# HYUNSUNG CHO

hyunsungcho@kaist.ac.kr

## EDUCATION

**Korea Advanced Institute of Science and Technology (KAIST)**            *Mar. 2018 - Present*
M.S. in School of Computing
Networking & Mobile Systems Lab. Advisor: Sung-Ju Lee

**Korea Advanced Institute of Science and Technology (KAIST)**            *Aug. 2013 - Feb. 2018*
B.S. in School of Computing (Software Advanced Major)
Magna Cum Laude

## RESEARCH INTERESTS

Human-Computer Interaction, Ubiquitous Computing, Mobile Computing, Context-Aware Computing

## PUBLICATIONS

Taesik Gong, **Hyunsung Cho**, Bowon Lee, and Sung-Ju Lee. Knocker: Vibroacoustic-based Object Recognition with Smartphones. In *Proceedings of the ACM Annual Conference on Interactive, Mobile, and Ubiquitous Technologies.* UbiComp '19.

**Hyunsung Cho**, Jinyoung Oh, Juho Kim, and Sung-Ju Lee. Demo: Sender-Controlled Mobile Instant Message Notifications Using Activity Information. In *Proceedings of the 17th ACM International Conference on Mobile Systems, Applications and Services* (Seoul, South Korea, June 17-21, 2019). MobiSys '19 Demos.

Taesik Gong, **Hyunsung Cho**, Bowon Lee, and Sung-Ju Lee. Video: Real-Time Object Identification with a Smartphone Knock. In *Proceedings of the 17th ACM International Conference on Mobile Systems, Applications and Services* (Seoul, South Korea, June 17-21, 2019). MobiSys '19 Videos.

Uichin Lee, Kyungsik Han, **Hyunsung Cho**, Kyong-Mee Chung, Hwajung Hong, Sung-Ju Lee, Youngtae Noh, Sooyoung Park, and John M. Caroll. Intelligent Positive Computing with Mobile, Wearable, and IoT Devices: Literature Review and Research Directions. *Ad Hoc Networks Journal, Volume 83, 2019.*

Taesik Gong, **Hyunsung Cho**, Bowon Lee, and Sung-Ju Lee. Identifying Everyday Objects with a Smartphone Knock. In *Proceedings of the ACM Conference on Human Factors in Computing Systems* (Montral, Canada, April 21-26), CHI '18 Late Breaking Work.

## WORK EXPERIENCE

**KAIST Networking and Mobile Systems Lab (NMSL),** Daejeon, South Korea            *Mar. 2017 - Present*
*Graduate Researcher (Undergraduate Researcher in 2017)*
Faculty Collaborators: Sung-Ju Lee, Juho Kim, and Junehwa Song. Exploring novel applications of mobile sensing for context-aware services.

**Kiswe Mobile Inc.,** New Providence, NJ, USA            *Jun. 2017 - Aug. 2017*
*Web Frontend Developer*
Developed a trivia widget for interactive mobile sports streaming service. The widget was included in the live service for the IAAF Diamond League event in collaboration with VRT Sporza. The service was covered in press. Developed tools to support video streamers such as a multi-view layout editor for multi-cam videos; an easy drag-and-drop thumbnail uploader; and a live streaming control interface.

**KAIST Interaction Lab (KIXLAB),** Daejeon, South Korea            *Dec. 2015 - Feb. 2017*
*Undergraduate Researcher*
Advisers: Jihee Kim and Juho Kim. Research on analysis of presidential election promises in relation with government budget expenditure data through crowdsourcing.

## TEACHING EXPERIENCE

**Head Teaching Assistant**, KAIST                                                  *Spring 2019*
CS341 Introduction to Computer Networks

**Invited Student Panel**, KAIST                                                    *Spring 2019*
CS492 Introduction to Research (invited by Juho Kim, Sung-Ju Lee, and Shin Yoo)

**Teaching Assistant**, KAIST                                                          *Fall 2018*
CS341 Introduction to Computer Networks

**Teaching Assistant**, KAIST                                                *Fall 2016 - Fall 2017*
CS101 Introduction to Programming

## EXTRACURRICULAR EXPERIENCE

**MADCAMP (Mobile Application Development Camp)**                          *Dec. 2016 - Feb. 2017*
Intensive, focused development camp where I developed five different mobile applications in 4.5 weeks. Example apps are a humming-based multi-play music quiz game and a group alarm clock that ensures every member to wake up.

**SPARCS (Developers Club), KAIST**                                        *Mar. 2014 - Dec. 2016*
*Head of Server Management Group & Web Developer*
Managed over 10 physical and virtual server machines as the leader of the club's server management group. Developed a server monitoring tool using gRPC. Held seminars on the basics of server management for students. Topics include Linux, LDAP, mail server, file system, and security.

## AWARDS & HONORS

**KAIST SoC Best TA Award**                                                        *Spring 2019*

**Google Women Techmakers Scholars**                                                      *2019*

**ACM MobiSys Best Video Award**                                                          *2019*

**ACM SIGCHI Local Chapter Best Poster/Demo Award**                                       *2018*

**KAIST Undergraduate Research Program**                                                  *2016*

**2nd Place, The 3rd Korea SW Hackathon**                                                 *2016*

**National Science & Technology Scholarship**                                       *2014 - 2017*

## TECHNICAL STRENGTHS

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|---|---|
| **Programming Languages** | Python, Java, Javascript, C++, C, MATLAB |
| **Mobile Development** | Android, React Native |
| **Backend Development** | Django, Node, Express |
| **Web Frontend Development** | React, Vue.js, AngularJS, jQuery, D3.js, HTML, CSS |
| **Database** | Firebase, MySQL, MongoDB |
| **Tools** | Git/Github, Vim, LaTex, Markdown, Slack |

## PRESS COVERAGE

**Nerdiest**, This algorithm makes smartphones recognize objects just by Knocking them      *Apr. 2018*

**ICT NEWS**, New application allows you to identify an object by tapping it with a smartphone      *Apr. 2018*

**Sporza**, Sporza biedt interactieve primeur met Kiswe Mobile tijdens Diamond League Brussel      *Aug. 2017*

## MISCELLANEOUS

**Languages**, Korean (Native), English (Fluent)