AUK KIM

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Research Interest

- Understanding and Designing Human Interactions with Artificial Intelligence systems and Intelligent Vehicles
- Understanding and Modeling Human Behaviors and Preferences

Research Domain

Human-Computer Interaction, Ubiquitous Computing, Sensor Mining

Invited Talks

- Making a voice assistant for vehicle smarter and safer, Design Thinking SWCON103, Kyung Hee University, December 2018 (invited by Prof. Hyunggu Jung).
- Supporting Groupwork over a Large Physical Space, KAIST Interaction Lab, KAIST, August 2016, (invited by Prof. Juho Kim).

Journal and Conference Reviewer

- ACM Conference on Human Factors in Computer Systems (CHI) 2018, 2019
- Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT) 2018, 2019
- International ACM SIGCHI Conference on Automotive User Interfaces and Interactive Vehicular Applications (AutomotiveUI) 2019

Technical Skills

- S/W Development (Fullstack): Web-based Applications, Android Applications, Desktop Applications (stand-alone application), Server-side Applications (data collection/distribution server)
- Quantitative Method: Statistical analysis, Machine learning, Deep learning, Data mining/analysis
- User Research Method: Participant-observation, Focus group, Contextual inquiry, Survey Design, Open-coding, Experiment Design, Experience User Sampling
- Data Analysis Tool: SPSS, R
- Programming: JAVA (including Android and JSP), Python, R, SQL, Javascript, HTML, CSS, C#

Education

- Korea Advanced Institute of Science and Technology (KAIST), Daejeon, Korea – March 2014 ~ Expected February 2020
  Ph.D. in Knowledge Service Engineering
  GPA 3.7/4.1 (93/100)
  Advisor: Prof. Uichin Lee

- Korea Advanced Institute of Science and Technology (KAIST), Daejeon, Korea – February 2012 ~ February 2014
  M.E. in Knowledge Service Engineering, February 2014
  GPA 3.7/4.1 (93/100)
  Advisor: Prof. Gahgene Gweon

- University of Canterbury, Christchurch, New Zealand – February 2008 ~ April 2011
  B.S. in Computer Science, April 2011
  GPA: 84.8/100

- University of Canterbury, Christchurch, New Zealand – February 2007 ~ February 2008
  Certificate in Foundation Study

Awards & Scholarship

- Korean Government National Scholarship, 2012-2019
- Outstanding Service Award, Dept. of Knowledge Service Engineering, KAIST, 2016-2017
- Outstanding Service Award, Dept. of Knowledge Service Engineering, KAIST, 2015-2016

Journal Articles

[J3] Park, J., Kim, S., **Kim, A.**, & Mun, Y. (2019) *Learning to be better at the game: Performance vs. completion contingent reward for game-based learning*. Computers & Education, Volume 139, 1-15

[J2] **Kim, A.**, Choi, Q., Park, J., Kim, K., & Lee U. (2018) *Interrupting Drivers for Interactions: Predicting Opportune Moments for In-vehicle Proactive Auditory-verbal Tasks*. In Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT/Ubicomp), Volume 2, Issue 4. ACM.

[J1] **Kim, A.**, & Gweon, G. (2016). *Comfortable with friends sharing your picture on Facebook?-Effects of closeness and ownership on picture sharing preference*. Computers in Human Behavior, 62, 666-675.

Refereed Full Conference Papers

[C3] **Kim, A.**, Kang, S., & Lee, U. (2017). *LetsPic: Supporting In-situ Collaborative Photography over a Large Physical Space*. In *Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems*, 4561-4573. ACM.

[C2] **Kim, A.**, & Gweon, G. (2014). ***Photo sharing of the subject, by the owner, for the viewer: examining the subject's preference***. In *Proceedings of the 2014 CHI Conference on Human Factors in Computing Systems, 975-978*. ACM.

[C1] **Kim, A.**, Lee, J., and Gweon, G. (2014). ***Maintaining Optimal Difficulty in Video Lecture through Real-Time Physiological Feedback***. Conference of the Society of e-Learning (SELCon).

Poster Presentations (Peer Reviewed)

[P5] **Kim, A.**, Choi, Q., Park, J., Kim, K., & Lee U. (2019). ***Predicting Opportune Moments for In-vehicle Proactive Speech Services***. In *Proceedings of the 2019 ACM International Joint Conference and 2018 International Symposium on Pervasive and Ubiquitous Computing and Wearable Computers*. ACM.

[P4] Cha, N., Kim, I., Park, M., **Kim, A.**, & Lee, U. (2018). ***HelloBot: Facilitating Social Inclusion with an Interactive Greeting Robot***. In *Proceedings of the 2018 ACM International Joint Conference and 2018 International Symposium on Pervasive and Ubiquitous Computing and Wearable Computers, 21-24*. ACM.

[P3] Kang, S., **Kim, A.**, Lee, J., Shin, I., & Lee, U. (2018). ***Understanding Customers' Interests in the Wild***. In *Proceedings of the 2018 ACM International Joint Conference and 2018 International Symposium on Pervasive and Ubiquitous Computing and Wearable Computers, 90-93*. ACM.

[P2] Kim, H., Molefi, L. W., **Kim, A.**, Woo, W., Segev, A., & Lee, U. (2017). ***It's More than Just Sharing Game Play Videos! Understanding User Motives in Mobile Game Social Media***. In *Proceedings of the 2017 CHI Conference Extended Abstracts on Human Factors in Computing Systems, 2714-2720*. ACM.

[P1] Kim, S., Patra, K. A. E., **Kim, A.**, Lee, K. P., Segev, A., & Lee, U. (2017). ***Sensors Know Which Photos Are Memorable***. In *Proceedings of the 2017 CHI Conference Extended Abstracts on Human Factors in Computing Systems, 2706-2713*. ACM.

Patents

[A4] Lee, U., Park, C., Kang, S., **Kim, A.,** & Cha, N., 2019. *Method and Apparatus for Context-adaptive Personalized Psychological State Sampling for Wearable Device*. United States. May 2019.

[A3] Lee, U., Park, C., Kang, S., **Kim, A.,** & Cha, N., 2019. *Context Adaptive Personalized Psychological State Sampling Method and Apparatus for Wearable Devices*. Republic of Korea. Patent Number 10-2019-0046688, April 2019.

[A2] Lee, U., Lee, J., **Kim, A.**, & Kang, S. 2018. *Method and Apparatus for Providing Personalized Product Information based on Wearable-based User Interest Estimation in AI-based Unmanned Stores*. Republic of Korea. Patent Number 10-2018-0048907, April 2018.

[A1] Lee, J., Sung, J., **Kim, A.**, & Jung. Y. 2012. *Method and Apparatus for Managing Trigger-based Tag*. Republic of Korea. Patent Number 10-2012-0082574, registered April 2014.

Research Projects

- Development of Crowdsourcing-based Context Big Data Collection Techniques and Generation of a Large-scale Open Big Dataset (2018-Present). Supported by the Ministry of Science and ICT. [P3, P4, A2, A3, A3].
- Development of Inference Model of Driver Interruptibility for Intelligent Proactive In-vehicle Services (2016-2017). Supported by the Hyundai NGV (Next Generation Vehicle Technology). [J2, P5]
- Development of Device Collaborative Giga-Level Smart Cloudlet Technology (2016-2018). Supported by the Institute for Information & Communications Technology Promotion. [C3, P1]
- Development of Analysis Model of Internet Addiction Causes (2015-2016). Funded by Ministry of Science, ICT and Future Planning
- Evaluating Social Media as a Source of Public Opinion in Korea (2013-2014). Supported by the U.S. Office of Naval Research Global. [J1, C2]
- Smart Device Educational Model that Engages Students by Applying Factors that Causes Media Addiction (2013-2016). Supported by Ministry of Science, ICT and Future Planning [C1]
- Development of Intelligent Tutoring System for Nursing Creative Human Resources (2011-2013). Supported by the Korean Ministry of Knowledge Economy and Korea Evaluation Institute of Industrial Technology.

Work Experience

- 2009.11 ~ 2011.06 Alchemy Software Ltd (Quality Assurance Team, Part-time)

Teaching Experience

Research Mentoring
- Research Mentor for Master student (Sungwook Moon), Dept. of Knowledge Service Engineering, KAIST, 2016-2017
- Research Mentor for Undergrate student (Bomi Kim), KAIST, 2017
- Research Mentor, Undergraduate Research Program (Youngwoo Shin), KAIST, 2014

Teaching Assistance
- Social Computing System Design and Analysis (KSE652) 2017 Fall, 2016 Fall
- Human-Computer Interaction: Theory and Design (KSE531) 2014 Spring, 2013 Spring
- Introduction to Learning Science (KSE611) 2013 Fall
- Online Learning and Communication (KSE612) 2012 Fall

Art Exhibitions (Technical Supports for Artists)

- Park, K. (**Kim, A.** – Motor control, Interactive mobile app development), *Sphere. Digital Promenade* (2018). Seoul Museum of Art, Seoul, Korea
- Park, K. (**Kim, A.** - IoT Device control and deployment, Media system development), *Path mixed media*. Path (2017). JJ Joong Jung Gallery, Seoul, Korea

- Park, K. (**Kim, A**. - IoT Device control and deployment, Media system development), *Path mixed media*. Path (2016). Künstlerhaus Bethanien, Berlin, Germany.

Research Intern

- Algorithm Lab (Prof. Tadao Takoka), University of Canterbery, 2010.06~2010.08
- UVR (Ubiquitous Virtual Reality) Lab (Prof. Woontack Woo), Gwangju Institute of Science and Technology (GIST), 2009.09~2009.12

Student Volunteer

- ACM Conference on Human Factors in Computer Systems (CHI) 2014, 2017

University Services

- Student Representative, Dept. of Knowledge Service Engineering, KAIST, 2015-2016

Social Volunteer Services

- Student Volunteer Army for Christchurch Earthquake 2010-2011
- Military services, 2004-2006