

# Chunjong Park

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RESEARCH INTERESTS	AI/ML-driven mobile sensing for health and interaction, Ubiquitous Computing, Human-Computer Interaction	
EDUCATION	<b>University of Washington</b> Ph.D., Computer Science & Engineering, ( <i>Advisor: Shwetak Patel</i> )	SEP. 2017 ~
	<b>Korea Advanced Institute of Science and Technology (KAIST)</b> M.S., Computer Science, ( <i>Advisor: Sung-Ju Lee</i> )	FEB. 2017
	<b>Korea Advanced Institute of Science and Technology (KAIST)</b> B.S., Computer Science, ( <i>Advisor: Sue Moon</i> )	FEB. 2015
RESEARCH EXPERIENCES	<b>UbiComp Lab., University of Washington</b> <i>Research Assistant</i> Designing and building mobile health application that can be used easily and safely by ordinary people. <ul style="list-style-type: none"><li>• Smartphone sensor-based user-facing health applications for rapid diagnostic test interpretation, capillary refill time measurement, and corneal disease screening.</li><li>• Improving trustworthiness and reliability of deep learning models for consumer-facing health applications</li><li>• Analyze user behaviors from large scale data collected from consumer-facing health devices and applications.</li></ul>	SEATTLE, WA SEP. 2017 ~
	<b>Microsoft Research</b> <i>Research Intern</i> (Manager: Tiffany Kuo, Mentors: Daniel McDuff, Miah Wander, Becky Mieloszyk) Built blood pressure estimation neural networks using photoplethysmography (PPG) signal from smartphone.	REDMOND, WA JUN. 2021 ~ SEPT. 2021
	<b>Microsoft Research</b> <i>Research Intern</i> (Manager: Ken Hinckley, Mentors: Michel Pahud, Eyal Ofek, Teddy Seyed) Built sensor-mediated interaction techniques for seamless content sharing in multi-device, multi-user environment, using proxemics and micro-mobility.	REDMOND, WA JUN. 2020 ~ SEPT. 2020
	<b>Snap Inc.</b> <i>Research Intern</i> (Manager: Andrés Monroy-Hernández) Built a non-textual communication application on smartphone and wearable by seamlessly recommending appropriate avatars that represent user's current context. Prototypes released in App Store ( <a href="#">Significant Otter</a> , <a href="#">BFF</a> )	SEATTLE, WA JUN. 2019 ~ DEC. 2019
	<b>Nokia Bell Labs</b> <i>Research Intern</i> (Manager: Fahim Kawsar, Mentors: Alberto Gil Ramos, Sourav Bhattacharya) Built strongly labeled audio dataset and a deep learning model on IoT devices for understanding ambient contexts.	CAMBRIDGE, UK JUN. 2018 ~ SEPT. 2018
	<b>Networking &amp; Mobile Systems Lab., KAIST</b> <i>Research Assistant</i> Worked on exploring context-aware smartphone notification management, understanding thermal characteristics of smartphones, and exploring better use of micro spare time.	DAEJEON, KOREA MAR. 2015 ~ JUL. 2017

## PUBLICATIONS

Reliable and Trustworthy Machine Learning for Health Using Dataset Shift Detection (*To appear*)

**Chunjong Park**, Anas Awadalla, Tadayoshi Kohno, Shwetak Patel

*Conference on Neural Information Processing Systems (NeurIPS)*, Dec. 2021

Air Constellations: In-Air Device Formations for Cross-Device Interaction via Multiple Spatially-Aware Armatures

Nicolai Marquardt, Nathalie Henry Riche, Christian Holz, Hugo Romat, Michel Pahud, Frederik Brudy, David Ledo, **Chunjong Park**, Molly Jane Nicholas, Teddy Seyed, Eyal Ofek, Bongshin Lee, William A. S. Buxton, and Ken Hinckley

*ACM Symposium on User Interface Software and Technology (UIST)*, Oct. 2021

Significant Otter: Understanding the Role of Biosignals in Communication

Fannie Liu, **Chunjong Park**, Yu Jiang Tham, Tsung-Yu Tsai, Laura Dabbish, Geoff Kaufman, Andrés Monroy-Hernández

*ACM Conference on Human Factors in Computing Systems (CHI)*, May. 2021

RDTCheck: A Smartphone App for Monitoring Rapid Diagnostic Test Administration

Devesh Sarda, **Chunjong Park**, Hung Ngo, Alex Mariakakis, Shwetak Patel

*ACM Conference on Human Factors in Computing Systems (CHI) Late-Breaking Work*, May. 2021

Online Mobile App Usage as an Indicator of Sleep Behavior and Job Performance

**Chunjong Park**, Morelle Arian, Xin Liu, Leon Sasson, Jeffrey Kahn, Shwetak Patel, Alex Mariakakis, Tim Althoff

*The Web Conference (WWW)*, Apr. 2021

The Design and Evaluation of a Mobile System for Rapid Diagnostic Test Interpretation

**Chunjong Park**, Hung Ngo, Libby Rose Lavitt, Vincent Karuri, Shiven Bhatt, Peter Lubell-Doughtie, Anuraj H. Shankar, Leonard Ndwiga, Victor Osoti, Juliana K. Wambua, Philip Bejon, Lynette Isabella Ochola-Oyier, Monique Chilver, Nigel Stocks, Victoria Lyon, Barry R. Lutz, Matthew Thompson, Alex Mariakakis, Shwetak Patel

*Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT)*, Mar. 2021

Diagnostic accuracy of an app-guided, self-administered test for influenza among individuals presenting to general practice with influenza-like illness: study protocol

Victoria Lyon, Monica Zigman Suchsland, Monique Chilver, Nigel Stocks, Barry Lutz, Philip Su, Shawna Cooper, **Chunjong Park**, Libby Rose Lavitt, Alex Mariakakis, Shwetak Patel, Chelsey Graham, Mark Rieder, Cynthia LeRouge, Matthew Thompson

*BMJ Open*, Nov. 2020

Augmenting Conversational Agents with Ambient Acoustic Contexts

**Chunjong Park**, Chulhong Min, Sourav Bhattacharya, Fahim Kawsar

*ACM International Conference on Human-Computer Interaction with Mobile Devices and Services (Mobile-HCI)*, Oct. 2020

Supporting Smartphone-Based Image Capture of Rapid Diagnostic Tests in Low-Resource Settings

**Chunjong Park**, Alex Mariakakis, Jane Yang, Diego Lassala, Yasamba Djiguiba, Youssouf Keita, Hawa Diarra, Beatrice Wasunna, Fatou Fall, Marème Soda Gaye, Bara Ndiaye, Shwetak Patel, Ari Johnson, Isaac Holeman

*International Conference on Information and Communication Technologies and Development (ICTD)*, Jun. 2020

Fire in Your Hands: Understanding Thermal Behavior of Smartphones

Soowon Kang, Hyeonwoo Choi, Soo Young Park, **Chunjong Park**, Jemin Lee, Uichin Lee, and Sung-Ju Lee

*ACM Conference on Conference on Mobile Computing and Networking (MobiCom)*, Oct. 2019

“Don’t Bother Me. I’m Socializing!”: A Breakpoint-Based Smartphone Notification System

**Chunjong Park**, Junsung Lim, Juho Kim, Sung-Ju Lee, and Dongman Lee

*ACM Conference on Computer-Supported Cooperative Work and Social Computing (CSCW)*, Feb. 2017

Zaturi: We Put Together the 25th Hour for You. Create a Book for Your Baby

Bumsoo Kang, Chulhong Min, Wonjung Kim, Inseok Hwang, **Chunjong Park**, Seungchul Lee, Sung-Ju Lee, and Junehwa Song

*ACM Conference on Computer-Supported Cooperative Work and Social Computing (CSCW)*, Feb. 2017

DX: Accurate Latency-based Congestion Feedback for Datacenters

Changhyun Lee, **Chunjong Park**, Keon Jang, Sue Moon, and Dongsu Han  
*IEEE/ACM Transaction on Networking*, Feb. 2017

Accurate Latency-based Congestion Feedback for Datacenters  
Changhyun Lee, **Chunjong Park**, Keon Jang, Sue Moon, and Dongsu Han  
*USENIX Annual Technical Conference (ATC)*, Jul. 2015

PATENTS Non-Textual Communication and User States Management  
Andrés Monroy-Hernández, **Chunjong Park**, and Fannie Liu  
U.S. Patent App. Filed, September 2020

WORK **Content N** SEOUL, KOREA  
EXPERIENCES *Lead Software Engineer* OCT. 2013 ~ MAR. 2014  
Designed and developed back-end systems for a mobile arcade game, *Sushi Master*, using Amazon AWS, Node.js, MongoDB, and Redis. Developed data analysis tool and web interface for game statistics.

**Company 100, Inc.** SEOUL, KOREA  
*Software Engineer* MAR. 2012 ~ OCT. 2013  
Designed and developed back-end systems for a mobile action-RPG game, *MetalBreaker*, using Amazon AWS, Node.js, MongoDB, and Redis. Developed data analysis tool and web interface for game statistics.

**SQISoft, Inc.** SEOUL, KOREA  
*Software Engineer* DEC. 2010 ~ MAR. 2012  
Developed billing system for heat & electricity, and face recognition-based immigration clearance system deployed at the Incheon Int'l Airport.

**Nexon Corp.** SEOUL, KOREA  
*Intern* SEP. 2010 ~ DEC. 2010  
Developed an in-game chat module in *BubbleFighter* online game.

TEACHING Teaching Assistant University of Washington  
EXPERIENCE **Introduction to Computer Communication Networks** WINTER 2018, FALL 2017

Teaching Assistant KAIST  
**Introduction to Computer Networks** SPRING 2016, SPRING 2015

Teaching Assistant KAIST  
**Networking for Smartphone Systems and IoT** FALL 2015

PROGRAMMING SKILLS • **Language:** C, C++, Java, Javascript/Node.js, Python, Objective-C, Swift  
• **OS/Platform:** Linux/Ubuntu, Android, iOS/WatchOS  
• **Hardware:** Arduino  
• **Framework/Library/Version Control:** OpenCV, PyTorch, TensorFlow, scikit-learn, Git

ACADEMIC SERVICES Reviewer IMWUT 2018, 2019, 2020, 2021 CHI 2019, 2020, 2021  
MobileHCI 2019, ISWC 2020, IEEE Pervasive Comp. 2020  
Student Volunteer UbiComp 2019, 2020

AWARDS Microsoft W+D Summer 2020 Hackathon Winners MICROSOFT, AUG. 2020  
Outstanding Teaching Assistant Award KAIST, MAR. 2017  
Outstanding M.S. Thesis Award KAIST, FEB. 2017  
Outstanding Teaching Assistant Award KAIST, MAR. 2016  
The 9<sup>th</sup> Open Source SW World Challenge, Silver Medal KOSSA, DEC. 2015