

# Zhiping (Patricia) Xiao

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## EDUCATION

**University of California at Los Angeles**, California, US Sep 2018 – till date

*Computer Science PhD student supervised by Prof. Yizhou Sun*

**University of California at Berkeley**, California, US Aug 2016 – May 2018

*Computer Science MS at Berkeley Institute of Design (BiD), with GSI (Graduate Student Instructor) scholarship*

**Courses (GPA 3.6/4.0):**

- Machine Learning in Education (INFO C260F)
- Teaching Techniques for Computer Science (CS375)
- History and Theory of New Media (NWMEDIA200)
- User Interface Design and Development (CS260A)
- Image Manipulation and Computational Photography (CS294-26)

**Peking University**, Beijing, China Sep 2012 – Jul 2016

*Bachelor of Computer Science (with Highest Honor), Major GPA 3.8/4.0, Overall GPA 3.5/4.0*

**Selected courses:**

- Computer Graphics; Introduction to Visual Computing; Fundamentals of Digital Media Technology
- Aesthetics; Outline of Chinese Art; Brain and Cognitive Science; Social Psychology; Network and Crowds
- Introduction to Intelligent Technology; Data Structures and Algorithms; Algorithm Design and Analysis
- Advanced Mathematics; Linear Algebra; Probability Theory and Statistics; Set Theory and Graph Theory
- Introduction to Computer Systems; Operating Systems; Database Systems; Computer Networks

**University of California at Berkeley**, California, USA Jul 2013 – Aug 2013

*Summer Exchange Student at Art School*

**Courses:** Approach to Painting (A+); Introduction of Visual Thinking (A+)

## INTERN EXPERIENCES

**Research Assistant**, Berkeley Institute of Design, University of California at Berkeley Jan 2017 – May 2018

*Advisor: Prof. Dan Garcia*

- Working on Implementing an Automatic Quiz-question-generation Systems Used in Online Courses, so as to help students prepare for exams efficiently.
- Backend knowledge tracing model is based on DKT model

**Software Engineer Intern**, Tianyancha Algorithm Team, Jindi Tech. May 2017 – Aug 2017

*Mentors: Dr. Chao Liu, Mr. Hao Chen*

- Big Data Visualization of Chinese Enterprises.
- Users behaviors tracing visualization frontend & parts of the backend
- The first version of PDF2HTML converter used for displaying enterprises' documents more interactively

**Research Assistant**, Institute of Networking, Peking University Feb 2016 – Jun 2016

*Mentor: Prof. Xiaoru Yuan*

- Visualization and Visual Computing
- Financial visualization team, implemented the first version of the Bitcoin transaction visualization project

**Research Software Engineer Intern**, Internet Graphics Group, Microsoft Research Asia Oct 2015 – Jan 2016

*Mentor: Dr. Weiwei Cui*

- Applied art and psychology principles towards more precise visualization

**Research Intern**, Language Technology Institute, Carnegie Mellon University Jul 2015 – Sep 2015

*Advisor: Prof. Alex Rudnicky*

- Built the Tick-Tock Chinese dialog system, based on a Non-Goal-Oriented English version
- Crawled Chinese dialogue data, built the Chinese Segment Module and a Chinese Question-Answer database

**Research Assistant**, Institute of Networking, Peking University

Jul 2014 – Oct 2015

*Advisor: Associate Prof. Kaigui Bian*

- Applied a special math sequence to the channel-hopping model so as to enhance its behavior
- Design & implemented an Android application Zuile, an anonymous, location-based social network App
- Designed the user interface and implemented the front-end of several Apps

## PUBLICATIONS

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- **Zhiping Xiao**, “AutoQuiz: an online, adaptive, test practice system”. Technical Report No. UCB/EECS-2018-54, May 11, 2018.
- **Zhiping Xiao**, Siqi Li and Zachary Pardos. “AutoQuiz: an individualized test-oriented tutoring system for students”. **SIGCSE 2018** (poster), Page 1089.
- Chris Johnson, Monica McGill, Durell Bouchard, Michael K. Bradshaw, Víctor A. Bucheli, Laurence D. Merkle, Michael James Scott, Z. Sweedyk, J. Ángel, **Zhiping Xiao**, and Ming Zhang. “**Game Development for Computer Science Education**”, in Proc. of **2016 ITiCSE Working Group Reports**, Pages 23-44. Arequipa, Peru, July 09 - 13, 2016.
- Lin Chen, **Zhiping Xiao**, Kaigui Bian, Shuyu Shi, Rui Li, and Yusheng Ji. “**Skolem Sequence Based Self-adaptive Broadcast Protocol in Cognitive Radio Networks**”, in Proc. of 2016 IEEE 83rd Vehicular Technology Conference (**VTC2016-Spring**), Pages 1-5. Nanjing, China, May 15 - 18, 2016.

## TEACHING EXPERIENCES

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**Teaching Assistant**, “Beauty and Joy of Computing” in UC Berkeley (CS10)

Jan 2017 – May 2018

*Instructor: Prof. Dan Garcia*

- Help with preparing course materials, including contents for each discussion in the discussion sessions every week, and part of the questions in quizzes, refining midterm & final exam questions
- Answering students’ questions online, in lab sessions, discussions, and during office hours

**Teaching Assistant**, “Data Structures and Algorithms” on Coursera and edX MOOCs

Sep 2013 – June 2015

*Instructor: Prof. Ming Zhang*

- Prepared the instruction materials and quizzes
- Designed PowerPoint animations to illustrate the algorithm details

## SELECTED PROJECTS

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Mostly at <https://github.com/PatriciaXiao>

- **AutoQuiz (2017-2018)**: A training system aiming at helping students preparing for exams, implemented using Flask framework; backend design includes knowledge tracing model based on deep learning and recommending a proper question / module to do next accordingly. The MS project in Berkeley supervised by Prof. Dan Garcia.
- **Chinese Water-Ink style 2D Rendering (2016)**: Render any input image to be Chinese traditional water-ink painting style
- **HoM – the home monitor (2016)**: Prototype design & implementation of an IoT (internet of things) system that aiming at help parents monitoring household appliances, built on KinomaJS
- **Scientific Fortune Telling App (2015)**: Age determination and face recognition algorithms. Visited by approximately 1000 users in the very first week online
- **Image Query (2015)**: Image feature selection, built upon Open CV. Team leader
- **Pop-art Style 3D Cartoon Rendering (2014)**: Non-Photorealistic Rendering built upon Open GL. Team leader
- **Visualizing the Nobel Prize Winners (2014)**: Information visualization, built upon D3
- **Othello Chess (2013)**: Human-Computer Game with Dxlib-based GUI. Developed independently

## PROFESSIONAL SKILLS

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- **Programming Languages**: C/C++, Python, JavaScript, Java, Scratch, SQL, SAS
- **Platforms/APIs**: Linux, Visual Studio, Photoshop, Adobe Illustrator, D3, OpenGL, OpenCV, Tensorflow, Flask

## SELECTED HONORS AND AWARDS

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- **EECS Graduate Student Instructor (GSI) award**, UC Berkeley, Aug 2016 – Jun 2018
- **Excellent Student Award** (top 5%), Peking University, 2015
- **Junzheng Scholarship** (Hui-Chun Chin and Tsung-Dao Lee Chinese Undergraduate Research Fund, top 1%), Peking University, 2014-2015
- **8508 Alumni Scholarship** (top 5%), Peking University, 2014
- **Third Prize** of Peking University Young Scientist Symposium on Informatics, 2015
- **Top 10 Winner** Prize (ranked No. 4 among 162 finalists), National wide "Green Shoots" Contest of College Students' Mobile App Development, Shanghai Government, 2015
- **Third Prize** of the 12<sup>th</sup> PKU Computer Application Design Contest, 2015
- **Winner Prize** of the 5<sup>th</sup> Computer - Computer Game Competition (Four Color Map Game, top 10%), Peking university, 2013
- **Third Prize** of the 12<sup>th</sup> PKU ACM/ICPC Programming Contest, Peking University, 2013
- **First Prizes** in the Annual National Drawing Competition, Ministry of Education, China, 2001, 2002, 2003, 2004, 2006 respectively
- **First Prize** in the Art and Design Competition at the International Year for the Culture of Peace, Po Leung Kuk, Hong Kong, 2000. The awarded painting was produced as a 9-minute tutorial video by a Hong Kong art institute (in Cantonese)

## EXTRA CURRICULUM ACTIVITIES

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**Stanford University**, California, USA

*Jul – Aug 2010*

- *Stanford EPGY - Education Program for Gifted Youth*
- Pre-Collegiate Summer Institute: International Relations

## ENGLISH COMMUNICATION SKILLS

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- **GRE:** 321/340 (Verbal Reasoning 151, Quantitative Reasoning 170, Analytical Writing 4.0)
- **TOEFL:** 108/120 (Reading 28, Listening 27, Speaking 26, Writing 27)
- **IELTS:** 7.0/9.0 (Listening 8.0, Reading 7.0, Writing 6.5, Speaking 5.5)

## INTERESTS

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- **Arts:** Music (Piano, Violin, Singing), Painting (Chinese Painting, Acrylic Painting, Sketching)
- **Sports:** Ping-Pong (ranked 4<sup>th</sup> at PKU EECS 2015 Competition), Swimming, Skiing, Skating