

HYUNGGU JUNG

Kyung Hee University, Electronics Information College bldg, Rm 443-1
 Department of Software Convergence
 1732 Deogyong-daero, Giheung-gu, Yongin-si, Gyeonggi-do, Korea

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RESEARCH INTERESTS

Artificial Intelligence, Health Informatics, Human-AI Interaction, Human-Computer Interaction, Visual Analytics, Assistive Technology, Social Computing, Precision Medicine, Interpretable Machine Learning

EDUCATION

University of Washington School of Medicine Seattle, WA
Ph.D. in Biomedical and Health Informatics *Dec. 2017*

- Thesis: Creating a smartphone application for image-assisted dietary assessment among older adults with type 2 diabetes

Stanford University Stanford, CA
M.S. in Computer Science *June 2012*

- Specialized Area: Human-Computer Interaction

University of Waterloo Waterloo, ON Canada
M.Math in Computer Science *Aug. 2010*

- Thesis: Reasoning about benefits and costs of interaction with users in real-time decision making environments with application to healthcare scenarios

Korea Advanced Institute of Science and Technology (KAIST) Daejeon, Korea
B.S. in Computer Science with a minor in Business Economics *Aug. 2008*

PROFESSIONAL EXPERIENCE

Assistant Professor, Kyung Hee University Yongin, Korea
Department of Software Convergence *Apr. 2018 - present*

Predoctoral Research Associate, University of Washington Seattle, WA
Department of Radiation Oncology *Oct. 2017 - Dec. 2017*

- Developed probabilistic-based systems designed to perform automated quality assurance checks on radiation therapy plans
- Advisor: Dr. Alan Kalet

Department of Human Centered Design and Engineering *Sep. 2016 - Sep. 2017*

- Developed the system that supports theoretical models for computer-supported cooperative work
- Advisors: Drs. Mark R. Zachry and David W. McDonald

Department of Biomedical Informatics and Medical Education *Sep. 2014 - Aug. 2016*

- Developed a Markov chain model for the prediction of head and neck squamous cell carcinoma dissemination
- Advisor: Dr. Mark M. Whipple

Research Intern, PARC, a Xerox Company Palo Alto, CA
Computer Science Laboratory *June 2015 - Sep. 2015*

- Developed and evaluated contextual intelligence (CI) technology using text classification and information extraction to support rules for facilitating peer-to-peer exchanges
- Advisor: Dr. Victoria Bellotti

Research Assistant, University of Washington Seattle, WA
Institute of Translational Health Sciences *July 2014 - Sep. 2014*

- Developed an interactive demographic visualization of multiple facilities across time. Led the design studio for redesigning a data-profiling tool gathering and presenting distributed data
- Advisor: Dr. Kari A. Stephens

Center for Game Science

Oct. 2013 - June 2014

- Developed a visual analytics tool for discovering and analyzing raw data. Developed a tool for grading equations by crowdsourcing through Amazon Mechanical Turk
- Advisor: Christy Ballweber

Research Intern, Microsoft Research

Redmond, WA

Natural Interaction Research Group

June 2013 - Sep. 2013

- Developed a visual analytics tool for assessing attention during lectures and presentations. Conducted a user interface evaluation of the tool
- Advisor: Dr. Shamsi Iqbal

Research Assistant, University of Washington

Seattle, WA

Health-E Research Group

Sep. 2012 - June 2013

- Conducted systematic literature review on technologies for health behavior change. Designed prototypes for an interface summarizing mobility information and creating prompts or messages promoting health behavior change
- Advisor: Dr. George Demiris

Research Assistant, Stanford University

Stanford, CA

Stanford HCI Group

Oct. 2011 - Dec. 2011

- Developed a mobile application to encourage people to increase physical activity. Gathered raw data from users and transferred them to the database
- Advisor: Dr. Scott Klemmer

Stanford Center for Biomedical Informatics Research

Sep. 2010 - Aug. 2011

- Developed a tool generating a consolidated guideline for physicians as part of GLINDA project
- Advisor: Dr. Mark A. Musen

Research Assistant, University of Waterloo

Waterloo, ON Canada

Artificial Intelligence Research Group

Sep. 2008 - Aug. 2010

- Developed an algorithm modeling a communication and information system for emergency medical staff, focusing on finding the right doctor in hospital emergency settings with real-time aspects and dynamic environments
- Advisor: Dr. Robin Cohen

Unix Consultant, University of Waterloo

Waterloo, ON Canada

Math Faculty Computing Facility (MFCF) Help Center

May 2009 - Apr. 2010

- Provided support to undergraduate students, graduate students and professors to use Waterloo's computer infrastructure by responding to questions in a help-desk environment

Software Engineer, Brainzsquare, Inc.

Seoul, Korea

Division of Desktop Management System

Dec. 2005 - Feb. 2006

- Developed a solution for desktop management system to control remote users' machines with Visual C++ at the IT infra-management firm

Military Service, Republic of Korea Fire and Disaster Department

Seoul, Korea

Seobu Station

June 2003 - Sep. 2005

- Designed a fire-training simulation using a 3D Virtual Reality technique, while working for call-receiving service for 119 Rescue and First-aid Service

GRANTS, AWARDS & HONORS

-
- 2018 MR-IoT Convergence Disaster Response AI Research supported by Information
-2021 Technology Research Center (ITRC)
Co-Investigator, 591,900,000 KRW
- 2018 Development of a Smartphone Application for Dietary Assessment supported
-2019 by Kyung Hee University
Principle Investigator, 20,000,000 KRW
- 2016, Graduate School Fund for Excellence and Innovation (GSFEI) Travel Awards
2014 \$300 award/travel for attending AMIA 2014 and AMIA 2016, respectively
- 2016 National Science Foundation (NSF) Student Travel Grant
\$1,000 travel grant for attending ICHI 2016

- 2015 **Korean-American Scientists and Engineers Association (KSEA) & Korea-U.S. Science Cooperation Center (KUSCO) Scholarship**
\$1,000 award for academic excellence to Korean students
- 2014 **The Korean Computer Scientists and Engineers Association Scholarship**
\$200 award for academic excellence to Korean students in computer science and engineering
- 2014 **Graduate and Professional Student Senate (GPSS) Travel Grants Program**
\$300 travel grant for attending AMIA 2014
- 2012 **Korean Government Scholarship**
-2014 Scholarship (\$31,000/year, for 2 years) awarded for tuition and stipend for Ph.D studies
- 2012 **Mogam Science Scholarship**
\$10,000 award for stipend for Ph.D studies
- 2012 **Best Project Award**
1st prize on CS247 Interaction Design Studio, Stanford University
- 2012 **Outstanding Award**
\$325 award, Stanford Opportunity Job Fair Research
- 2012 **Canadian AI Travel Grant**
\$250 travel grant for attending Canadian AI 2010
- 2008 **Mathematics Graduate Experience Award**
-2010 \$1,000 award/term for 2 years, University of Waterloo
- 2008 **International Masters Student Award**
-2010 \$1,550 award/term for 2 years, University of Waterloo
- 2008 **Humanity Scholarship**
\$1,000 award, KAIST
- 2006 **Undergraduate Research Assistantships (URA) Program**
-2007 Research with a faculty member as an undergraduate research assistant, University of Waterloo
- 2006 **Overseas Study Program Scholarship**
Half tuition fee for summer session at UCSD
- 2006 **Undergraduate Research Participation (URP) Program**
\$500 award, KAIST
- 2006, **Chae-San Scholarship**
2003 Scholarship for exemplary computer science students

PUBLICATIONS

INTERNATIONAL JOURNAL PAPERS

- [j.10] Stephens KA, **Jung H**, Estiri H, Fiore-Gartland B, Lee S, Chan YF, Heagerty P, Kosel A, Keppel G, Munson S, Baldwin LM. "Design Considerations for Developing Data Profiling Tools for Distributed Electronic Health Data Networks". In preparation for review at *Journal of the American Medical Informatics Association (JAMIA)*. [SCI Q1 IF=4.270]
- [j.9] **Jung H**, Demiris G, Tarczy-Hornoch P, Zachry M. "Development and Usability Assessment of a Food Record App for Dietary Assessments among Older Adults with Type 2 Diabetes". Under review at *JMIR mHealth and uHealth* (**Corresponding author**) [SCI Q1 IF=4.541].
- [j.8] Seo W, **Jung H**. "Understanding the Community of Blind or Visually Impaired Vloggers on YouTube". Under review at *Universal Access in the Information Society* (**Corresponding author**) [SCIE IF=1.176].
- [j.7] Woo S, **Jung H**. "Effectiveness of Information and Communication Technology in Alzheimers Disease: A Systematic Review". Under review at *Under review at CIN: Computers, Informatics, Nursing* (**Corresponding author**) [SCIE IF=1.056].

- [j.6] Peltonen LM, Pruinelli L, Ronquillo C, Raji N, Lozada Peresmitre E, Lorraine B, Topaz M, Haley D, Lewis A, Alhuwail D, Ali S, Badger MK, Eler GJ, Georgsson M, Islam T, Jeon E, **Jung H**, Kuo C, Sarmiento RF, Sommer J, Tayaben JL, “The Current State of Nursing Informatics: An International Cross-sectional Survey”. *Finnish Journal of eHealth and eWelfare*. 11(3), 220-231, May 2019. DOI: <https://doi.org/10.23996/fjhw.77584>
- [j.5] Han K, **Jung H**, Jang J, Lee D. “Understanding Users Privacy Attitudes through Subjective and Objective Assessments: An Instagram Case Study”. *IEEE Computer*. 51(6):18-28, June 2018. DOI: 10.1109/MC.2018.2701648 [**SCI Q2 IF=1.755**]
- [j.4] Peltonen LM, Alhuwail D, Ali S, Badger MK, Eler GJ, Georgsson M, Islam T, Jeon E, **Jung H**, Kuo CH, Lewis A, Pruinelli L, Ronquillo C, Sarmiento RF, Sommer J, Tayaben JL, Topaz M. “Current Trends in Nursing Informatics: Results of an International Survey”. *Studies in Health Technology and Informatics*. 2016;225:938-9, June 2016. PMID: 27332419
- [j.3] Peltonen LM, Topaz M, Ronquillo C, Pruinelli L, Sarmiento RF, Badger MK, Ali S, Lewis A, Georgsson M, Jeon E, Tayaben JL, Kuo CH, Islam T, Sommer J, **Jung H**, Eler GJ, Alhuwail D. “Nursing Informatics Research Priorities for the Future: Recommendations from an International Survey”. *Studies in Health Technology and Informatics*. 2016;225:222-6, June 2016. PMID: 27332195 (**Nominated for the best scientific paper top ten award list**)
- [j.2] Topaz M, Ronquillo C, Peltonen LM, Pruinelli L, Sarmiento RF, Badger MK, Ali S, Lewis A, Georgsson M, Jeon E, Tayaben JL, Kuo CH, Islam T, Sommer J, **Jung H**, Eler GJ, Alhuwail D. “Advancing Nursing Informatics in the Next Decade: Recommendations from an International Survey”. *Studies in Health Technology and Informatics*. 2016;225:123-7, June 2016. PMID: 27332175
- [j.1] Cohen R, **Jung H**, Fleming M, Cheng MYK. “A User Modeling Approach for Reasoning about Interaction Sensitive to Bother and Its Application to Hospital Decision Scenarios”. *Special Issue on Personalization in e-Health User Modeling and User-Adapted Interaction (UMUAI): Volume 21, Issue 4 (2011), pp. 441-484*, October 2011. DOI: 10.1007/s11257-010-9091-3 (**Corresponding author**). [**SCIE Q1 IF=3.625**]

INTERNATIONAL CONFERENCE PAPERS

- [c.9] Abdulwahhab O, **Jung H**. “Designing Community of Practice Systems: a Value Sensitive Approach”. In *the IEEE International Conference on Informatics, Health, & Technology (pp. 1-7)*, Riyadh, Saudi Arabia, February 2017. DOI: 10.1109/ICIHT.2017.7899005
- [c.8] **Jung H**, Law A, Grunblatt E, Wang LL, Kusano A, Mejino Jr. JLV, Whipple ME. “Development of a Novel Markov Chain Model for the Prediction of Head and Neck Squamous Cell Carcinoma Dissemination”. In *AMIA Annual Symposium Proceedings. American Medical Informatics Association*, 2016 Nov;2016:1832-39, Chicago, IL, November 2016. PMID: 28269942
- [c.7] Topaz M, Ronquillo C, Peltonen LM, Pruinelli L, Sarmiento RF, Badger MK, Ali S, Lewis A, Georgsson M, Jeon E, Tayaben JL, Kuo CH, Islam T, Sommer J, **Jung H**, Eler GJ, Alhuwail D, Lee YL. “Nurse Informaticians Report Low Satisfaction and Multi-level Concerns with Electronic Health Records: Results from an International Survey”. In *AMIA Annual Symposium Proceedings. American Medical Informatics Association*, 2016 Nov;2016:2016-25, Chicago, IL, November 2016. PMID: 28269961. (**Nominated for the best paper top**)
- [c.6] **Jung H**, Bellotti V, Doryab A, Leitersdorf D, Chen J, Hanrahan B, Lee S, Turner D, Dey A, Carroll JM. “‘MASTERful’ Matchmaking in Service Transactions: Inferred Abilities, Needs and Interests versus Activity Histories”. In *Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems (pp. 1644-1655)*. Association for Computing Machinery (ACM), San Jose, CA, May 2016. DOI: 10.1145/2858036.2858263 [**Acceptance rate: 23% (565/2435)**] (**BKCSA003 IF=4**)
- [c.5] Wang LL, Grunblatt E, **Jung H**, Kalet IJ, Whipple ME. “Biological Model Development as an Opportunity to Provide Content Auditing for the Foundational Model of Anatomy Ontology”. In *AMIA Annual Symposium Proceedings. American Medical Informatics Association*. 2015 Nov 5;2015:2111-20, San Francisco, CA, November 2015. PMID: 26958311
- [c.4] **Jung H**, Hong SR, Meas P, Zachry M. “Designing Tools to Support Advanced Users in New Forms of Social Media Interaction”. In *Proceedings of the 33rd Annual International Conference on the Design of Communication (SIGDOC '15) Article 34*. Association for Computing Machinery (ACM), Limerick, Ireland, July 2015. DOI: 10.1145/2775441.2775462

- [c.3] Stephens KA, Lee ES, Estiri H, **Jung H**. “Examining Researcher Needs and Barriers for using Electronic Health Data for Translational Research”. In *AMIA Joint Summits Translational Science Proceedings. American Medical Informatics Association*. 2015 Mar 25;2015:168-72, San Francisco, CA, March 2015. PMID: 26306262
- [c.2] Estiri H, Chan YF, Baldwin LM, **Jung H**, Cole A, Stephens KA. “Visualizing Anomalies in Electronic Health Record Data: The Variability Explorer Tool”. In *AMIA Joint Summits Translational Science Proceedings. American Medical Informatics Association*. 2015 Mar 25;2015:56-60, San Francisco, CA, March 2015. PMID: 26306237
- [c.1] **Jung H**, Cohen R. “A Model for Reasoning about Interaction with Users in Dynamic, Time Critical Environments for the Application of Hospital Decision Making”. In *Advances in Artificial Intelligence: 23rd Canadian Conference on Artificial Intelligence, Canadian AI 2010, Ottawa, Canada, May 31-June 2, 2010, Proceedings 2010 May 12 (Vol. 6085, pp. 319–323)*. Springer. DOI: 10.1007/978-3-642-13059-5_37

INTERNATIONAL CONFERENCE PAPERS (EXTENDED ABSTRACT)

- [e.18] Kwon K, **Jung H**. “Health Promotion Interventions in Prisons in the United States: A Systematic Review”. Under review at *the American Public Health Association (APHA) 2019 Annual Meeting*, Philadelphia, PA, November 2019.
- [e.17] Bae Y, **Jung H**. “A Prototype of Non-smoking Aid Application Based on Features and User Interfaces to Support People with Low Vision”. To appear at *the 2019 US-Korea Conference on Science, Technology and Entrepreneurship (UKC)*, Rosemont, IL, August 2019.
- [e.16] Yoo T, **Jung H**. “Category Classification of Educational Videos on YouTube through Machine Learning Approaches Using Video Titles”. To appear at *the 2019 US-Korea Conference on Science, Technology and Entrepreneurship (UKC)*, Rosemont, IL, August 2019.
- [e.15] Seo M, **Jung H**. “A Study on the Utilization and Module Configuration Diagram of the User Path in Virtual Reality Using Unity”. To appear at *the 2019 US-Korea Conference on Science, Technology and Entrepreneurship (UKC)*, Rosemont, IL, August 2019.
- [e.14] Lee J, Park G, **Jung H**. “Poster: SEEjang: Smart, Easy, and Economical Offline Shopping Assist App Development through Design Thinking Process”. In *Proceedings of the 17th Annual International Conference on Mobile Systems, Applications, and Services (MobiSys)*, Seoul, Korea, June 2019. **(BKCSA043 IF=3)**
- [e.13] Jung H, **Jung H**. “Evaluation of Mobile Applications for Disaster Responses through Personas and Scenarios”. In *Proceedings of Asian CHI Symposium: Emerging HCI Research Collection at CHI'19*, Glasgow, UK, May 2019.
- [e.12] Kwon K, **Jung H**. “Opportunities to Reduce Lung Cancer Disparities Among African Americans through Informatics: A Systematic Review”. In *Proceedings of the American Public Health Association (APHA) 2018 Annual Meeting*, San Diego, CA, November 2018.
- [e.11] Kwon K, **Jung H**. “The Use of Public Health Informatics to Reduce Lung Cancer Disparities Among African Americans: A Systematic Review”. In *Proceedings of the 2013 US-Korea Conference on Science, Technology and Entrepreneurship (UKC)*, Queens, NY, August 2018.
- [e.10] Seo W, **Jung H**. “Understanding Blind or Visually Impaired People on YouTube through Qualitative Analysis of Videos”. In *Proceedings of the ACM International Conference on Interactive Experiences for TV and Online Video. Association for Computing Machinery (ACM)*, Seoul, Korea, June 2018.
- [e.9] Seo W, **Jung H**. “Exploring the Community of Blind or Visually Impaired People on YouTube”. In *Proceedings of the 19th ACM SIGACCESS Conference on Computers and Accessibility (ASSETS)*. ACM, Baltimore, MD, October 2017. DOI: 10.1145/3132525.3134801
- [e.8] **Jung H**, Seo W, Cha M. “Personas and Scenarios to Design Technologies for North Korean Defectors with Depression”. In *Companion of the 20th ACM Conference on Computer-Supported Cooperative Work and Social Computing (pp. 215-218)*. ACM, Portland, OR, February 2017. DOI: 10.1145/3022198.3026308 **(BKCSA040 IF=3)**

- [e.7] **Jung H**, Law A, Wu E, Whipple ME. “Coordinated Markov Modeling of Cancer Metastasis from Multiple Primary Sites”. In *Proceedings of the Conference of the Asia Pacific Association for Medical Informatics*, Seoul, Korea, November 2016.
- [e.6] **Jung H**, Lee J. “Development of a Medication Information Generator System for Older Adults”. *2016 IEEE International Conference on Healthcare Informatics (ICHI)*, Chicago, IL, USA, October 2016, p. 312. DOI: 10.1109/ICHI.2016.54
- [e.5] Lee S, **Jung H**. “Mutiv: Music-based Mobile Application to Support Joggers”. *2016 IEEE International Conference on Healthcare Informatics (ICHI)*, Chicago, IL, USA, October 2016, p. 411. DOI: 10.1109/ICHI.2016.75
- [e.4] Law AB, **Jung H**, Wang LL, Kusano A, Whipple ME. “A Model of Regional Tumor Metastasis of Squamous Cell Carcinoma of the Tongue”. In *Proceedings of the American Head and Neck Society (AHNS) 9th International Conference on Head and Neck Cancer*, Seattle, WA, July 2016.
- [e.3] **Jung H**, Lee ES, Estiri H, Stephens KA. “Interactive Demographic Visualization of Multiple Facilities across Time”. In *Proceedings of the 2014 Workshop on Visual Analytics in Healthcare (VAHC)*, Washington, D.C., November 2014.
- [e.2] **Jung H**, Lau J. “Task-Decomposing Anonymous Crowds”. In *Proceedings of the 2013 US-Korea Conference on Science, Technology and Entrepreneurship (UKC)*, East Rutherford, New Jersey, August 2013.
- [e.1] **Jung H**. “Reasoning about Interaction for Hospital Decision Making”. In *Advances in Artificial Intelligence: 23rd Canadian Conference on Artificial Intelligence, Canadian AI 2010*, Ottawa, Canada, May 31-June 2, 2010, Proceedings 2010 May 12 (Vol. 6085, pp. 414–415). Springer. DOI: 10.1007/978-3-642-13059-5_60

DOMESTIC CONFERENCE PAPERS

- [c.4] Ko Y, **Jung H**, Oh U. “Analysis of Conflicts in Romantic Relationships on Mobile Messengers”. In *Proceedings of HCI Korea 2019*, Seogwipo, Jeju-do, Korea, February 2019.
- [c.3] Jeon H, **Jung H**. “Designing a Crime Rate-based Recommended Routes Guidance Application”. In *Proceedings of HCI Korea 2019*, Seogwipo, Jeju-do, Korea, February 2019.
- [c.2] Yoo T, **Jung H**. “Needs Analysis Based on Vlogging Career”. In *Proceedings of HCI Korea 2019*, Seogwipo, Jeju-do, Korea, February 2019.
- [c.1] Bae Y, **Jung H**. “A Study on the Analysis of Personas and Scenarios for Earthquake Avoidance in School”. In *Proceedings of HCI Korea 2019*, Seogwipo, Jeju-do, Korea, February 2019.

PRESENTATIONS

- [p.6] **Jung H**. “Toward Smart Health: Healthcare Transformation”. Podium presented at the *4th Aslla Symposium*, Gangneung, Gangwon-do, June 2018.
- [p.5] **Jung H**. “Creating a Smartphone Application for Image-assisted Dietary Assessment for Older Adults with Type 2 Diabetes”. Podium presented at the *American Medical Informatics Association (AMIA) Annual Symposium*, Chicago, IL, November 2016.
- [p.4] **Jung H**. “Use of Social Media for Dietary Assessment among Older Adults with Diabetes”. Podium presented at the *Workshop on Social Media for Older Adults*, Bellevue, WA, November 2016.
- [p.3] **Jung H**. “Creating a Smartphone Application for Image-assisted Dietary Assessment for Older Adults with Type 2 Diabetes”. Podium and poster presented at the *IEEE International Conference on Healthcare Informatics*, Chicago, IL, October 2016.
- [p.2] Wang LL, Grunblatt E, **Jung H**, Whipple ME, Kalet IJ. “Ontological Content Auditing during Model Creation Using the Foundational Model of Anatomy”. Poster presented at the *National Library of Medicine (NLM) Informatics Training Conference*, Bethesda, MD, June 2015.
- [p.1] **Jung H**, Cohen R. “A Model for Reasoning about Interaction with Users in Hospital Decision Scenarios”. Poster presented at *Biomedical Computation at Stanford (BCATS) 2010*, Stanford, November 2010.

INVITED TALKS

12. From Data to Decision: Improving Decision Making with Electronic Health Records Data
 - Department of Computer Science, Korea University, Seoul, Korea May 2019
 - Department of Computer Science and Engineering, POSTECH, Pohang, Korea Mar. 2019
 - Department of Software Convergence, Kyung Hee University, Yongin, Korea Oct. 2018
 - Department of Computer Engineering, Ajou University, Suwon, Korea Mar. 2018
 - School of Human ICT Convergence, Sungkyunkwan University, Suwon, Korea Nov. 2017
 - Department of Preventive Medicine, Kyung Hee University, Seoul, Korea Nov. 2017
 - Electronics and Telecommunications Research Institute, Daejeon, Korea Nov. 2017
 - Department of Biomedical Informatics and Medical Education, University of Washington School of Medicine, Seattle, WA Oct. 2017
 - Department of Quantitative Health Sciences, University of Massachusetts Medical School, Worcester, MA Sep. 2017
 - Brown Center for Biomedical Informatics, Brown University, Providence, RI May 2017
11. From Data to Decision: Improving Decision Making with Data for Disaster Response
 - MR-IoT Convergence Disaster Response AI Research Workshop, Suwon, Korea Feb. 2019
10. ‘MASTerful’ Matchmaking in Service Transactions: Inferred Abilities, Needs and Interests versus Activity Histories
 - School of Computing, KAIST, Daejeon, Korea Nov. 2017
 - Department of Computer Science and Engineering, Seoul National University, Seoul, Korea Jan. 2017
 - School of Computer Science and Engineering, Chung-Ang University, Seoul, Korea Dec. 2016
 - School of Human ICT Convergence, Sungkyunkwan University, Suwon, Korea Dec. 2016
 - Graduate School of Convergence Science and Technology, Seoul National University, Suwon, Korea Dec. 2016
 - Department of Library and Information Science, Yonsei University, Seoul, Korea Dec. 2016
9. Creating Technologies towards Smart Health and Cyber-Human Systems
 - Department of Biostatistics and Informatics, Colorado School of Public Health, Aurora, CO Apr. 2017
 - Department of Healthcare Policy and Research, Weill Cornell Medical College, New York, NY Apr. 2017
 - Department of Informatics, New Jersey Institute of Technology, Newark, NJ Apr. 2017
 - Graduate School of Knowledge Service Engineering, KAIST, Daejeon, Korea Jan. 2017
8. Creating Tools for Visual Analytics through User-Centered Design Process
 - Institute for Biomedical Informatics, University of Pennsylvania, Philadelphia, PA Jan. 2017
7. Needs Assessment through Personas and Scenarios
 - College of Nursing, Seoul National University, Seoul, Korea Jan. 2017
6. Markov Modeling of Cancer Metastasis for Predicting Head and Neck Squamous Cell Carcinoma Dissemination
 - Department of Biomedical informatics, Ajou University School of Medicine, Suwon, Korea Dec. 2016
 - Biomedical Engineering Department, Seoul National University College of Medicine, Seoul, Korea Dec. 2016
 - Division of Biomedical Informatics, Seoul National University College of Medicine, Seoul, Korea Dec. 2016
 - School of Electrical Engineering, Korea University, Seoul, Korea Nov. 2016
5. Designing Tools to Support Users with Special Needs
 - School of Human ICT Convergence, Sungkyunkwan University, Suwon, Korea Dec. 2015
4. Designing Tools to Support Advanced Users in New Forms of Social Media Interaction
 - 16th KOCSEA Technical Symposium, Claremont, CA Dec. 2015
3. Redesigning Tools for Supporting Clinical Researchers through User-centered Design Approach
 - School of Human ICT Convergence, Sungkyunkwan University, Suwon, Korea Dec. 2014
 - Department of Biomedical Informatics, Ajou University School of Medicine, Suwon, Korea Dec. 2014

- College of Nursing, Seoul National University, Seoul, Korea Dec. 2014
- 2. A Model for Reasoning about Interaction with Users in Dynamic, Time Critical Environments for the Application of Hospital Decision Making
 - Sharing Discovery: The 2010 Graduate Student Research Conference, University of Waterloo, Waterloo, ON Canada Apr. 2010
- 1. Finding the Right Doctor in Hospital Emergency Scenarios
 - Lawrence S. Bloomberg Faculty of Nursing, University of Toronto, Toronto, ON Canada Sep. 2009

TEACHING

Instructor, Kyung Hee University

SWCON221 Datacenter Programming

SWCON363 Independent Learning & Research(Major)

SWCON104 Web and Python Programming

SWCON103 Design Thinking

GEE1952 Major Exploring Program

Yongin, Korea

Fall 2018 - Spring 2019

Spring 2019

Fall 2018

Fall 2018

Fall 2018

- Give lectures on the concepts, theories, and practices about data science and human-computer interaction design through flipped-learning approaches

Writing Tutor, University of Washington

The Odegaard Writing and Research Center

Seattle, WA

Fall 2016 - Fall 2017

- Provided undergraduate and graduate students with 1:1 writing tutoring

Course Assistant, Stanford University

CS116 From Nand to Tetris

CS424M Computational Modeling and Analytics in Social Science

CS106A Programming Methodology

Stanford, CA

Spring 2012

Winter 2012

Fall 2011

- Graded assignments and held office hours to assist students with concepts

Instructor, Stanford University

Stanford Educational Studies Program

Stanford, CA

Fall 2010, Spring 2011, Fall 2011, Spring 2012

- Taught Korean language and alphabet for about 90 high school students

Teaching Assistant, University of Waterloo

CS136 Elementary Algorithm Design and Data Abstraction

CS115 Introduction to Computer Science 1

Waterloo, ON Canada

Winter 2009

Fall 2008

- Marked assignments and examinations, and proctored examinations

Instructor, Government of Grenada

Korea Internet Volunteers

St.George's, Grenada

Summer 2008

- Taught Java programming and Web design
- Received certificate of appreciation from Minister of Education of Grenada

Teaching Assistant, KAIST

BEP403 Microeconomics

CS101 Introduction to Programming

Daejeon, Korea

Spring 2008

Spring 2008

- Held consulting hours to assist students with concepts
- Marked assignments and examinations, and proctored examinations

Tutor, KAIST

KAIST Tutoring Program

Daejeon, Korea

Fall 2007 - Spring 2008

- Provided 1:1 remedial tutoring to undergraduate freshmen
- Tutored two international freshmen in CS101 Introduction to Programming (Java programming)

Instructor, De La Salle Lipa

Korea Internet Volunteers

Lipa, Philippines

Summer 2007

- Taught MATLAB programming and conducted seminars for advanced information technology
- Received two certificates of appreciation, one from the Dean of Computer Science and another from the Dean of Tourism Department

RESEARCH MENTORING

- Heejae Jung (Undergraduate, Kyung Hee University) *Apr. 2018 - present*
“Evaluation of Mobile Applications for Disaster Responses through Personas and Scenario”
- Hyeonjin Jeon (Undergraduate, Kyung Hee University) *Apr. 2018 - present*
“Designing a Crime Rate-based Recommended Routes Guidance Application”
- Taewon Yoo (Undergraduate, Kyung Hee University) *Apr. 2018 - present*
“Needs Analysis Based on Vlogging Career”
- Yiji Bae (Undergraduate, Kyung Hee University) *Apr. 2018 - present*
“A Study on the Analysis of Personas and Scenarios for Earthquake Avoidance in School”
- Seung Je Woo (PhD student, Stanford University) *Jan. 2016 - present*
“Review on Information-communication Technologies for Diagnosis and Treatment of Alzheimer’s Diseases”
- Woosuk Seo (PhD student, University of Michigan-Ann Arbor) *Apr. 2017 - Aug. 2018*
“Understanding the Community of Blind or Visually Impaired People on YouTube”
- Woosuk Seo, Michelle Cha (Undergraduate, University of Washington) *May 2016 - Feb. 2017*
“Designing Technologies to Support North Korean Defectors with Depression”
- Sangwook Lee (Undergraduate, Postech, Korea) *May 2016 - Nov. 2016*
“Designing Tools to Support Runners through User-centered Design Approach”
- Donghun Lee (Researcher, ETRI, Korea) *Sept. 2015 - June 2016*
“Designing Space-sharing Platforms through User-centered Design Approach”
- Jiyoun Lee (Undergraduate, KwangWoon University, Korea) *Jan. 2016 - May 2016*
“Development of a Medication Information Generator System for Older Adults”

TECHNICAL SKILLS

- Programming: C/C#/C++, Java, Python, R, Scheme, JavaScript, Lisp, MATLAB, and Maple
- Applications: Docker, Kubernetes, \TeX , \LaTeX , \BibTeX , and other common productivity packages for Windows and Linux platforms
- Operating Systems: Microsoft Windows, iOS, Android, Linux, and Unix

SERVICE

Conference/Workshop Organization & Assistance

- Officer, Korea ACM SIGCHI Chapter *2018-2019*
- Program Committee, ACM Conference on Recommender Systems (RecSys) *2018-2019*
- Program Committee, the 4th Aslla Symposium *2018*
- Invited Session Chair, SIGCHI Korea Local Chapter 2018 Spring Academic Workshop *2018*
- Program Committee, ACM Annual Meeting of the Intelligent User Interfaces (IUI) Community *2017-2018*
- Student Volunteer, ACM Conference on Human Factors in Computing Systems (CHI) *2015-2018*
- Assistant Editor, MedInfo 2017 Editorial Team *2017*
- Organizer, Workshop on Social Media for Older Adults (SMOA) *2016*
- Student Volunteer, IEEE International Conference on Healthcare Informatics (ICHI) *2016*
- Student Volunteer, ACM Conference on Bioinformatics, Computational Biology, and Health Informatics (BCB) *2016*
- Student Volunteer, AMIA Annual Symposium *2015*
- Web Chair, ACM Conference on Multimodal Interaction (ICMI) *2015*
- Student Volunteer, AMIA Joint Summits on Translational Science *2011-2012*
- Student Volunteer, Biomedical Computation at Stanford (BCATS) 11th Symposium *2010*

Publication Reviewer

- ACM Conference on Recommender Systems (RecSys) *2018-2019*
- ACM Conference on Human Factors in Computing Systems (CHI) *2016-2019*
- ACM Conference on Human-Computer Interaction with Mobile Devices and Services (Mobile HCI) *2017-2019*
- ACM International Conference on Multimodal Interaction *2018*

- ACM Conference on Automotive User Interfaces and Interactive Vehicular Applications (AutomotiveUI) 2018
- ACM Conference on Computer-Supported Cooperative Work and Social Computing (CSCW)
- AMIA Joint Summits on Translational Science 2016, 2018
- ACM Conference on Intelligent User Interfaces (IUI) 2017-2018
- AMIA Consumer and Pervasive Health Informatics Working Group Student Paper Reviewer 2017
- ACM Symposium on Spatial User Interaction (SUI) 2017
- ACM Australian Conference on Human-Computer Interaction (OzCHI) 2017
- Journal of Future Generation Computer Systems 2017
- International Journal of Distributed Sensor Networks 2017
- ACM Conference on Designing Interactive Systems (DIS) 2017
- ACM/IEEE Conference on Human-Robot Interaction (HRI) 2017
- ACM Conference on Interaction Design and Children (IDC) 2016-2017
- AMIA Translational Bioinformatics Year in Review 2016-2017
- AMIA Annual Symposium 2015, 2017-2018
- Workshop on Visual Analytics in Healthcare (VAHC) 2016
- ACM Conference on Interactive Experiences for TV and Online Video (TVX) 2016

Other Service

- Officer, Young Generation (YG) Group, KSEA Seattle Chapter 2016-2018
- Student Liaison, Consumer and Pervasive Health Informatics Working Group, AMIA 2017
- Panelist, KSEA Seattle YG BioHealth Mentoring 2017
- Panelist, Fall 2017 Foundation for International Understanding Through Students (FIUTS) Grad-Only Oritation 2017
- Alumni Interviewer, Stanford Alumni Interview Program 2015, 2017
- Mentor, AMIA High School Scholars Program 2015
- Organizer, National Mathematics and Science Competitions, KSEA Seattle Chapter 2014
- Booth Captain, CulturalFest, FIUTS, University of Washington 2013
- MS Admissions Committee Member, Computer Science Department, Stanford University 2011
- Shadow Program Mentor, University of Waterloo 2009-2010
- CS4U Volunteer, David R. C. School of Computer Science, University of Waterloo 2008-2009
- Dormitory Leader, KAIST Dormitory Association, KAIST 2007-2008

Professional Membership

- Member, Association for Computing Machinery (ACM)
- Member, American Medical Informatics Association (AMIA)
- Member, Korean-American Scientists and Engineers Association (KSEA)
- Member, Korean Computer Scientists and Engineers Association of America
- Member, Healthcare Information and Management Systems Society (HIMSS)