

Kyeongan (Karl) Kwon

Graduate Research Assistant

Department of Computer Science, University of Houston

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SUMMARY

6 years of industry and academia experience in Software Engineering. Experience in being a part of and managing a team of researchers and developers. Ability to assume responsibility and deliver results in a timely fashion.

EDUCATION

Ph.D.	Computer Science, University of Houston, Houston, Texas, USA Advisor: Ioannis Pavlidis	Expected Dec 2015
M.S.	Computer Science, University of Houston, Houston, Texas, USA (Cum. GPA 3.4/4.0)	May 2014
B.S.	Software Engineering, SEJONG University, Seoul, South Korea (Major GPA 3.9/4.0)	Dec 2005

RELATED COURSEWORK

Java Programming	Advanced C/C++ Programming	Advanced Numerical Analysis
Machine Learning	Unix/DB Programming	Human-Computer Interaction

RESEARCH/WORK EXPERIENCE

Research Assistant, Computational Physiology Lab., University of Houston Aug 2011 – Present

- Devise and program data visualization method [User Portrait](#) to condense Affective User Data. (JS, High Charts)
- Design and develop a web application, [ScholarPlot.com](#) to visualize research accomplishment. (PHP, NVD3, JS)
- Design and develop an iPhone app called [Scholar Plot](#) to plot scholar's journals. (Objective-C, PHP)
- Implemented an Android app for mobile authentication using touchscreen gestures (Java, Android)
- Implemented an algorithm and an application detecting Human motions with Kinect SDK (Microsoft .NET)

Software Engineer, TMAXSOFT, Seoul, Korea Oct 2006 – Oct 2009

- Lead team and developed core banking system that supports agile and business processes management using service-oriented architecture (SOA) and helps 24/7 processing of large transaction volumes (C/C++, Java, J2EE)
- Implemented Finance Management to drive performance with consistent financial and operational information, leading a 150% performance improvement. (C/C++, Java, Oracle, Web Logic)
- Programmed and maintained Learning Management System (LMS) to support e-learning education and training program. (C, Java, J2EE, Oracle)

Software Engineer, Dial Communication, Seoul, Korea Jan 2006 – Sept 2006

- Devised and developed Voice over IP (VoIP) application using H.323/SIP (C++, MFC, Win32 API)
- Developed a web portal system to support employees (Java, J2EE, Web Logic, Oracle)

Computer Specialist, Sergeant, Republic of Korea Army Aug 1999 – Oct 2001

- Managed and upgraded Intranet and extranet system of the Republic of Korea Army (C/C++, Perl, JSP, ASP)
- Programmed the e-Learning System to support military education and training

PROGRAMMING SKILLS

- Java, C, C++, PHP, JSP, Python, jQuery, JavaScript, D3, NV3, HTML, CSS, Bootstrap
- Objective-C, XCODE, iPhone, Android, Visual Studio, MATLAB, R
- MySQL, Oracle, Unix, Linux, OS X

OTHER PROJECTS

- **Reacher**: Designed and implemented a mobile game called [Reacher](#) for iPhone, Android, Windows. (C#, Unity)
- **Mini DBMS**: Developed a fully functioned DBMS in C++ supporting SQL with nested SPJ query. (C++, Lex & Yacc)

PUBLICATIONS

- [1] **KA Kwon**, D. Shastri and I. Pavlidis "Information Visualization in Affective User Studies", The IEEE Visual Analytics Science and Technology, IEEE Information Visualization, and IEEE Scientific Visualization, VIS 2014, (InfoVIS 2014) Paris, France.
- [2] **KA Kwon**, D. Shastri and I. Pavlidis "Interfacing Information in Affective User Studies", The 2014 ACM International Joint Conference on Pervasive and Ubiquitous Computing (UbiComp 2014), Seattle, WA.
- [3] **KA Kwon**, "Interfacing Information with Mixed Methods", Proceeding of the 2014 US-Korea Conference on Science, Technology and Entrepreneurship, (UKC 2014), San Francisco, CA
- [4] T. Feng, Z. Liu, **KA Kwon**, W. Shi, B. Carbunar, Y. Jiang and N. Nguyen, "Enhancing Mobile Security with Continuous Authentication Based on Touchscreen Gestures", The twelfth annual IEEE Conference on Technologies for Homeland Security, (HST 2012), Waltham, MA.
- [5] JH Lee, Z. Liu, X. Tian, DH Woo, Weidong Shi, D. Bumber, Y. Yan, and **KA Kwon**, "Acceleration of Bulk Memory Operations in a Heterogeneous Multicore Architecture", 21st International Conference on Parallel Architectures and Compilation Techniques, (PACT 2012), Minneapolis, MN

PAPERS PRESENTED

- [1] The 11th Annual Young Generation Technical and Leadership Conference, Orlando, FL Jan 2015
- [2] The IEEE Information Visualization, and IEEE Scientific Visualization, Info VIS, Paris, France Nov 2014
- [3] The 1st Graduate Research and Scholarship Projects (GRaSP), at University of Houston, Houston, TX Oct 2014
- [4] The 2014 ACM International Joint Conference on Pervasive and Ubiquitous Computing, Seattle, WA Sept 2014
- [5] The 2014 US-Korea Conference on Science, Technology and Entrepreneurship, UKC, San Francisco, CA Aug 2014
- [6] The Ph.D. Showcase of the Department of Computer Science at the University of Houston, Houston Feb 2014
- [7] The 10th Annual Young Generation Technical and Leadership Conference, Houston, TX Jan 2014

TEACHING EXPERIENCE

Teaching Assistant, University of Houston Aug 2011 – Dec 2013

- Instructed COSC 6355 Ubiquitous Computing to guide with iPhone Programming (Fall 2013)
- Assessed and guided COSC 3320 Design and Database Systems (Spring 2013)
- Taught and analyzed COSC 3320 Algorithms and Data Structures (Fall 2011, Spring 2012, Fall 2012)
- Instructed and graded COSC 3320 Introduction to Automata and Computation (Summer 2012, Fall 2012)

HONORS/AWARDS

- Texas Public Education Grant (TPEG) for International Award Aug 2014
- Outstanding Undergraduate Awards Winner 2nd/3rd place, SEJONG University Jan 2004, 2005

PROFESSIONAL AFFILIATIONS/ACTIVITIES

- President of Korean Graduate Student Association at the University of Houston Aug 2012 – Aug 2014
- Member of Korean-American Science and Engineering Association Jan 2013 – Present
- Committee of Ph.D. Computer Science Official Group at the University of Houston Jan 2012 – Present
- Current Active Member of Cougar CS at the University of Houston Aug 2011 – Present

VOLUNTEER EXPERIENCE

- Independent one-on-one computer tutoring for underprivileged children, Incheon, South Korea
- Group tutor for orphans in computer utilization Seoul, South Korea