Eric Lee Turner, PhD

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OVERVIEW

Tech lead and manager with a strong background in research, algorithm development, and software engineering. Core areas of focus include AR/VR/XR, Surface Reconstruction, Depth Sensing, Foveated Rendering, Computer Graphics, Computational Geometry, SLAM, Multiview Stereo, Signal Processing, and Computer Vision.

WORK EXPERIENCE

Google 03/2016 - Present
Staff Software Engineer - XR Team
- Engineering Manager and Production Lead of XR World Geometry.
- Tech lead and manager for Depth Perception in AR, leading 20+ engineers on depth sensing, foveated rendering, and surface reconstruction.
- Tech lead for ARCore Depth and Semantics APIs, utilized across 3500+ applications, including Google Maps LiveView, Snapchat, Tiktok, Facebook.
- Developed real-time passive depth sensing for off-the-shelf mobile hardware, enabling single-camera depth sensing up to 40 meters in range, expanding ARCore Depth API to 60+ meters in range.
- Tech lead on real-time 3D reconstruction techniques with noisy depth on smartphones.
- Integrated depth functionality for Portrait Mode in Pixel 3.
- Daydream AR/VR - Tech lead on foveated rendering techniques for mobile VR headsets, creating foveation API for VRCore.
- Developed custom hardware-foveation displays for VR.
- *12 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.

EDUCATION

University of California - Berkeley
Ph.D. in Electrical Engineering and Computer Sciences May 2015
M.S. in Electrical Engineering and Computer Sciences May 2013

Carnegie Mellon University
B.S. in Electrical and Computer Engineering May 2011
Minors in Physics, Computer Science

TECHNICAL SKILLS

Programming Languages: C/C++, Java, Python, Matlab, BASH, x86
Markup Languages: HTML, LaTeX, Markdown
Software: Unity, Visual Studio, Git, SVN
Frameworks: Eigen, Boost, OpenCV, OpenGL, GLSL, Halide, Qt, Android, Doxygen