# Bicheng Luo

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## Education

- **Tsinghua University, Beijing, China, September 2014 - Present**
  Master of Software Engineering, Major GPA: 4.0/4.0, Rank: 2/156
- **Nanjing University, Nanjing, China, September 2010 - July 2014**
  Bachelor of Software Engineering, Major GPA: 3.7/4.0, Rank: 28/214

## Skills

- Familiar with C++/Objective-C, know Python/Java/JavaScript development.
- Experience in iOS development with UIKit/Foundation/CocoaPod, 2 apps on AppStore.
- Familiar with computer vision and computer graphics, built projects with OpenCV/OpenGL/WebGL.
- Professional working proficiency in English.

## Work Experience

- **Leezee Co., Ltd., Beijing, China    Co-founder/Program Designer/Developer    October 2014 - February 2016**
  *Description*: Acted as CTO and led the team to develop an iOS application utilizing face detection to create interactional short videos: Parocam
  *Responsibilities*: **a.** Designed and implemented a complete iOS application using UIKit/Foundation; **b.** Integrated face detection into the app with the assistance of GPUImage; **c.** Wrote GLSL shaders for the purpose of video processing using GPU; **d.** Utilized MBaaS frameworks such as Parse to implement social network services; **e.** Built storage solution for short videos on Amazon S3 and network modules using AFNetworking.
- **Morgan Stanley Inc., Shanghai, China    Software Development Intern    July - September 2013**
  *Description*: Developed questionnaire platform using Adobe Flex and Spring Security
  *Responsibilities*: **a.** Implemented a questionnaires administration platform based on Java EE; **b.** Designed the functionality of visualizing the flow chart of questionnaires presented by Adobe Flex; **c.** Built authority and security mechanisms for the questionnaire platform with Spring Security.

## Research Experience

- **Institute of Computer Graphics and Computer-Aided Design, Tsinghua University, Beijing, China    Research Assistant    September 2014 - Present**
  *Description*: Working on research concerning data compression of static 4D holograms, preparing for submission to the conference
  *Research*: **a.** Made surveys about lossy and lossless compression of 2D images, video compression based on motion compensation and Image-Based Rendering; **b.** Designed and implemented a series of algorithms for compression of static 4D holograms; **c.** Developed a set of devices for capture and compression of static 4D holograms; **d.** Adjusted parameters and improved performance for the algorithm according to the experiments.
- **Data & Knowledge Engineering Group, University of Queensland, Brisbane, Australia    Research Intern    October 2012 - February 2013**
  *Description*: Published a paper concerning a real-time image similarity search system on mobile platform: Imagilar
  *Research*: **a.** Made surveys about image features detection and descriptor representation such as SIFT, FAST and SURF; **b.** Designed the algorithm for real-time searching and indexing on mobile platform; **c.** Implemented an iOS application supporting real-time image similarity search; **d.** Completed and published a paper on Web Information Systems Engineering (WISE2013).

## Projects

- **WebGLBrush** 2014.1 - 2014.6 Front end project based on SculptGL, the graduation project at Nanjing University, serving as a 3D modeling system utilizing mouse motion as sculpting and supporting various types of files as well as brush modes. It also provides the functionalities of brush radius and intensity adjustment.
- **PocketNJU** 2014.2 - 2014.6 Official iOS application for campus life in Nanjing University, including features about curriculum/school bus/e-card/societies/BBS/news and so on.
- **ImageProcessing** 2014.7 - 2015.1 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 and so on.
- **K3SimSearch** 2016.1 - 2016.2 a Python tool serving as a dictionary in which visually similar words can be found.
- **BukaCracker** 2014.12 - 2015.1 Online manga website based on Java EE.

## Teaching

- Teaching Assistant: edX Computational Geometry, TsinghuaX, 2016
- Teaching Assistant: Computational Geometry, Tsinghua University, 2015/2016
- Teaching Assistant: Algorithm Analysis and Design, Tsinghua University, 2015

## Awards

- The First Prize Scholarship from Glodon Co., Ltd., at Tsinghua University, 2015
- The Excellent Undergraduate of Nanjing University, 2014
- Excellence in the state level, Innovation and Entrepreneurial Project at Nanjing University, 2013
- Full scholarship of the Outstanding Undergraduate International Exchange Program from China Scholarship Council, 2012