ability to design and build pretty and intuitive User Interfaces for a great User Experience.
- In-depth knowledge of most commonly used Image Formats.
- Shader writing for MentalRay (1 year), Vray (2 years) and GLSL (10 years).
- Scripting in Python (12 years), MEL (6 years) and PHP (10 years).
- Cross platform development for Windows, macOS, Linux and iOS.
- Experienced in R&D and strong at "Problem Solving".
- Great Team Player with excellent communication skills, able to meet challenging deadlines.
- Excellent in working closely with artists, understanding their problems and fulfilling their needs.
- Operator experience in Maya (16 years), Nuke (4 years) and Photoshop (10 years).
- Strong in web design with HTML5, Java Script, CSS with a WSGI backend (>10 years).

### Achievements

- Received the Sony Outstanding Engineer Award, the highest form of individual recognition for Sony Group engineers, in 2020.
- Developed Sony Pictures Imageworks' next-generation in-house Hair and Fur Grooming software *Fyber*. Used as primary grooming tool by many artists on all live-action and animated shows since 2020.
- Developed Sony Pictures Imageworks' in-house software *Sprout*, a Maya plug-in for efficient creation, manipulation and rendering of large scale environments.
- Presented *Sprout* at Siggraph 2017 ("Interactive Environment Creation with *Sprout*") and *Fyber* at Siggraph 2021 ("Hair Grooming with Imageworks' *Fyber*", also available on YouTube).
- Developed a complex pipeline with software bindings (e.g. Nuke) used by Scanline VFX in all steps of production like I/O, Compositing, Simulation, Rendering, HR and Management - greatly improving their workflows.
- Developed a plug-in for Nuke which allows compositors to completely relight a scene by adding and tweaking common lightsources known from 3D packages like Maya in post production without having to re-render the scene in 2008.
- Created a short film using Motion Capturing - doing all the necessary production steps like directing the actress, editing and cleaning the data using "Motion Analysis EVaRT" and "Autodesk Motion Builder".
- Developed an around 2006 widely used Script Suite for Maya including tools for Modeling, Rigging, Animation and Rendering known as the "Koshigaya Script Suite".

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Work experience

	Client / Company	Position / Project
Since April 2022	NVIDIA Corporation Vancouver, Canada	Senior Software Engineer, IC5 Omniverse
August 2019 - April 2022	Sony Pictures Imageworks Vancouver, Canada	Principal Software Engineer <ul style="list-style-type: none"> <li>• Developed Fyber (see "Achievements"), a standalone hair and fur grooming software with plug-ins for Maya, Katana and Houdini.</li> </ul>
October 2014 - August 2019	Sony Pictures Imageworks Vancouver, Canada	Senior Software Engineer <ul style="list-style-type: none"> <li>• Developed Sprout (see "Achievements") and many other Maya plugins, e.g.:</li> <li>• Playblast with support for deformation motion blur.</li> <li>• Custom texture projection shader with support for shadowing.</li> <li>• Texture blending shader with a custom tool to efficiently paint vertex masks on very high resolution geometry.</li> <li>• and many more .. :)</li> </ul>
August 2013 - September 2014	Topalsson Munich, Germany	Senior Software Engineer <ul style="list-style-type: none"> <li>• Development of a car-configurator in Unreal Engine 4 and Unigine.</li> </ul>
November 2011 - August 2013	Scanline VFX Munich, Germany	Senior Software/Pipeline Engineer Several feature and tv movies [NDA] <ul style="list-style-type: none"> <li>• Development and Maintenance on the new production pipeline.</li> <li>• Writing of Vray shaders and 3ds Max plugins.</li> <li>• Development of Nuke effect plugins.</li> </ul>
June 2011 - November 2011	Dr. D Studios Sydney, Australia	Motion Capture Pipeline TD Happy Feet 2 [feature] <ul style="list-style-type: none"> <li>• General pipeline development for animation and moedit.</li> <li>• Development of Tools for Shotgun and Tank.</li> </ul>

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Work experience  
(continued)

	Client / Company	Position / Project
May 2009 - June 2011	Scanline VFX Munich, Germany	Senior Software/Pipeline Engineer Several feature and tv movies [NDA] <ul style="list-style-type: none"> <li>• Development of a new production pipeline, replacing the old one.</li> <li>• Writing of Vray shaders and 3ds Max plugins.</li> <li>• Development of Nuke effect plugins.</li> </ul>
February 2009 - April 2009	Parasol Island GmbH Düsseldorf, Germany	Software/Pipeline Engineer, Rigging TD Audi R8 [commercial] <ul style="list-style-type: none"> <li>• Development of a complex Car-Setup.</li> <li>• Developed and introduced an OpenEXR pipeline.</li> </ul>
May 2008 - December 2008	PIXOMONDO IMAGES Ludwigsburg, Germany	Software/Pipeline Engineer Ninja Assassin [feature] 2012 [feature] <ul style="list-style-type: none"> <li>• Development of the production pipeline.</li> <li>• Writing of 3ds Max plugins used for crowd caching.</li> </ul>
March 2008 - April 2008	Cine plus vision GmbH Ludwigsburg, Germany	Software/Pipeline Engineer, Effects TD Prisoners of the Sun [feature] <ul style="list-style-type: none"> <li>• Fluid simulations of smoke and dust.</li> <li>• Development of an OpenEXR pipeline.</li> </ul>
January 2007 - February 2008	Elektrofilm Stuttgart, Germany	Software/Pipeline Engineer, Effects TD Armageddon - The longest night [tv] Hafen der Hoffnung - Die letzte Fahrt der W. Gustloff [tv] Lamborghini [commercial] <ul style="list-style-type: none"> <li>• Fluid simulations for Fire, Smoke and Water.</li> <li>• Development of tools to shatter windows.</li> <li>• Development of a crowd tool for Maya.</li> <li>• Development of a pipeline for fast interaction between Maya and Fusion.</li> </ul>
September 2006 - November 2006	Berliner Film Company Berlin, Germany	Cloth TD / Effects TD Happily N'Ever After [feature] <ul style="list-style-type: none"> <li>• Cloth simulation for the main characters.</li> <li>• Fluid simulations for Smoke and Dust.</li> </ul>

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### Education

September 2003 - September 2006	The German Film School Berlin (Elstal), Germany	German diplom (equiv. to masters) as "Digital Artist"
September 1999 - August 2002	Max-Eyth Gymnasium Kassel, Germany	Abitur (HSC)

### Knowledge & Skills

Software	Maya, Katana, Photoshop, Nuke, 3ds Max, Shake, After Effects
Coding Languages	C++, Python, Java Script, Objective C, Java, Delphi, C#, PHP, MEL
Software APIs	Maya, Katana, Nuke, Shake, 3ds Max, Vray, MentalRay
Technologies	OpenGL, Vulkan, Metal, Qt, HTML5, OpenCL, OpenAL, OpenEXR, Cocoa/Touch
Languages	German (native), English (fluent)