Lindsay Kay - 3D Web Developer

Personal Information

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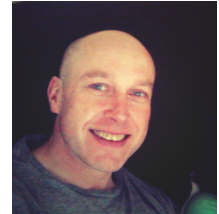
Summary

Freelance 3D graphics software engineer providing Web-based solutions for BIM, CAD and medicine; independent open source developer.

Recent Work Experience

2017–present **WebGL Developer** *BIMData,* Lyon, France. Responsible for the 3D viewer within the BIMData IFC visualization platform.

- Writeup: xeolabs.com/portfolio/bimdata

2010–present **WebGL Developer** *BioDigital Systems,* New York, New York. Responsible for the core 3D rendering tech within the BioDigital Human Web-based medical visualization platform.

o Lead 3D development (2010-2015, 2018-present)

o Over three million subscribed users

o Won the 2015 Webby Award for best Healthcare Website

o Won the 2013 SXSW Classic Interactive Award

o Writeup: xeolabs.com/portfolio/biodigital-human

2018–2018 **WebGL Developer** *SolidComponents,* Halmstad, Sweden. Built the 3D viewer within the SolidComponents online CAD product catalog.

2018–2018 **WebGL Developer** *TNO,* Amsterdam, Netherlands. Contributed to BIMSurfer V3.

2015–2017 **WebGL Developer** *TNO,* Amsterdam, Netherlands. Built the 3D viewer within BIMSurfer V2, an open source tool for Web-based IFC visualization.

2016–2016 **WebGL Developer** *zSpace,* Sunnyville, CA. Created WebGL demos for the zSpace 300 mixed-reality 3D display.

o Demonstrated at GDC 2017

o Writeup: xeolabs.com/portfolio/xeogl-and-zspace

Selected Projects

2013–2013 **Smile Train,** New York. Responsible for 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 Providing development and support services to commercially-licensed users.
o Users include Konstruktum, OpenProject, PlanRadar, Eyeonym, uniZite, Blue Star Qatar and D-Studio
o xeokit.io

2015–present **xeogl** - 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 & Background Knowledge

Technical skills *(recent)*

3D graphics algorithms

3D application, engine and API design

WebGL (1 & 2), OpenGL, glTF

Medical and architectural visualization, BIM, BIMServer, BIMSurfer

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

Remote freelancing, technical writing