Lindsay Kay - 3D Web Software Engineer

Contact

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Summary

3D Web software engineer delivering solutions for BIM, CAD, medical visualization and architecture; independent open source developer.

Experience

2019–present **BIM 3D Software Engineer** *D-Studio,* Mechelen, Belgium.

- Developing a suite of browser-based 4D BIM applications, using the xeokit SDK

2019–present **BIM 3D Software Engineer** *OpenProject,* Berlin, Germany.

- Developing a BIM version of the OpenProject project management software, using the xeokit SDK
- xeokit.github.io/xeokit-viewer

2019–2019 **BIM 3D Software Engineer** *PlanRadar,* Vienna, Austria.

- Providing BIM software development and consultancy services on the xeokit SDK

2017–2019 **BIM 3D Software Engineer** *BIMData,* Lyon, France.

- Created V1 of the 3D viewer within the BIMData IFC visualization platform
- Writeup: xeolabs.com/portfolio/bimdata

2010–2019 **Medical Visualization 3D Software Engineer** *BioDigital Systems,* New York, New York.

- Created the core 3D rendering tech within the BioDigital Human Web-based medical visualization platform
- Over four million subscribed users
- Won the 2015 Webby Award for Best Healthcare Website
- Won the 2013 SXSW Classic Interactive Award
- Lead 3D development (2010-2015, 2018-2019)
- Writeup: xeolabs.com/portfolio/biodigital-human

2018–2018 **CAD 3D Software Engineer** *SolidComponents,* Halmstad, Sweden.

- Created the 3D viewer within the SolidComponents online CAD product catalog

2018–2018 **BIM 3D Software Engineer** *TNO,* Amsterdam, Netherlands.

- Contributed various features to BIMSurfer V3

2015–2017 **BIM 3D Software Engineer** *TNO,* Amsterdam, Netherlands.

- Created the 3D viewer within BIMSurfer V2, an open source tool for Web-based IFC visualization

2016–2016 **3D Software Engineer** *zSpace,* Sunnyville, CA.

- o Created WebGL demos for the zSpace 300 mixed-reality 3D display.
- o Demonstrated at GDC 2017
- o Writeup: xeolabs.com/portfolio/xeogl-and-zspace

2008–2010 **Java/JavaScript Developer** *SMX,* Auckland, New Zealand.

2005–2008 **Wind Turbine Test Engineer** *AIOTec,* Christchurch, New Zealand.

2001–2003 **Java Developer** *R.A. Ward Ltd.*

1997-2001 **Web Developer** *Online-World Ltd.* New Zealand & San Diego.

Selected Projects

2013–2013 **Smile Train,** New York. Created the 3D rendering tech within the WebGL-based Smile Train virtual surgery simulator, which provides surgeons in 1100 hospitals in 150 countries with next generation surgical training technology for learning surgical techniques in cleft lip and palate repair.

- o Won NTSA Award for Outstanding Achievement in Modeling & Simulation
- o Showcased at TEDMED 2014
- o smiletrain.org

2019–present **xeokit,** Berlin, Germany. A dual-licensed 3D WebGL SDK for viewing large BIM and CAD models in the browser.

- o Presented at SIGGRAPH 2019.
- o Users include OpenProject, PlanRadar, HOK Architects, Eyeonym, uniZite, Blue Star Qatar, D-Studio, BIMData, BuildSort and Systhema
- o xeokit.io

2015–present **xeogl** - An open source WebGL-based 3D library for engineering visualization.

- o xeogl.org

2007–2016 **SceneJS** - One of the first popular open source WebGL 3D libraries.

- o scenejs.org

Talks & Publications

2015 **The xeogl & SceneJS WebGL Libraries,** *Berlin WebGL Meetup 2015*

2012 **SceneJS - A WebGL-Based Scene Graph Engine,** *OpenGL Insights 2012*

- o Download: xeolabs.com/pdfs/OpenGLInsights.pdf

2010 **SceneJS WebGL Library,** *WebGL Camp #1, Stanford University, 2010*

- o http://www.gameenginegems.net/gemsdb/article.php?id=1188

Education

2000–2004 **BSc, Computer Science,** University of Canterbury, Christchurch, New Zealand

- o Course tutor for software engineering and algorithms

Skills

Graphics application, engine and API development

Medical, CAD, BIM and architectural visualization

WebGL, OpenGL

C, C++, Java, JavaScript/ECMA6, HTML, CSS, Git, Linux, Open Source