

Kevin Karsch

OBJECTIVE

Research and development role where I can leverage my — Research and development role where I can

EXPERIENCE

Co-Founder, CTO

Lightform, 2015–now

- Leading the technical divisions of the company: software, hardware and research
- Project manager and individual contributor for software development and research
- Additional responsibilities include hiring, IP, company direction and board member
- Products developed:

Lightform LF1

A hardware device that attaches to any projector to enable easy and fast AR experiences driven by computer vision (*released 11/2018, \$5M+ sold*).

Lightform LF2

The first integrated projector-camera-computer for projected AR (*ships Q4 2019*).

Lightform Creator

Content creation software for projection mapping used with Lightform hardware products, including semiautomatic mapping, selection, and effects (*released 11/2018*).

Lowe's Canvas

An autocalibrating projection system for home renovation and redecoration, installed at 20 Lowe's Home Improvement stores across the country (*delivered 12/2016*).

Computer Vision Engineer

Lumenco, 2012–2014

- Developed software for displaying glasses-free, 3D media via autostereoscopy
- Made an algorithm that synthesized extreme viewpoints from stereo images and videos

Computer Vision Engineer

Precision Augmented Reality Works, 2013

- Created software to detect changes in retail store displays for inventory management
- Implemented a method to automatically register 3D inventory models with image data

Intern

Adobe Research/Microsoft Research, 2011/2012

- Published an image editing method for automatically inserting 3D models into pictures
- Aspects of this work have been built into Adobe Dimension
- Published a monocular depth estimation technique and accompanying dataset

EDUCATION

PhD in Computer Science

University of Illinois Urbana-Champaign, 2009–2015

- Thesis: *Inverse Rendering Techniques for Physically Grounded Image Editing*
- Advisors: David Forsyth, Derek Hoiem

BS in Math, Computer Science

University of Missouri-Columbia, 2005–2009

- Summa Cum Laude with Departmental Honors in Math and Computer Science

INFO

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LINKS & PAPERS

🏠 kevinkarsch.com

📄 lightform.com

🔄 github.com/kevinkarsch

📖 kevinkarsch.com/papers

📑 kevinkarsch.com/patents

📁 kevinkarsch.com/arxiv

📺 vimeo.com/kevinkarsch

🌐 linkedin.com/in/kevinkarsch

LANGUAGES

C/C++ (STL/c++11/14/17),

Python, Matlab

LIBRARIES

OpenCV, Libav/FFmpeg,

Qt/QML, Tensorflow

SOFTWARE

Git, Jira, Blender, Figma,

Adobe Ps/Ae/Pr/Dn

OPERATING SYSTEMS



INTERESTS

