

Han Joo Chae

Vice President of ROKIT Healthcare

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EDUCATION

Seoul National University, Seoul, Korea — *Ph.D.*

AUGUST 2015 - FEBRUARY 2020

Ph.D. in Computer Science and Engineering.

Carnegie Mellon University, Pittsburgh, PA — *M.S. & B.S.*

AUGUST 2005 - MAY 2010

M.S. in Electrical and Computer Engineering.

B.S. in Electrical and Computer Engineering with University Honors.

EXPERIENCE

ROKIT Healthcare, Seoul, Korea — *Vice President*

OCTOBER 2020 - PRESENT

Leading the AI & UX department to improve the overall user experience of patients and clinicians utilizing machine learning techniques.

Samsung Electronics, Suwon, Korea — *UX Designer & Software Developer*

AUGUST 2010 - DECEMBER 2013

Designed new interfaces on mobile, tablet, TV, and Smartwatch and developed prototypes as proof-of-concept. Also, developed NMS web applications for Mobile WiMAX, LTE, and WCDMA base stations.

Bluegg, Seoul, Korea — *Software Developer*

OCTOBER 2014 - DECEMBER 2015

Developed Android and web applications for a donation campaign service called LIGHT-UP.

Samsung R&D Center Silicon Valley, San Jose, CA — *Intern*

JUNE 2009 - AUGUST 2009

Developed a mobile 3D interface using sensors and image processing.

RESEARCH PROJECTS

Wall-based Space Manipulation, HCI Lab, SNU — 2018

Developed a novel 3D interaction technique to efficiently manipulate distant objects in AR. A paper was presented at UIST '18.

RESEARCH INTERESTS

Augmented Reality

3D Interaction Technique

Information Visualization

Machine Learning

AWARDS & HONORS

Naver Ph.D. Fellowship, 2018.

Awarded for the outstanding research achievement in computer science.

3rd Place Winner, 2018.

Participated & won 3rd place in the BR41N.IO Brain-Computer Interface Designers Hackathon at the 2018 UIST School.

Google Travel Grants, 2016.

Awarded to attend UIST '16 and present a poster.

Samsung Best Paper Award, 2009.

Awarded for the paper about the mobile 3D interface developed at Samsung R&D Center during the internship.

University Honors, 2009.

Received from CMU in recognition of exemplary academic achievement.

Eta Kappa Nu, 2009. Member of the ECE Honor Society.

Controlling IoT Devices in AR, HCI Lab, SNU — 2016

Developed gesture based interaction techniques to control multiple IoT devices and visualized their connections and relationships in AR.

PAPERS

Han Joo Chae, Youli Chang, Minji Kim, Gwanmo Park, and Jinwook Seo. 2020. ARphy: Managing Photo Collections Using Physical Objects in AR. In *Extended Abstracts of the 2020 CHI Conference on Human Factors in Computing Systems (CHI EA '20)*. Association for Computing Machinery, New York, NY, USA, 1–7.

Han Joo Chae, Youli Chang, Minji Kim, Gwanmo Park, and Jinwook Seo. 2020. Leveraging the Physical Properties of Real Objects to Manage Digital Photography in Augmented Reality. In the *Journal of Korean Institute of Information Scientists and Engineers (JOK '20)*, 47(10), 900–905.

Han Joo Chae, Jeong-in Hwang, Yieun Kim, Kyle Koh, and Jinwook Seo. 2020. SCARII : A Study to Advise Safety Concerns Caused by Involuntary Inputs in Augmented Reality. In the *Journal of Korean Institute of Next Generation Computing*, 16(2), 18–36.

Sarah Faltaous, Gabriel Haas, Liliana Barrios, Andreas Seiderer, Sebastian Felix Rauh, Han Joo Chae, Stefan Schneegass, and Florian Alt. 2019. BrainShare: A Glimpse of Social Interaction for Locked-in Syndrome Patients. In *Extended Abstracts of the 2019 CHI Conference on Human Factors in Computing Systems (CHI EA '19)*. Association for Computing Machinery, New York, NY, USA, Paper LBW0155, 1–6.

Han Joo Chae, Jeong-in Hwang, and Jinwook Seo. 2018. Wall-based Space Manipulation Technique for Efficient Placement of Distant Objects in Augmented Reality. In *Proceedings of the 31st Annual ACM Symposium on User Interface Software and Technology (UIST '18)*. ACM, New York, NY, USA, 45–52.

Han Joo Chae, Jeong-in Hwang, Yuri Choi, Yieun Kim, Kyle Koh, and Jinwook Seo. 2016. Prevention of Unintentional Input While Using Wrist Rotation for Device Configuration. In *Proceedings of the 29th Annual Symposium on User Interface Software and Technology (UIST '16 Adjunct)*. ACM, New York, NY, USA, 205–206.

Heonjin Park, Kyle Koh, Yuri Choi, Han Joo Chae, Jeongin Hwang, and Jinwook Seo. 2016. Defining Rules Among Devices in Smart Environment Using an Augmented Reality Headset. In *Proceedings of the Second International Conference on IoT in Urban Space (Urb-IoT '16)*. ACM, New York, NY, USA, 18–21.

Han Joo Chae, Jeong-in Hwang, Yieun Kim, Kyle Koh, and Jinwook Seo. 2018. A Study to Advise Involuntary Inputs While Configuring IoT Devices in Augmented Reality Environment. In *Proceedings of the Korea Computer Congress 2018 (KCC 2018)*, 418–420.

[Best Note]

Kyle Koh, Han Joo Chae, Yuri Choi, Yieun Kim, and Jinwook Seo. 2016. A Study on User Interface for Device Configuration with Wrist Rotation Using AR and Wearables in IoT Environment. In *Proceedings of the Korea Computer Congress 2018 (KCC 2016)*. 1411–1413.

Yieun Kim, Koeun Choi, Han Joo Chae, and Jinwook Seo. 2018. CookUs: Improving User Interaction with multiple recipes to cook cousins. In *Proceedings of the Korea Computer Congress 2018 (KCC 2018)*, 1464–1466.

Youli Chang, Brian J. Lee, GuHyun Han, Hyunjoo Song, Jaemin Jo, Han Joo Chae, and Jinwook Seo. 2016. A Usability Testing Method Using EEG, EDA, BVP Biosignals. In *Proceedings of the Korea Computer Congress 2016 (KCC 2016)*, 1396–1398.

PATENTS

US10540013B2 (2020) - Method of performing function of device and device for performing the method.

JP2014146337A (2019) - Method of executing function of device and device for the same.

US10292134B2 (2019) - Method and apparatus for providing notification.

US10123064B2 (2019) - Content providing method and device.

US10051604B2 (2018) - Method and apparatus for providing notification.

US10020835B2 (2018) - Wearable device and method of transmitting message from the same.

US10009873B2 (2018) - Method and apparatus for providing notification.

AU2016235039B2 (2017) - Method of performing function of device and device for performing the method.

US9629120B2 (2017) - Method and apparatus for providing notification.

US9338620B2 (2016) - Method and apparatus for executing alarm with respect to missed received call for mobile communication terminal.

US8310537B2 (2012) - Detecting ego-motion on a mobile device displaying three-dimensional content.

TEACHING

Scenario-Based UX Design, Seoul National University — 2018

Chatbot Development Workshop, Seoul National University — 2018

Simple User Experiment with Quantitative Usability Testing, Seoul National University — 2018

Electronics Prototyping Using Arduino, Seoul National University — 2017