

Young-Ho Kim

Postdoctoral Researcher
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Research Statement

My research is at the intersection of Personal Health Informatics, Human-Computer Interaction (HCI), and Ubiquitous Computing (UbiComp). I design, develop, and evaluate self-tracking technology to empower people to better learn about themselves and make positive changes in their behaviors and thoughts. In my doctoral and postdoctoral work, I explored how technology can effectively support *flexible self-tracking*, in which tools are designed to allow flexibility over the way to collect, explore, and reflect on the data. Flexible self-tracking tools can effectively support the self-tracking experience by adapting to people's diversified needs, contexts, and preferences. To understand how people interact with tools in their everyday context, I often conduct field deployment studies as well as formative research methods such as usability testing and think-aloud exploratory studies.

Employment

Aug 2019 – **University of Maryland, College Park, MD, USA**

Present Postdoctoral Researcher, working with Dr. Eun Kyoung Choe
College of Information Studies & HCIL

Mar 2019 – **Seoul National University, Seoul, Korea**

Jul 2019 BK21 Postdoctoral Researcher, working with Dr. Jinwook Seo
Dept. of Computer Science & Engineering, College of Engineering

Sep 2012 – **Seoul National University, Seoul, Korea**

Feb 2019 Graduate Research Assistant, working with Dr. Jinwook Seo
Dept. of Computer Science and Engineering, College of Engineering

Mar 2011 – **I-UM Socius, Seoul, Korea**

Jun 2012 UI/UX Designer @ Brand Experience Design Team

Education

Sep 2012 – **Ph.D. in Electrical Engineering & Computer Science (Now CSE)** [*Outstanding Dissertation Award*] (GPA: 96.6)

Feb 2019 Seoul National University, Korea

- Dept. of Computer Science & Engineering, College of Engineering
- Advisor: Dr. Jinwook Seo
- Dissertation: Designing Flexible Self-Tracking Technologies for Enhancing *In Situ* Data Collection Capability

Mar 2007 – **Bachelor of Fine Arts in Design** [*Cum Laude*] (GPA: 94.3)

Feb 2011 Seoul National University, Korea

- Major of Visual Communication Design, Dept. of Craft & Design, College of Fine Arts
- Advisor: Prof. Suzung Kim

Grants and Awards

- 2019 **NRF of Korea International Postdoc Fellowship**
Granted 45,000,000 KRW (equivalent to 40,000 USD) stipend for 1-year postdoctoral studies abroad.
Proposal title: Design and Development of a Multipurpose Research Platform for Effective Collection of Mobile Health/Activity Data
- 2019 **Google Travel Grant**—ACM CHI 2019, Glasgow, Scotland, UK
- 2019 **Outstanding Ph.D. Dissertation Award**—Dept. of Computer Science & Engineering, Seoul National University
- 2017 **NAVER Ph.D. Fellowship Award**—Granted 5,000,000 KRW (equivalent to 4,500 USD) from NAVER Corp.
- 2011 **iF Design Award Nominee**—Social Dating Service, I-UM
- 2011 **Graduation with Distinction (Rank first)**—Dept. of Craft & Design, Seoul National University
- 2007–2011 **Merit-based Scholarship, Seoul National University (Fully-supported tuition for 4 years)**

Publication

International Journal Papers (Peer Reviewed)

- [J2] **Githru: Visual Analytics for Understanding Software Development History Through Git Metadata Analysis**
Youngtaek Kim, Jaeyoung Kim, Hyeon Jeon, Young-Ho Kim, Hyunjoo Song, Bohyoung Kim, and Jinwook Seo
IEEE Transactions on Visualization and Computer Graphics (IEEE TVCG), in Press. Also presented at *IEEE VIS'20 (VAST)*.
Links: [DOI](#), [Github](#)
- [J1] **OmniTrack: A Flexible Self-Tracking Approach Leveraging Semi-Automated Tracking**
Young-Ho Kim, Jae Ho Jeon, Bongshin Lee, Eun Kyoung Choe, and Jinwook Seo
PACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT), 1 (3), Article 67.
Also presented at *ACM UbiComp'17, Maui, Hawaii, USA*.
Links: [DOI](#), [Video](#), [Web](#), [Github](#)

International Conference Papers (Peer Reviewed)

- [C4] **Data@Hand: Fostering Visual Exploration of Personal Data on Smartphones Leveraging Speech and Touch Interaction**
Young-Ho Kim, Bongshin Lee, Arjun Srinivasan, and Eun Kyoung Choe
Proc. ACM CHI Conference on Human Factors in Computing Systems (CHI'21, 26.3% Acceptance Rate). Conditionally accepted.
Links: [Video](#), [Web](#), [Github](#)
- [C3] **Toward Becoming a Better Self: Understanding Self-Tracking Experiences of Adolescents with Autism Spectrum Disorder Using Custom Tracker**
Sung-In Kim, Eunkyung Jo, Myeonghan Ryu, Inha Cha, Young-Ho Kim, Heejeong Yoo, and Hwajung Hong
Proc. EAI Intl. Conference on Pervasive Computing Technologies for Healthcare (PervasiveHealth'19). 169-178.
Link: [DOI](#)
- [C2] **Understanding Personal Productivity: How Knowledge Workers Define, Evaluate, and Reflect on Their Productivity**
Young-Ho Kim, Eun Kyoung Choe, Bongshin Lee, and Jinwook Seo
Proc. ACM CHI Conference on Human Factors in Computing Systems (CHI'19, 23.8% Acceptance Rate). No. 615.
Links: [DOI](#), [Video](#)

- [C1] **TimeAware: Leveraging Framing Effects to Enhance Personal Productivity**
Young-Ho Kim, Jae Ho Jeon, Eun Kyoung Choe, Bongshin Lee, KwonHyun Kim, and Jinwook Seo
Proc. ACM CHI Conference on Human Factors in Computing Systems (CHI '16, 23.4% Acceptance Rate). 272–283.
Links: [DOI](#), [Video](#)

Domestic Short Papers & Posters (In Korean, Lightly Peer Reviewed)

- [D7] **A Study for Specializing a Chatbot-based Self-Management Program for Adolescents with Autism Spectrum Disorder** *Note*
Sung-In Kim, Myeonghan Ryu, Eunkyung Jo, Inha Cha, Young-Ho Kim, Heejeong Yoo, and Hwajung Hong
Proc. HCI Korea (HCIK'19), Feb 13-16 in Jeju, South Korea.
- [D6] **Designing a Flexible Self-Tracking Mobile Application** *Poster*
Young-Ho Kim, Jae Ho Jeon, Bongshin Lee, Eun Kyoung Choe, and Jinwook Seo
Proc. Korea Software Congress 2016 Winter
- [D5] **Ensemble Box – A Digital Orgel Supporting Drawing Melodies in Various Timbres** *Poster*
Young-Ho Kim, Jeongin Hwang, and Jinwook Seo
Proc. Korea Software Congress 2016 Summer
- [D4] **AntHouse: A Novel Visualization Interface about Exploring Social Relationship from Email History** *Note*
Young-Ho Kim, Jae Ho Jeon, and Jinwook Seo
Proc. HCI Korea (HCIK'14), Feb 12-14 in Jeongseon, South Korea.
- [D3] **Design and Development of Visual Analytics Tool in SRC-STAT** *Note*
GuHyun Han, Young-Ho Kim, DongHwa Shin, Young Jo Lee, and Jinwook Seo
Proc. HCI Korea (HCIK'14), Feb 12-14 in Jeongseon, South Korea.
- [D2] **A Design Study for a Visualization/analysis System for Petroleum Reservoir Simulation Data** *Note*
Kyle Koh, Young-Ho Kim, and Jinwook Seo
Proc. HCI Korea (HCIK'14), Feb 12-14 in Jeongseon, South Korea.
- [D1] **Suggestion for Facebook Friend-Sourcing Gallery Service: Focusing on Daily Activities based on Weather Data** *Poster*
Sumi Kim, Young-Ho Kim, and Bongwon Suh
Proc. HCI Korea (HCIK'14), Feb 12-14 in Jeongseon, South Korea.

Miscellaneous

- [M1] **Designing Flexible Self-Tracking Technologies for Enhancing *In Situ* Data Collection Capability** *Doctoral Consortium*
Young-Ho Kim
Presented at HCI Korea (HCIK'19), Feb 13-16 in Jeju, South Korea.

Computing Systems as Research Artifacts

Data@Hand (iOS, Android) – Artifact for [C4]

A cross-platform mobile application that leverages speech and touch interactions to facilitate visual exploration of self-tracking data.

- Role: Design (in collaboration), implementation of the entire system
- Contributors: Young-Ho Kim, Bongshin Lee, Arjun Srinivasan, and Eun Kyoung Choe
- Open-sourced (<https://data-at-hand.github.io>)

Githru (Web) – Artifact for [J2]

A visual analytics system for understanding software development history through Git metadata analysis.

- Role: Implementation (in collaboration) of the frontend components, improvement of the GUI aesthetics
- Contributors: Youngtaek Kim, Jaeyoung Kim, Hyeon Jeon, Young-Ho Kim, Hyunjoon Song, Bohyoung Kim, and Jinwook Seo
- Open-sourced (<https://githru.github.io/demo/>)

OmniTrack for Research (Web, Android)

A research platform to implement, conduct, and manage mobile-based in-situ data collection studies without coding.

- Role: Design (in collaboration), implementation of the entire system
- Contributors: Young-Ho Kim, Bongshin Lee, Jinwook Seo, Eun Kyoung Choe, Junhoe Kim, and Valérie Erb
- Used to conduct studies in [C2], [C3]
- Open-sourced (<https://omnitrack.github.io/research>)

OmniTrack (Android) – Artifact for [J1]

A flexible self-tracking app that supports constructing personalizable trackers leveraging semi-automated tracking.

- Role: Design (in collaboration), implementation of the entire system
- Contributors: Young-Ho Kim, Jae Ho Jeon, Bongshin Lee, Eun Kyoung Choe, and Jinwook Seo
- Open-sourced (<https://omnitrack.github.io>)

TimeAware (MacOS, Windows, Web) – Artifact for [C1]

A desktop-based screen time monitoring widget.

- Role: Design (in collaboration), implementation of the entire platform
- Contributors: Young-Ho Kim, Jae Ho Jeon, Eun Kyoung Choe, Bongshin Lee, and Jinwook Seo

Teaching Experience

2020 Fall; **University of Maryland**, College Park, MD, USA

2019 Fall *Guest Lecturer, invited by Prof. Eun Kyoung Choe*

- INST 682 / CMSC838X: Personal Health Informatics & Visualization
- 2020: Provided a tutorial lecture on “*Time-series visualization of personal data using Tableau.*”
- 2019: Provided a guest lecture on “*Mobile-based in-situ data collection.*”

2019 Spring **Seoul National University**, Seoul, Korea

Graduate Teaching Assistant, worked with Prof. Jinwook Seo

- 4190.426A, Information to Human-Computer Interaction (CSE Undergraduate), 23 students
- Provided a tutorial lecture on in-situ data collection and personal informatics.
- Designed and wrote a class project (topic: Understanding People via Mobile In-Situ Data Collection).
- Advised 11 class project teams (23 students).
- Advised on writing a project proposal, setting up study instrumentation, giving presentations, and writing a project report.

- 2016 Fall **Seoul National University**, Seoul, Korea
Graduate Teaching Assistant, worked with Prof. Jinwook Seo
- M1522.000500, Information Visualization & Visual Analytics (CSE Graduate), 45 students
 - *Provided a tutorial lecture on D3.js.*
 - Wrote D3.js assignments, wrote D3.js problems for midterm exam, graded assignments and exam, and held office hours.
- 2015 Fall **Korea University**, Seoul, Korea
Guest lecturer, invited by Prof. Jaegul Choo
- AAA638, Computational and Visual Analytics (CS Graduate)
 - D3.js tutorial lecture (2.5 hours)
- 2013 Fall **Seoul National University**, Seoul, Korea
Graduate Teaching Assistant, worked with Prof. Jinwook Seo
- 4190.103A, Programming Practice (CSE Undergraduate), 50 students
 - Designed material for a weekly C programming lab session, wrote programming assignments, led lab sessions, graded assignments, and held office hours.

Student Mentorship & Collaboration

GuHyun Han, CSE PhD student.

Collaborated on designing and evaluating a customizable ambient visualization system for smartphone notifications. In submission.

*Seoul National University
 Feb 2019 - Jul 2019*

Youngtaek Kim, CSE PhD student.

Collaborated on designing a source code repository visualization framework, supported by Samsung electronics. Co-authored [J2].

*Seoul National University
 Mar 2017 - Jul 2019*

Sung-In Kim, College of Medicine undergraduate. Currently a public health physician.

Advised an independent study on how customizable self-tracking app could support habit formation of autistic adolescents. Co-authored [C3] [D7].

*Seoul National University
 Dec 2017 - Feb 2019*

Valérie Erb, CS undergraduate at University of Zurich. Currently a MS student at KAIST CT.

Advised an internship project on contributing to implementation of OmniTrack for Research, a mobile-based in-situ data collection platform.

*Seoul National University
 Feb 2018 - Jun 2018*

Junhoe Kim, CSE undergraduate. Currently at NCSOFT Korea.

Advised an internship project on contributing to implementation of OmniTrack [J1].

*Seoul National University
 Feb 2018 - Jul 2018*

Talks

Visible Language Meets Engineering Language: Designing Interactive Information Visualization Systems to Nudge People

‘Dessert Seminar’ (BBL)

*Korea Institute of
 Design Promotion
 Apr 2019*

HCI, Personal Informatics, and Information Visualization: Being (Surviving as) an HCI Researcher in Engineering Fields without Losing Designer’s Soul

Guest Lecture in Design Research Class (Dept. of Design), hosted by Mingu Lee

*Seoul National University
 Mar 2019*

- Designing Flexible Self-Tracking Technologies to Enhance *In Situ* Data Collection** *Hanyang University*
Mar 2019
Invited Talk, hosted by Dr. Gwang Uk Kim (Dept. of Computer Science)
- Understanding Personal Productivity: How Knowledge Workers Define, Evaluate, and Reflect on Productivity** *Seoul National University*
Aug 2018
The 4th SNU HCI Group Summit
- Designing the HCI Technology for Flexible, Semi-Automated Personal Tracking Experience** *Seoul National University*
Apr 2018
Invited Talk, hosted by Dr. Hwajung Hong (Dept. of Communication)
- Designing the HCI Technology for Flexible, Semi-Automated Personal Tracking Experience** *NAVER Corp., Korea*
Mar 2018
Invited Speaker at NAVER Tech Talk
- A Flexible Self-Tracking Approach Leveraging Semi-Automated Tracking** *Seoul National University*
Aug 2017
The 3rd SNU HCI Group Summit
- Leveraging Framing Effects to Enhance Personal Productivity** *Seoul National University*
Aug 2016
The 2nd SNU HCI Group Summit

Exhibitions

- HCIK '11 (Korean HCI Society Annual Conference 2011)** *Yongpyung, South Korea*
Jan 2011
Presented a serious game using NeuroSky Mindset, 'Hans and Gretel.'
- SIGGRAPH ASIA 2010 Seoul** *Seoul, South Korea*
Dec 2010
Participated in an exhibition of Intermedia Lab in SNU
An Interactive Alphabet Education Application, 'Particle Zoo' was presented.
- Korea Serious Game Festival 2010** *Bundang, South Korea*
Sep 2010
Participated in an Exhibition of SNU AICT (Advanced Institute of Convergence Technology).
- Gyeonggi Gwangyo Technovalley Exhibition** *Suwon, South Korea*
Sep 2010
Participated in an Exhibition of SNU AICT (Advanced Institute of Convergence Technology).

Service

- Reviewer** ACM CHI (2017, 2019, 2020, 2021)
ACM DIS (2018)
ACM MobileHCI (2020)
PACM IMWUT (2017 Aug, 2019 Nov, 2020 Aug)
INTERACT (2019)
- Committee** IEEE PacificVis 2017 (Design Chair)
Workshop on Ubiquitous Personal Assistance in ACM UbiComp 2018, 2019 (Technical Program Committee)
Seoul National University, Organizing Committee of SNU HCI Group Summit (2016, 2017)
Seoul National University, HCI Winter School Organizing Committee (2016)

Student Volunteer IEEE PacificVis 2017
 ACM CHI 2016

References

Available upon request.