Daye Kang

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RESEARCH INTERESTS

Human-Computer Interaction, Data Visualization, Data Science, Accessible Data, UX Research

EDUCATION

08/2018 - present

Korea Advanced Institute of Science and Technology (KAIST), Deajeon, Korea
M.S. in Industrial Design (Specialization: Human-Computer Interaction)
- Thesis: *Improving Communication in Computational Notebooks Using Interactive Data Comics*
- Advisor: Andrea Bianchi

01/2020 - 05/2020

University of Wisconsin-Madison, Wisconsin, United States
Global Engineering Education Exchange Program (GE3)
- Data Science & Human-Computer Interaction Courses

03/2020 - 06/2020

Korea National Open University, Seoul, Korea
Computer Science Major

03/2013 - 08/2018

Hongik University, Seoul, Korea
B.F.A. in Visual Communication Design (Specialization: UX Research)
- Thesis: *Lexia in Wonderland*: *Korean Education Service for Children with Dyslexia*
- Dean's Award & Graduation Project Excellence Award

09/2014 - 12/2014

California Institute of the Arts, California, United States
Exchange Program in Graphic Design and Animation

03/2016 - 06/2016

Luxun Academy of Fine Arts, Shenyang, China
Exchange Program in Visual and Communication Art

RESEARCH EXPERIENCE

09/2018 - present

MAKInteract Lab [Link], KAIST, Daejeon, Korea
Research Assistant — Advisor: Professor Andrea Bianchi
- **Visualizing the algorithm of voice agents**, circuit building process, **statistical data**
- Proposing projects, conducting user studies, participating in industrial projects
- Designed web-based UI solutions

06/2020 - present

NH KAIST Research Center, Deajeon, Korea
UX Trend Researcher — Advisor: Professor Sangsu Lee
- Published periodicals on the latest UX trends in digital services
- Topics including **Human-Centered AI, Data Visualization, Digital Collaboration**
- Funded by 'NH Investment & Securities'

09/2019 - 01/2020

Hyundai Motors, Seoul, Korea
Project Manager & Research Assistant — Advisor: Professor Andrea Bianchi
- Proposed 'Road Characteristics Recognition Using Acoustic Feedback and **Machine Learning for Adaptive Driving**'
- Managed hardware, software, and design teams
- Studying how **black-box algorithms affect users** and developed interaction scenarios
- Received $27,000 USD in funding

| 06/2019 - 08/2019 | **Color Lab** [Link], KAIST, Daejeon, Korea |
| | Research Assistant — Advisor: Professor Hyeon-Jeong Suk |

- Developing scenarios for an **adaptive display for idling TVs**
- Funded by LG Display

| 06/2017 - 11/2017 | **Asan Medical Innovation Center**, Seoul, Korea |
| | UX Researcher — Advised by Daylight Design [Link] |

- Interviewing and observing **doctors, nurses, caregivers, hospitalized children**
- Used nudge design to facilitate physical activities of hospitalized children
- Received $2,800 USD in funding from Samsung

PUBLICATIONS
CONFERENCE

C.3 ToonNote: Improving Communication in Computational Notebooks Using Interactive Data Comics
Daye Kang, Tony Ho, Nicolai Marquardt, Bilge Mutlu, Andrea Bianchi. ACM Conference on Human Factors in Computing Systems (*Conditionally accepted: CHI '21*) [Link]

C.2 HeyTeddy: Conversational Test-Driven Development for Physical Computing
Yoonji Kim, Youngkyung Choi, **Daye Kang**, Minkyeong Lee, Tek-Jin Nam, Andrea Bianchi: Proc. 2019. ACM Interact. Mob. Wearable Ubiquitous Technol. 3(4): 139:1-139:21 [Link] (*IMWUT '19*)

C.1 Lexia in Wonderland: Korean Education Service for Children with Dyslexia
Daye Kang, Hye-Ryeong Kim, Ji-Hae Lee, Jae Young Yun. 2017. Conference on Korean Society of Design Science. (*KSDS '17*)

POSTER

P.2 Designing Internal Structure of Chocolate and Its Effect on Food Texture
Yujin Lee, Jee Bin Yim, **Daye Kang**, Hyeon-Beom Yi, Daniel Saakes. 2019. Conference on Designing Interactive Systems (Companion Volume) 2019:231-235 [Link] (*DIS '19*)

P.1 Nudge Design to Increase Physical Activities for Hospitalized Children
Daye Kang, Hye-Min Choi, Ka-Hyun Kim, Younjoon Lee. 2017. Conference on Korean Society of Design Science. (*KSDS '17*)

AWARDS AND HONORS

| 2018 - present | **Korean Government Scholarship**, Korea Ministry of Science and Technology |
| | Scholarship for promising master students |

| 2017 | **Adobe Design Achievement Awards (Semifinalist)**, Adobe |

- Social Impact - Web/App/Game Design
- Korean education app for Dyslexic children 'Lexia in Wonderland' [Link]

Dean's Award, Hongik University
Academic Achievement & Research Publication at Korean Society of Design Science

Graduation Project Excellence Award, Visual Communication Design Department
'Lexia in Wonderland: Korean Education Service for Children with Dyslexia'

Excellence Paper Award, Korean Society of Design Science
'Lexia in Wonderland: Korean Education Service for Children with Dyslexia'

Poster Honor Award, Korean Society of Design Science
'Nudge Design to Increase Physical Activities for Hospitalized Children'

	2016	**Excellence Award**, Times Young Creative Awards 2D & 3D animation advertisement for candy brand 'QinQin Hou'

TEACHING ASSISTANT	Fall 2019	**ID220** - **Interaction Prototyping**, KAIST, Professor: Andria Bianchi • Focus on physical computing & Processing (Java) to build interactive prototypes
	Spring 2019	**CC500** - **Scientific Writing**, KAIST, Professor: Holly Wang • Scientific writing in English in CHI format using LaTeX (Overleaf)
	Fall 2018	**ID202** - **Idea & Expression**, KAIST, Professor: Kyungah Choi • Focus on drawing and creating 3D objects using traditional materials

WORK EXPERIENCE	07/2015 - 08/2015	**3D Modelling Intern**, Studio Gale • Designed and created 3D models for the production of the TV animation 'Pororo'

SELECTED PROJECTS All projects are documented @ dayekang.info	2020	**Book Recommendation System**, Team assignment for 'Data Science for People' class • Data exploration, user-based collaborative filtering, k-means clustering, text analysis and used R Shiny to build a prototype [R Shiny] [PDF]

CONFERENCE	2019	**CHI 2019**, Glasgow, UK
	2017	**KSDS 2017**, Dae-gu, Korea Presenting 'Lexia in Wonderland: Korean Education Service for Children with Dyslexia'

SKILLS	Research	**Data analysis**: Python (Numpy, Pandas), R programming language, Open coding **User research**: Affinity Diagram, Focus Group Interview, Ethnography, Participatory Design, Idea Workshop, Journey Map
	Prototype Development	**Software**: Javascript(jQuery, Node.js), Python, Java, C, HTML, CSS, Processing, Git, JupyterLab extension framework, Machine learning **Hardware**: Arduino, CAD (Autodesk Fusion 360)
	Design	**Design**: Adobe Creative Tool Kits (Illustrator, Photoshop, Indesign, After Effects, Premiere, XD), Sketch, InVision, 3D Maya
	Language	Korean(native) / English(fluent) / Chinese(basic)

RELATED COURSES	Computer Science	● CS242 Discrete Mathematics ● ID311 Software Prototyping (audited) ● CS245 Java Programming ● CS770 Human-Computer Interaction ● CS343 Database Systems ● ECE379 Data Science & Engineering ● CS345 Algorithms ● ISYE601 Data Science for People

EXTRA CURRICULAR ACTIVITIES	2018 - present	**Plants mom** Taking care of 20+ plants hoping to add more fresh oxygen to the world
	2018 - 2020	**Fundraising for 'Save the Children' Non-profit Organization**
	2013 - 2018	**Swimming Club**