Jerry, Richeng HUANG

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Active, diligent and enthusiastic software engineer student. Interested in any kind of project concerning web technology and software development. Proficient implementation skills in C++ and Java. Curious to various algorithmic problems.

EDUCATION

2015 Dec   University of Illinois, Urbana-Champaign
            Master of Science in Computer Science
2014 Jun   The Hong Kong University of Science and Technology, Hong Kong
            BEng in Computer Science   GGA: 3.735/4.30   major GPA: 3.844/4.30
2012 Jun   Sun Yat-sen University, Guang Zhou, China
            BEng in Computer Science   GPA: 3.3/4.0   major GPA: 3.6/4.0   Rank: 5/35

AWARDS

- 2012 - 2014   First Class Honors in Graduation, HKUST
- 2012 - 2013   Scholarship Scheme for Continuing Undergraduate Students , HKUST
- 2013 - 2014   Dean's List, Fall Semester 2013-2014 & Spring Semester 2012-2013, HKUST
- 2011 - 2012   Second Class Scholarship, Sun Yat-sen University

SKILLS

- Proficient in C/C++, Java, Python, PHP, html, JavaScript, jQuery, Regular expression, Git.
- Familiar with OpenGL, Scheme, MySQL, Flash, Matlab

CURRICULAR EXPERIENCES

- **Micro-Scheme Language Implementation**   2012 Sep – 2012 Dec
  - Parsed s-expression into tree data structure by using bison and flex.
  - Evaluated s-expression in tree structure based on the rules of Scheme (used polymorphism in C++).
- **TCP and UDP transmitter, HTTP Client and Server, CPU Scheduler**   2013 Jun – 2013 Aug
  - Controlled the transmission rate and chunk size of UDP sender to reduce packet loss, in Java.
  - Implemented concurrent request ability for HTTP server, in C++.
  - Implemented FIFO, Shortest Job First and Round-robin scheduling algorithms on Nachos, in C++.
- **Knowledge Discovery over English Songs, Final Year Project**   2013 Sep - 2014 May
  - *Generate melodies given a sequence of English words as input.*
  - Establish a frequent pattern set containing pairs of lyrics and melodies from over 1,000 English songs.
  - Generated a melody sequence automatically by matching lyric sequence from the frequent pattern set.
  - Built a demo Web-app by using Vexflow.js(draws music score) and MIDI.js.
- **Twitter Client on Java Platform**   2013 Mar – 2013 Apr
  - Developed in Agile Software Development Process with Scrum Framework.
  - Implemented novel functionalities such as special follow and embedded games.
  - Followed Continuous Integration and kept software testing.
- **Implementation of Gossip-style Membership Protocol**   2014 Sep – 2014 Oct
  - Implemented node functionalities in peer-to-peer layer such as joining group, sending/processing gossip messages, detecting failure members, in C.
  - Ensured completeness and achieved high accuracy when message losses happened.
- **OpenGL Hierarchical Robot Model**   2013 Feb – 2013 May
  - Built a 3D robot and implemented Bezier curve, B-spline curves and Inverse Kinematics to control the position and angle of any components of the robot.
  - Implemented particle systems to simulate water fountains, ball collisions, etc.
- **iSearch, a Search Engine**   2013 Sep - 2013 Nov
  - Indexed 1000 web pages with multithreading. Implemented spelling suggestion by AJAX.
  - Ranked the page by combining scores of vector space model and scores of Page Rank.

WORK EXPERIENCES

- **Web developer (Part-time) for Imos: http://i-mos.org**   2013 Dec - 2014 May
  Imos: an interactive Modeling and Online Simulation Platform.
  - Optimised the performance and stability of the website and created model-upload templates.
  - Programmed in both server side and client side by using CodeIgniter PHP framework(MVC), KnockoutJS(MVVM pattern) and jQuery, and managed database by MySQL.
- **Summer Intern in MassMutual Asia Co., Hong Kong Branch**   2011 Jul - 2011 Aug
  - Analyzed survey data from over 100 clients, completed 15-page report for product design and developed financial solution for a key client.
  - Assisted team in awarding runner-up in the intra-company competition among all intern teams.

COURSES

Operating Systems	Computer Graphics
Principles of Programming Languages	Computer Organisation
Database Management Systems	Computer Communication Networks
Theory of Computation	Introduction to Data Mining
Design and Analysis of Algorithm	Distributed Systems(ongoing)
Software Engineering	Computer Systems Organization(ongoing)
Search Engines for Web and Enterprise Data	