Keehong Youn

keehong@ucsb.edu

## Employment

- Apple Inc. Vision Products Group, System Software team
  - From 10/28/2019 to Present
  - One Apple Park Way, Cupertino, CA 95014
  - Role: AR/VR Software Engineer
  - Develop and validate computer graphics software for AR (augmented reality) and VR (virtual reality) systems. Specifically, design test procedure and write computer program for evaluating the quality of computer graphics rendering of AR/VR application. So far have accomplished objective metric system for quantitively comparing different rendering results.
  - Design prototype applications and internal software for Apple Vision Pro product

## Education

- Ph.D in Media Arts and Technology
  - Completion: 06/14/2019
  - University of California, Santa Barbara, United States of America
  - Advisor: JoAnn Kuchera-Morin
  - Research 1: Spherical projection mapping software for large scale VR system
  - Research 2: Volumetric visualizations of scientific data in VR environment
  - Emphasis: Developing digital media system for artistic and scientific purposes

- Master of Science in Mechanical and Aerospace Engineering
  - Completion: 02/26/2014
  - Seoul National University, Republic of Korea
  - Advisor: Hyunwoo Bang
  - Research 1: Finger tracking interface development using depth sensing camera
  - Research 2: AR based cell tracking software development for microscopes
  - Emphasis: Designing innovative interface for human computer interaction

- Bachelor of Science in Mechanical and Aerospace Engineering
  - Completion: 02/24/2012
  - Seoul National University, Republic of Korea
  - Graduation project: autonomous cruise control using depth sensing camera

Publication

- PROBABLY/POSSIBLY?: An Immersive Interactive Visual/Sonic Quantum Composition and Synthesizer
  - JoAnn Kuchera-Morin et al.
  - Proceedings of the 25th ACM international conference on Multimedia, 2017

- Time-lapse microscopy using smartphone with augmented reality markers
  - Dongyoub Baek, Sungmin Cho, Kyungwon Yun, Keehong Youn and Hyunwoo Bang
  - Microscopy Research and Technique, Vol. 77, Issue 4, 2014

- ElaScreen: Exploring Multi-dimensional Data using Elastic Screen
  - Kyungwon Youn, Junbong Song, Keehong Youn, Sungmin Cho, Hyunwoo Bang
  - SIGCHI 2013 Extended Abstracts

Skills

- Interactive real-time graphics programming with OpenGL/GLSL and Metal framework
- General systems programming with C, C++, Objective-C, and Swift
- Multimedia programming and fast prototyping with OpenFrameworks(C++) and Processing(Java)
- Computer Vision applications using OpenCV (Python, C++)

Other

- Open Source Software Contribution : “Allolib”, a C++ library for interactive multimedia applications
  - Main author since the beginning of the project
  - https://github.com/AlloSphere-Research-Group/allolib