

Tiezheng Li

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RESEARCH INTEREST

Machine Learning, Graphics and Vision, Software Engineering

EDUCATION

Tsinghua University, Beijing, China

Aug 2011 - July 2015

Bachelor of Engineering in Computer Science and Technology

- Overall GPA 91/100, Ranking 9/123; Junior year GPA 94.5/100, Ranking 3/123

University of Southern California, Los Angeles, California

Jun 2014 - Aug 2014

Visiting Scholar in Computer Graphic and Immersive Technology (CGIT) Lab, Viterbi School of Engineering

ACADEMIC EXPERIENCE

Corrosion Detection System, CGIT Lab, Los Angeles, California

Jun 2014 - Aug 2014

Research Intern, Advised by Ulrich Neumann, Director, Professor, Computer Science, USC

- Conducted experiments to measure the effectiveness of texture, color and wavelet features extracted from images in predicting corrosion
- Applied machine learning algorithms and implemented a corrosion detecting system using BP network, reached an accuracy of 90% for corrosion classification
- Presented results and reports on a poster session among 40 summer programs

Real-time Speaker Recognition System, Tsinghua University, Beijing, China

Sep 2013 – Jan 2014

Research Assistant, Advised by Mingxing XU, Associate Professor, Computer Science, Tsinghua University

- Designed and developed a real-time speaker recognition system with GUI, which extracts MFCC and LPC features from utterance and classifies voices by a pre-trained CRBM
- Optimized GMM algorithm performance to 19 times faster than scikit-learn package. Reached an average recognition accuracy of 95% on offline corpus of 100 different speakers.

Blockly – Web Service Integration Platform, Tsinghua University, Beijing, China

Feb 2013 – Aug 2013

First Author, Advised by Maosong SUN, Professor, Computer Science, Tsinghua University

- Proposed a novel approach - graphical programming - to integrate heterogeneous web services. Blockly creates connections among services, like building up Lego blocks, by conditional or loop statements of different API, automatically finishes user-defined task queue and shares data among services without complex coding work
- Won First Prize (less than 10%) in Technology Challenge Cup of Beijing among more than 600 projects. Research paper published in Student Journal of Tsinghua University

Selected Course Projects:

- CPU based on standard 32-bit MIPS instruction set on FPGA, along with an operation system with user-mode applications and external hardware (VGA, ps/2 keyboard) support (best course project ever)
- Academic Search Engine with social network analysis and online reading experience (rank 1st in class)
- Video Player on Cyclone II with VGA and SD memory support (rank 1st in class)
- Ray-tracer with global illumination and soft shadow, rendering a 3D scene with mesh models (full marks)
- HTML5 Card Game Platform where game can be generated through XML rule files
- Content-based Image Retrieval System applied in photography collection
- Simplified Python Interpreter in C++

WORK EXPERIENCE

Microsoft China, Beijing, China

Oct 2014 – Present

Intern Software Developer, Strategic Partner Group

Dressing Room

A novel augmented reality platform for virtual fitting to enhance the experience of shopping

- Researched state-of-the-art deep learning approaches and designed the module detecting and fitting human shoulder using convolutional neural network
- Helped to distribute and recollect data-label task of 50000 pictures to annotators

Labelit

A web-based crowd sourcing platform to label and classify pictures in machine-learning-based projects

- Proposed the initial idea, designed the database and interact flowchart
- Developed the system using Node.js and MongoDB, deployed on Microsoft Azure

Tecent-Tsinghua Computer Graphics Lab, Beijing, China

May 2012 – Oct 2012

Research Intern, Advised by Shi-min Hu, Professor, Computer Science, Tsinghua University

PatchNet

A patch based representation for interactive library-driven image editing

- Researched on segmentation, region matching and contextual similarity method

STARTUP EXPERIENCE

Supernova Studio, Changchun, China

Sep 2011 – Present

President, Chief Developer, leading a team of 8

JiMuYun – Graphical Programming Platform for Web Service

Based on *Blockly*, provide online service for integration of other web services

- Sponsored by National Training Programs of Innovation and Entrepreneurship for Undergraduate (¥10,000)
- Won *Star of Innovation* as one of the best 4 tech teams among university

Expedition – Independent Role-Playing Game

A traditional Chinese style RPG with dialogue lines of 300,000+ words and playing time of 20+ hours

- Developed the main program in Ruby, wrote storyline and was responsible for test and publicity
- Distributed as open-source software. Won Gold Prize of summer practice in department as the most creative one ever. Reported by CTV and XinWenHua newspaper in Changchun

Guji, Beijing, China

Sep 2014 – Present

CTO, work with a core team of 5

Guji – Mobile Social App

A novel app provides game-like group communication, optimizes user-shared content based on circles theory

- Engaged in server development. Tackling load balance and horizontal expansion under huge traffic
- Received seed investment of ¥350,000. Selected to Tsinghua X-lab acceleration program (top 10%)

AWARDS & HONORS

Zhong-Shi-Mo Scholarship, Tsinghua U (<i>only 1 each year, for best performance in Dept. CS</i>)	2014 & 2012
CSC-IBM Scholarship, IBM Company (<i>top 1%</i>)	2014
Excellent Student Award, China Computer Federation (<i>100 in total nationwide</i>)	2013
Scientific and Innovative Scholarship, Tsinghua U (<i>5% in Dept.</i>)	2013
First Prize in National Olympiad in Informatics, Jilin Division	2011 & 2010

PERSONAL SKILLS

- Programming: Proficient in C++, C#, Python, Ruby, Java, Matlab, JavaScript, HTML/CSS
- Software: Adobe Photoshop, Audition, Flash, Premiere, After Effects, Linux command, LATEX