elturner.github.io

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#### **EDUCATION**

## University of California - Berkeley

Ph.D. in Electrical Engineering and Computer Sciences M.S. in Electrical Engineering and Computer Sciences

May 2015

May 2013

GPA: 4.00/4.00

3D and 2D surface reconstruction algorithms for architectural modeling

## Carnegie Mellon University

B.S. in Electrical and Computer Engineering

May 2011

QPA: 3.91/4.00 - Dean's List Minors in Physics, Computer Science

## WORK EXPERIENCE

#### Google

03/2016 - Present

Senior Software Engineer - Daydream AR/VR

- Developed real-time passive depth sensing on mobile hardware.
- Tech lead on real-time 3D reconstruction techniques with noisy depth on smartphones.
- Tech lead on foveated rendering techniques for mobile VR headsets.
- Developed custom hardware-foveation displays for VR.
- 6 patents filed.

## Indoor Reality, Inc.

06/2015 - 03/2016

Chief Technology Officer (CTO)

- Principal Investigator (PI) on multiple federal grants totalling \$2 Million.
- Tech lead in developing hardware, software, and algorithms used for automatic and rapid indoor building 3D modeling via backpack-mounted scanning system.
- Developed software for data collection, algorithmic processing, and visualization.
- Supervisor for visualization and deployment development team.
- 3 patents filed.

### @Maps

08/2014 - 12/2014

Principal Engineer

- Developed hardware systems and surface reconstruction software for building modeling. Research and development of camera calibration procedures.

#### Speir Technologies

01/2013 - 01/2014

Software Development Consultant

- Developed demo application and 3D modeling algorithms for remote viewing medical ultrasound scanning.

### **MIT Lincoln Laboratory**

05/2011 - 08/2011

Summer Intern - Group 104: Intelligence and Decision Theory

- Developed algorithms for creation of synthetic data for Synthetic Aperture Radar (SAR) CCD track-finding.

# TECHNICAL SKILLS

Programming Languages: C/C++, Java, Python, Matlab, BASH, x86

Markup Languages: HTML, LaTeX, Markdown

**Software:** Unity, Autodesk Revit, Recap, Navisworks, AutoCAD, SolidWorks, Visual Studio, Git, SVN

Frameworks: Eigen, Boost, OpenCV, PCL, OpenGL, GLSL, Halide, Qt, Android, Google Tango, Doxygen

# AWARDS

Awarded Best Student Paper - GRAPP 2014

01/2014

Awarded NSDEF Fellowship

09/2013 - 05/2016