

BICHENG LUO

The Institute of CG&CAD, School of Software, Tsinghua University – Beijing – China

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EDUCATION

Tsinghua University, Beijing, China

Sept. 2014–July 2017 (Expected)

M.Eng. in Software Engineering, GPA: 95.8/100, Ranking: 2/156

Nanjing University, Nanjing, China

Sept. 2010–July 2014

B.Eng. in Software Engineering, GPA: 4.37/5.0

RESEARCH EXPERIENCE

DepVR: 360° Scene Representation Based on Implicit Depth, Tsinghua University

June 2016–Present

- Proposed an approach to capture, store and synthesize the 360° scene with the implicit depth information:
 - Designed the representation for the 360° scene using Image-Based Rendering
 - Made a set of capturing device to obtain the implicit depth of the real world scene
 - Implemented a real-time synthesis method to demonstrate the VR scene on HMDs

Light Field Compression, Tsinghua University

Aug. 2014–May 2016

- Proposed a method to record and represent the light field of objects in small storage:
 - Designed a light-weighted representation of light field
 - Built up a [mini light stage](#) for recording the light field of real world objects
 - Developed the applications for compression encoding and real-time decoding

Image Similarity Search System on Mobile Platform, University of Queensland

Oct. 2012–Dec. 2013

- Implemented a content-based similarity search application
- Published a demo paper to Web Information System Engineering (WISE2013):
 - [Imagilar: A Real-Time Image Similarity Search System on Mobile Platform](#)

WORK EXPERIENCE

Research Assistant, School of Software, Tsinghua University

Aug. 2014–Present

- Responsible for algorithm design and implementation using C/C++, OpenGL, Direct3D or other common computer vision and graphics libraries(OpenCV, OpenMP, CUDA, etc.
- Developed programs based on Arduino for hardware design and building
- Submitted a technical paper to IEEE Virtual Reality 2017

Software Engineering Intern, Windows and Devices Group, Microsoft

June 2016–Aug. 2016

- Developed [avaChat](#), a mobile and PC application for communicating with friends in 3D avatars
- Developed [avaChat_Holo](#), the transplanted version of avaChat on Microsoft HoloLens
- Participated in Microsoft Hackathon 2016

Startup Co-founder & CTO, Leezee Co., Ltd.

Oct. 2014–Feb. 2016

- Acted as the chief technical manager and led the team to develop [Parocam](#), an iOS application which can detect the user's face to record creative videos
- Designed the backend structure for [Take](#), an iOS/Android application for online videos RSS

IT Analyst Summer Intern, Morgan Stanley

June 2013–Sept. 2013

- Implemented a questionnaires administration platform using Java EE
- Visualized the flow chart of questionnaires in Adobe Flex
- Built authority and security mechanisms into the questionnaire platform with Spring Security

Research Intern, School of ITEE, University of Queensland

Oct. 2012–Feb. 2013

- o Designed the algorithm for real-time content-based image similarity indexing and retrieving
- o Implemented a search system on mobile platform
- o Completed and published a [demo paper](#) on Web Information Systems Engineering (WISE2013)

TEACHING EXPERIENCE

Teaching Assistant, TsinghuaX, edX

Mar. 2016–Present

- o Course: [Computational Geometry: GIS, CAD, and Other Applications](#), 70240183x
- or [Chinese version](#) in xuetangX
- o Helped the lecturer to maintain the whole progress of the online course
- o Helped to make lecture videos and subtitles, designed quiz, programming assignments and the final test
- o Designed and marked course projects, delivered lecture videos, and Q&A in online discussions

Teaching Assistant, Tsinghua University

Sept. 2015–Present

- o Course: Computational Geometry, 70240183
- o Designed and marked course projects, delivered lectures, and Q&A

Teaching Assistant, Tsinghua University

Sept. 2015–Jan. 2016

- o Course: Algorithm Analysis and Design, 74100033
- o Marked the course assignments and the final test, delivered lectures and Q&A

HONORS & AWARDS

- o First Class Scholarship, Tsinghua University (Top 2%) *2015*
- o Graduate with Honor, Software Institute, Nanjing University (Top 10%) *2014*
- o Excellence in the Nation Level, Innovation and Entrepreneurial Project at Nanjing University, Project ID: G1210284071 (Awarded to 18 projects out of 170) *2013*
- o Full Scholarship of the Outstanding Undergraduate International Exchange Program, China Scholarship Council (Awarded to 1000 undergraduates nationwide) *2012,2013*
- o The Third Prize in Innovation Cup, Software Institute, Nanjing University (Awarded to 4 teams out of 11) *2011*

PUBLICATION

- [1] **Bicheng Luo**, Zi Huang, Hongyun Cai, Yang Yang. Imagilar: A Real-Time Image Similarity Search System on Mobile Platform. In *Web Information Systems Engineering (WISE 2013)*, Volume 8181 of the series Lecture Notes in Computer Science pp 535-538
Available at http://link.springer.com/chapter/10.1007%2F978-3-642-41154-0_47

PAPERS SUBMITTED

- [1] **Bicheng Luo**, Feng Xu, Jun-Hai Yong. DepVR: 360° Scene Representation Based on Implicit Depth. In the Proceeding of IEEE Virtual Reality (IEEE VR 2017).

SELECTED PROJECTS

- o [WebGLBrush](#): The graduation project in Nanjing University, a WebGL-based 3D sculpture modeling system, inspired by ZBrush
- o [ImageProcessing](#): A photo editing tool based on MFC and OpenCV, the course project for Digital Image Processing, including features of luminance/contrast adjustment, blur and sharpen, face detection and beautifying, image impainting, etc.
- o [PlanarSight](#): A small game based on advanced computational geometry algorithms such as constrained Delaunay triangulation and visibility polygon construction