

# BICHENG XU

Address: MCH 2405, 8888 University Drive, Burnaby, BC, Canada, V5A 1S6

Email: [bichengxu12@outlook.com](mailto:bichengxu12@outlook.com) Mobile: +1(604)725-967 Website: [bicheng-xu.github.io](http://bicheng-xu.github.io)

## EDUCATION BACKGROUND

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**Simon Fraser University (SFU)**, Burnaby, Canada 09/2014 - 08/2017

*BSc. in Computing Science*, Dual Degree Program with ZJU, Minor in Mathematics

·GPA: 3.94/4.00

·Awards: 2016 Vice President Research Undergraduate Student Research Award (Science); 2016 Undergraduate Open Scholarship; 2014 SFU/ZJU Dual Degree Program Entrance Award

**Zhejiang University (ZJU)**, Hangzhou, China 08/2012 - 07/2014

*BEng. in Computer Science and Technology*, Dual Degree Program with SFU

·GPA: 3.63/4.00

·Awards: 2015 Second-Class Volunteer Award; 2013-2014 Third-Class Scholarship for Outstanding Merits; 2012-2013 Third-Class Scholarship for Outstanding Merits

## WORK EXPERIENCE

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**Ericsson Canada Inc.**, Burnaby, Canada 09/2015 - 12/2015

*Software Developer Coop - IP Operating System Team Member*

- Implemented the packet's incoming rate check feature for line cards according to different router platforms using C programming language
- Designed and implemented test cases for packet's incoming and outgoing rate check functions for line cards

## LAB EXPERIENCE

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**Vision and Media Lab**, SFU 05/2016 - Present

*Research Assistant*

- Carried out research on group activity recognition in videos using TensorFlow library
- Combined VGG Net, recurrent neural network, and connectionist temporal classification (CTC) to recognize a sequence of activities performed by a group of people in a video through supervised learning
- Will add weakly supervised learning on key participants of group activity to produce more concrete results

**Computational Vision Lab**, SFU 02/2016 - 06/2016

*Part-time Volunteer Research Assistant*

- Used Caffe framework to build fully-connected neural networks to explore the color prediction problem
- Given the information of two lights and the color of one pixel under one light, predicted the color of the same pixel under the other light

**Network Modelling Lab**, SFU 06/2015 - 12/2015

*Part-time Volunteer Research Assistant*

- Used Android mobile to do research and programmed on UI layout, Wi-Fi detection, cellphone sensors and network communication on Android platform
- Researched on bus tracking and arrival time prediction in urban environments based on Wi-Fi sensing
- Explored the problem on indoor location using cellphone's Wi-Fi detection and sensors of light, magnetic field and acceleration

## COURSE-RELATED PROJECTS

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**A Simple Ray Tracer**, Introduction to Computer Graphics, SFU 03/2016 - 04/2016

*Individual Project*

- Employed C++ with OpenGL API to implement the ray tracing global illumination model
- Rendered three spheres and a chess board with shadows, light reflections and refractions
- Extended the ray tracer to render two glass chess pieces and a glass chess board with their light interactions

**QuickActivity Project**, Web-Based Information Systems, SFU 06/2015 - 08/2015

*Group Leader and Main Developer*

- Used python-based Django as web development framework with deep understanding of Model View Controller (MVC) design pattern
- Supported the functions of activity searching, posting, attending, bookmarking and other useful features such as saving webpage as PDF files and exporting activity-attending information as CSV files

**Automatic Course Arrangement Subsystem**, Software Engineering, ZJU

05/2014-06/2014

*Team Leader and Main Developer*

- Developed the subsystem using PHP and MySQL for the back-end and HTML5, CSS3 and JavaScript for the front-end
- Supported the functions of course arrangement and schedule searching by setting different privileges to different kinds of users

**A Turn-Based Strategy Game**, Object-Oriented Programming, ZJU 11/2013 - 12/2013

*Software Designer and Developer*

- Built a LAN-connected turn-based strategy game with three team members
- Used C++ in QT development environment under Linux
- Connected multiple players in a local area network through TCP/IP using the <QtNetwork> library in QT

**Flow Chart Conversion Application**, Practice on Programming, ZJU 04/2013 - 05/2013

*Programmer*

- Programmed a flow chart conversion application only using C in Turbo C with another two team members
- Implemented the conversion from text to pixels properly
- Drew flow charts of every function of the input program on different pages
- Supported other features such as page selecting by keyboard input

## COMMUNITY INVOLVEMENT

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**Red Cross Association**, ZJU 02/2013 - 06/2014

*Volunteer Mentor*

- Organized and guided volunteers to pay visits to a local nursing home fortnightly
- Learnt first-aid skills including CPR in case of emergency

**Corporation Investigation**, ZJU 07/2013 - 08/2013

*Team Leader and Organizer*

- Conducted liaison with different companies for permission
- Investigated corporate cultures of offices of Augmentum, Morgan Stanley and IBM in Shanghai, China

## SKILLS AND INTERESTS

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Programming: C, C++, Python, MATLAB, Java, JavaScript, PHP, HTML5, CSS3, HDL (Verilog Hardware Description Language), SQL, Swift (for iOS programming)

Language: Mandarin (native), English (fluent)

Literature: Keen on western and traditional Chinese poems and novels