

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

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

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 \(WISE2013\)](#).

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.

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 inpainting 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.

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.

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

罗必成

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教育背景

- 清华大学，计算机图形学与可视化研究所，**2014.9 - 至今**
软件工程硕士在读，GPA: 4.0/4.0, 排名: 2/156
- 南京大学，**2010.9 - 2014.7**
软件工程学士，GPA: 3.7/4.0, 排名: 28/214

助教工作

- [edX Computational Geometry](#)网络课程助教, 2016春
- 清华大学计算几何课程助教, 2015年秋/2016年春
- 清华大学算法分析与设计课程助教, 2015年秋

研究经历

- 计算机图形学与可视化研究所，清华大学 助理研究员 **2014.9 - 至今**
负责静态4D全息图像数据压缩的相关研究，正在准备投稿。
研究内容: a. 就二维图像的有损/无损压缩算法，基于运动补偿的视频压缩算法以及基于图像的渲染进行相关文献综述； b. 设计并实现一套静态4D全息图像的有损数据压缩算法； c. 研制一套静态4D全息图像的图像获取与压缩设备； d. 对常见物体进行4D全息图像的获取实验，并对算法进行参数调优与性能优化。
- 数据与知识工程组，昆士兰大学，布里斯班，澳大利亚 研究实习生 **2012.10 - 2013.2**
负责基于移动平台的实时相似图像搜索的相关研究，并以此发表文章：[Imagilar](#)
研究内容: a. 就SIFT、SURF和FAST等图像特征描述子和多媒体数据库的索引与存储进行相关文献综述； b. 设计并实现一套基于移动平台的图像特征提取和特征索引建立算法； c. 完成实时相似图像搜索功能的iOS应用开发 d. 以该研究工作为题，进行论文撰写，并发表于 [Web Information Systems Engineering \(WISE2013\)](#)。

工作经历

- 北京栗子互动有限公司 创始人/产品设计/技术研发 **2014.10 - 2016.2**
担任技术总监，负责带领团队完成一款基于人脸识别的趣味短视频应用[有劲相机](#)的研发工作。
职责: a. 利用UIKit/Foundation框架开发一款完整的iOS应用； b. 基于GPUImage进行人脸识别模块的集成； c. 利用GLSL shaders完成基于GPU的实时视频处理功能的开发 d. 基于LeanCloud等MBaaS框架进行社交和广场功能的开发； e. 基于AFNetworking库进行基础的网络通信模块开发，并利用七牛云作为短视频云存储平台完成文件存储服务的研发。
- 摩根士丹利国际银行（中国）有限公司 暑期实习生 **2013.7 - 2013.9**
负责一套基于Adobe Flex和Spring Security的在线问卷调查系统的研发工作。
职责: a. 完成基于Java EE的在线问卷系统的逻辑功能开发； b. 开发问卷调查系统中问题流可视化的功能，并通过Adobe Flex进行动画渲染； c. 利用Spring Security为问卷系统实现一套权限控制与安全访问的机制。

项目经历

- [WebGLBrush](#) **2014.1 - 2014.6** 一个基于SculptGL的前端Web项目，本科毕业设计，主要功能为利用鼠标绘制雕刻来进行三维建模，支持多种格式的三维模型导入与导出，支持多种画刷模式以及画刷强度/半径的相关设置调节。
- [掌上南大](#) **2014.2 - 2014.6** 南京大学官方指定校园生活服务类iOS应用，包含课表查询/校车查询/图书馆借书/校园卡余额查询/教务信息/社团活动/BBS/新闻资讯等便利功能于一体。
- [ImageProcessing](#) **2014.7 - 2015.1** 基于MFC和OpenCV的照片编辑处理工具，清华大学数字图像处理课程项目，包含亮度调节/对比度调节/锐化/去噪/人脸识别与磨皮/图像修补等功能。
- [K3SimSearch](#) **2016.1 - 2016.2** 一个查询拼写上相似的GRE单词的Python小工具。
- [BukaCracker](#) **2014.12 - 2015.1** 基于Java EE的在线漫画阅读系统。

专业技能

- 熟悉C++/Objective-C，了解Python/Java/JavaScript开发；
- 三年以上iOS开发经验，熟悉UIKit/Foundation/CocoaPod；两个AppStore上线应用；
- 计算机图形学与计算机视觉研究经历，熟悉OpenCV/OpenGL/WebGL相关技术；
- 良好的英语口语交流与学术写作能力；

获奖情况

- 清华大学软件学院广联达一等奖奖学金，2015
- 南京大学软件学院优秀毕业生，2014
- 南京大学大学生创新创业训练项目，国家级优秀，2013
- 国家留学基金委优秀本科生国际交流项目全额奖学金，2012