Bicheng Luo

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Education

Columbia University, New York, NY *Sep 2017–Dec 2018(Expected)*
M.S. in Computer Science (Vision/Graphics Track)

Tsinghua University, Beijing, CN *Sep 2014–Jul 2017*
M.Eng. in Software Engineering, GPA: 94.9/100, Ranking: 2/156

Nanjing University, Nanjing, CN *Sep 2010–Jul 2014*
B.Eng. in Software Engineering, GPA: 4.37/5.0

Professional Experience

Google, Software Engineering Intern | Geo Platform *May 2018–Aug 2018*
◇ Developed UGC features for AR Place Discovery app:
- Implemented Place Understanding based on Firebase ML Kit (Text/Landmark Recognition) and Cloud Vision API
- Designed geometry algorithms to generate storefront facades in 3D space according to a single street view image
- Utilized ARCore to anchor user generated place information with real world storefronts on Android
- Implemented back-end services using Protocol Buffer and gRPC

Microsoft, Software Engineering Intern | Windows and Devices Group *Jun 2016–Aug 2016*
◇ Developed avaChat, an application based on UWP and Unity3D for chatting with friends in 3D avatars
◇ Developed avaChat_Holo, a transplanted version of avaChat on Microsoft HoloLens

Leezee, Startup Co-founder & CTO *Oct 2014–Feb 2016*
◇ Built an iOS application utilizing face detection to create interactional short videos:
- Integrated face detection with GPUImage
- Wrote GLSL shaders for GPU-accelerated video processing
- Utilized MBaaS framework (Parse) to implement social network services
- Built storage solution for short videos on Amazon S3 with network modules using AFNetworking

Tsinghua University, Research Assistant & Teaching Assistant | School of Software *Aug 2014–Jul 2017*
◇ Parallax360: Stereoscopic 360° Scene Representation for Head-Motion Parallax
- **TVCG** Special Issue on **IEEE VR 2018**
- Invited talk for **SIGGRAPH 2018** IEEE TVCG Special Session on Virtual and Augmented Reality
- Construct a set of capture device based on Arduino to obtain implicit depth of real world scenes
- Implemented a real-time synthesis method to demonstrate VR scenes on Oculus Rift using Direct3D/HLSL

◇ Worked as a teaching assistant for Algorithm Analysis and Design, and Computational Geometry

University of Queensland, Research Intern | School of ITEE *Oct 2012–Feb 2013*
◇ Designed algorithms for real-time content-based image similarity indexing and retrieving
◇ Developed an iOS app with Java EE backend and published a demo paper on **WISE2013**
- Imagilar: A Real-Time Image Similarity Search System on Mobile Platform

Selected Projects

ARecorder, Columbia University *Apr 2018–May 2018*
◇ A Unity+Vuforia based video recorder app
◇ Designed for taking video clips while in the midst of an experiment with users' hands covered in sticky plaster

PR2-GOGR, Columbia University *Mar 2018–May 2018*
◇ An approach of object geometry reconstruction using Willow Garage's PR2

ROI Constraint UNIT, Columbia University *Apr 2018–May 2018*
◇ A modified Unsupervised Image-to-Image Translation with region of interest configuration

Technical Skills

◇ Programming Languages: C/C++, Java, Objective-C, C#, Python, JavaScript
◇ Tools and Technologies: iOS Development, OpenCV, OpenGL/WebGL/GLSL, Direct3D/HLSL