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Texas A&M University-Commerce, Commerce, TX 75428

CORE QUALIFICATIONS

- **Doctor of Science (D.Sc) in Applied Information Technology (AIT) and Master of Science Project Management (MSPM)**
- Have **6 years** face to face, hybrid, and online teaching experience at the **University level**
- Experience in writing grant proposals and awarded research grants (**Accumulated Research Grants: \$96,000**)
- Research experience in (IT / IS) project management and computer science. Currently conducting research in **Internet of Things (IoT), Cloud Computing, Big data, Mobile Application** targeted at a **smart connected car**, as well as, **Network Anomaly Detection**
- Author / co-author of research papers published / accepted for publication in reputed peer-reviewed journals, international conferences, and book chapter
- Participated and presented at IEEE / ACIS international conferences
- Recipient of multiple **Assistantships** including academic excellence

PROFESSIONAL APPOINTMENTS

Adjunct Faculty Texas A&M University-Commerce, TX Department of Computer Science & Information Systems	May 2017 - Present
Ad-Interim Assistant Professor Texas A&M University-Commerce, TX Department of Computer Science & Information Systems	Jan 2016 – May 2017
Adjunct Faculty & Teaching Assistant Towson University, MD Department of Computer & Information Sciences	Sep 2010 – May 2015
Graduate Assistant University of Alaska Anchorage, AK Project Management Department	Sep 2008 – May 2010

EDUCATION

Doctor of Science (D.Sc) in Information Technology

May 2015

Towson University, MD

- Concentration: IT / IS Project Management, Software Engineering, and Database Management
- Advisor: Dr. Robert J. Hammell
- Dissertation: Objective Decision Support Tools for IT Project Managers

Master of Science Project Management (MSPM)

May 2010

University of Alaska Anchorage, AK

- Concentration: R&D Project Management
- Advisor: Dr. Jang Ra
- Thesis: How to Apply Project Management in R&D

Bachelor of Computer Engineering & Real Estate

Feb 2008

Daegu University, South Korea

- Thesis Project: Innovative Shopping Mall Website Development in conjunction with Business Strategies

RESEARCH INTERESTS

- IoT, Cloud computing, Big data with Machine Learning, and Mobile application (ICBM)-based R&D project focusing on a smart connected car
- IT / IS project management in conjunction with software engineering and database management

RESEARCH PROJECT EXPERIENCE

- **(PI)** Subject: Development of Driver Assistance Vision Software for a Connected Car under the Kyungpook S/W Convergence Cluster Global Stage R&D Support Program (**GB-RD2-03**), September 2016~November 2017 Funded by Gyeongbuk Institute of IT Convergence Industry Technology (GITC), South Korea
 - Conduct a feasibility study and requirements elicitation
 - Create project business and technical documentations

- Bluetooth-based data signal design and LTE architecture for smart connected car network
- Distributed file system analysis and design
- Vehicle error codes-based database implementation
- Working on developing the blind spot detection system.
- Project scope for the second year will be determined soon.
- **Research Associate**, Subject: Research on Machine Learning Models for Network Traffic Anomaly Analysis, July 2016~December 2016 supported in part by Institute for Information & communications Technology Promotion (IITP) grant funded by the Korea government (MSIP) (No.R-20160222-002755, Cloud based Security Intelligence Technology Development for the Customized Security Service Provisioning)
 - Deep learning-based data analysis background work
 - Comparison study on deep learning-based network traffic analysis and anomaly detection with the existing work
 - Development of an initial framework for deep learning-based network traffic analysis and anomaly detection
- Subject: Smart e-Learning Using N-Screen (SELUNS) Project, November 2011 ~ May 2012 Collaborated with Sookmyung Women's University, South Korea
- Subject: Vaccination Inventory Management System (Passageware) Project, March 2011 ~ September 2011 Sponsored by Passport Health, USA
- Subject: Prioritization of Future Freight Infrastructure Projects within the Anchorage Metropolitan Area Transportation Solutions (AMATS), February 2010 ~ May 2010 Sponsored by PM department of UAA & Municipality of Anchorage, AK.
- Subject: Project Management for R&D Leaders, June 2009 ~ February 2010 Sponsored by KIRD (Korea Institute of R&BD Human Resources Development), South Korea

GRANT PROPOSALS EXPERIENCE

- Secured research grant from Gyeongbuk Institute of IT Convergence Industry Technology (GITC) (~~₩45,000,000~~ = **approximately \$41,000**) from **September 2016** to **November 2017**. This research received a rating of “**Excellent**” for evaluation in **December 2016** and has a high chance to be extended by 2018 with additional research funds.

- Assisted for writing grant proposals: Project Management for R&D Leaders (\$35,000) & Prioritization of future Freight Infrastructure Projects within the Anchorage Metropolitan Area Transportation Solutions (AMATS) (\$20,000)

TEACHING

- Texas A&M University-Commerce
 - CSCI 151 Intro to Computer Science & Programming (Spring 2016, Fall 2016, and Spring 2017)
 - CSCI 359 Systems Analysis & Design (Spring 2016, Fall 2016, and Spring 2017)
 - CSCI 502 Statistics for Computational Science and Analysis (Fall 2016 and Spring 2017)
 - CSCI 515 Fundamental of Programming C / C++ (Summer 2016)
 - CSCI 516 Fundamental Concepts of Computing / Machine Organization (Assembly Language Programming) (Fall 2016)
 - CSCI 520 Information Structure (Algorithm Design) (Spring 2017)
 - CSCI 524 Analysis & Design Software Systems (Web-based class) (Spring 2016)
 - CSCI 540 Computer Architecture (Spring and Summer 2016, Summer 2017)
- Towson University
 - COSC 109 Computer & Creativity (Fall 2012 to Spring 2015)
- TA for:
 - CIS 475 Analysis and Design for Web Sites
 - CIS 440 System Development for E-Commerce
 - AIT 643 Enterprise Architecture

TEACHING EVALUATION (1 = Strongly Agree to 5 = Strongly Disagree)

	CSCI151	CSCI359	CSCI502	CSCI515	CSCI516	CSCI524	CSCI540
Fall 2016	1.30	1.51	1.19		1.35		
Summer 2016				1.43			1.34
Spring 2016	1.48	1.81				1.66	1.23

STUDENT RESEARCH COMMITTEE

- Master's Thesis Committee (Fall 2016 and Spring 2017), "Clustering-Based Network Anomaly Detection," Department of Computer Science and Information Systems, Texas A&M University-Commerce

AWARDS AND HONORS

- **Excellent Research Performance**, Gyeongbuk Institute of IT Convergence Industry Technology (GITC), South Korea, **Dec 2016**
- **Full Graduate Assistantship**, Towson University, **Sep 2010 - May 2015**
 - Awarded graduate & teaching assistantship and full tuition waiver for studying doctoral degree
- UAA PM Department & School of Engineering **Scholarship**, **Sep 2008 - May 2010**
 - Awarded graduate assistantship and full tuition waiver for studying master's degree
- **First Prize (Top 1% Award)**, Digital Olympiad for University Students in Korea, **2007**
- **Full scholarship** (full tuition waiver), **Mar 2001 - Feb 2008**
 - Awarded by Daegu University, South Korea for academic excellence

PROFESSIONAL ACTIVITIES AND SERVICES

- IEEE SCI 2017 Reviewer
- Journal of Multimedia Information System (JMIS) Reviewer
- Member of:
 - IEEE (Institute of Electrical and Electronics Engineers)
 - Korean-American Scientists and Engineers Association
- Special Guest Lecturer, Daegu University, South Korea (2009, 2013, 2015, 2016)
- Microsoft Project 2010 Training, POSCO, South Korea (2010)
- Project Management Training, Booz Allen Hamilton in Hawaii (2009)
- Microsoft Project 2007 and Primavera P6 Training, UAA (2008, 2009)
- ProMAC Conference Program Committee (2008)

PUBLICATIONS

Journal Papers (*in reverse chronological order*)

- 1) **D. Kwon**, H. Kim, J. Kim, S. Suh, I. Kim, and K. Kim, "A Survey of Deep Learning-based Network Anomaly Detection," Cluster Computing - The Journal of Networks, Software Tools and Applications, Springer, Jun. 2017 (**Accepted**) [**Thomson-Reuter Indexed**]
- 2) **D. Kwon**, S. Park, and J. Ryu, "A Study on Big Data Thinking of the IoT-based Smart-Connected Car in Conjunction with CAN Bus and LTE," Symmetry 2017 (Submitted and under review) [**Thomson-Reuter Indexed**]
- 3) Z. Cheng, **D. Kwon**, C. Jin, and Y. Kwon, "A Study on C2B2C Business Integration Model Design," Journal of Multimedia Information Systems (JMIS), Vol. 3 No. 3. December 2016, ISSN 2383-7632
- 4) **D. Kwon** & R. Hammell, "Early Stage Probabilistic Software Project Schedule Estimation," Journal of Information Systems Applied Research (JISAR), Vol. 6 No. 4, November 2013 [**Top 30% Paper Awarded**]
- 5) Y. Kwon, J. Cui, and **D. Kwon**, "A Study on Comparison Analysis of the System Quality Factors between Korea and China Shopping Mall Websites," Journal of Korea Multimedia Society Vol. 16 No. 11, November 2013
- 6) Y. Kwon, J. Cui, and **D. Kwon**, "A Study on Effective Website Implementation using Reliability Measurement," Journal of Korea Multimedia Society Vol. 14 No. 6, June 2011
- 7) Y. Kwon, J. Cui, and **D. Kwon**, "Design and Implementation of a Messenger Program for PDA using UML," Journal of the Korea Industrial Information Systems Research, Vol. 15, Issue 5, 2010
- 8) Y. Kwon, H. Zhang, G. Gao, and **D. Kwon**, "Evaluation of Web Accessibility," Journal of Decision Science, Vol. 17, No. 1, ISSN: 1598-8090, 2009
- 9) Y. Kwon, C. Yang, and **D. Kwon**, "A Study on E-Commerce Recommender Systems Based on LSI and Fuzzy Model," Journal of Computer and Communication, Vol. 6 No. 1, ISSN: 1598-6640, January 2009

Conference Proceedings (*in reverse chronological order*)

- 1) S. Baek, **D. Kwon**, J. Kim, S. Suh, H. Kim, and I. Kim, "Unsupervised Labeling for Supervised Anomaly Detection in Enterprise and Cloud Networks," The 4th IEEE

International Conference on Cyber Security and Cloud Computing (IEEE CSCloud 2017), New York City, NY, June 26-28, 2017

- 2) **D. Kwon**, G. Yoon, S. Kim, and Y. Kwon, "A Study on Auto Patrol Drone Development for Safety Management," 2017 International Conference on Network and Cyber Security (ICNCS 2017), Lakeland, FL, May 2017
- 3) **D. Kwon**, D. Yun, and J. Ryu, "A Study on the treatment method of the on / off branch pipeline for real-time multi-image stitching," The International Symposium on Innovation in Information Technology and Applications (ISIITA 2017), Danang, Vietnam, Jan. 10-13, 2017
- 4) **D. Kwon** and R. Hammell, "Objective Framework for Early-Stage Comparison of Software Development Project Types," 14th IEEE/ACIS International Conference on Computer and Information Science (ICIS), Las Vegas, June 2015
- 5) **D. Kwon** and R. Hammell, "Refinement/verification of early stage probabilistic software project schedules in the planning stage," 15th IEEE / ACIS International Conference on Software Engineering, Artificial Intelligence, Networking and Parallel/Distributed Computing (SNPD), Las Vegas, June 2014
- 6) **D. Kwon**, J. Cui, Y. Kwon, and C. Jin, "A Study on Comparison on the Technical Factors of Korea and China Shopping Mall Website," 14th ACIS International Conference on Software Engineering, Artificial Intelligence, Networking and Parallel/Distributed Computing (SNPD), Hawaii, July 2013
- 7) **D. Kwon** and R.J. Hammell II, "Early Stage Probabilistic Software Project Schedule Estimation" Proceedings of the 5th Annual Conference on Information Systems Applied Research (CONISAR 2012), 1-4 November 2012, New Orleans, LA, <http://proc.conisar.org/2012/pdf/2222.pdf>. ****Paper subsequently selected for inclusion in the Journal of Information Systems Applied Research; included above in Journal Papers**
- 8) S. Kim, T. Brewer, G. Kretchik, **D. Kwon**, H. Yeo, and K. Brown, "Prioritization of Future Freight Infrastructure Projects within the Anchorage Metropolitan Area Transportation solutions (AMATS)", Proceedings of 13th TRB National Transportation Planning Applications Conference, Reno, Nevada, May 8-12, 2011

- 9) C. Yang, Y. Kwon, **D. Kwon**, and J. Ra, "A Study on a Fuzzy Synthetic Judgment Method for an E-Commerce Recommender System," ProMAC 2008 4th International Conference in Project Management, Anchorage, AK, September 2008

Book Chapter

- 1) **D. Kwon**, Y. Kwon, Y. Song, and R. Lee, "An Empirical Study on the Relationship between User Characteristics and Quality Factors for Effective Shopping Mall Websites Implementation," Software Engineering Research, Management and Applications, Springer International Publishing, ISSN: 1860-949X, 2014

Poster

- 1) Y. Kwon, C. Yang, and **D. Kwon**, "A Fuzzy-SVD Model for Product Recommendation," The 2008 International Conference on Multimedia, Information Technology and its Applications (MITA 2008), Thailand, July 2008

Future Research Papers

- 1) J. Ryu and **D. Kwon**, "A study on the surveillance image monitoring system using multi-image stitching," **Top 30% paper selected**. Appointed to submit to the SCOPUS indexed journal, and will be published in December, 2017
- 2) **D. Kwon**, I. Jeong, K. Kim, and B. Bakr, "A Study on Probabilistic Schedule Estimation and Refinement of the Small and Medium-Sized Software Development Projects," Will be submitted to the international conference by the end of June, 2017
- 3) **D. Kwon** and S. Park, "A Study on Development of Driver Assistance Software for a Connected Car," Will be submitted to the IEEE International Conference on Consumer Electronics (ICCE) before the end of June, 2017.
- 4) R. Malaiya, **D. Kwon**, J. Kim, S. Suh, H. Kim, and I. Kim, "A Study on GAN-based Network Anomaly Detection," Will be submitted to the SCI(E)-indexed journal before the end of June, 2017.
- 5) **D. Kwon** and R. Malaiya, "A Study on Generative Adversarial Network (GAN)-based Object Detection for a Smart-Connected Car," Will be submitted to the SCI(E)-indexed journal before the end of August, 2017.

TECHNICAL SKILLS

PROJECT MANAGEMENT TOOLS

MS Project, MS Project Server, Primavera P6,
Precision Tree, @Risk, WBS Chart Pro

WEBSITE DEVELOPMENT TOOLS

Adobe Dreamweaver CC, Microsoft Front
page

MULTIMEDIA DEVELOPMENT TOOLS

Adobe Photoshop CC, Illustrator CC, Flash
CC, Premier Pro, OpenGL

PROGRAMMING

C, C++, C#, MS-SQL, Oracle 11g, My SQL,
HTML