Jeonghyun Kim

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Profile

MS student at the Interactive Computing Lab, KAIST, supervised by Prof. Uichin Lee. Research stress management systems that improve self-awareness through wearable and mobile sensing. Interested in user-centered design, HCI, and well-being technologies.

Research Interests

Human-Computer Interaction (HCI), Interactive Systems, Mental Health, and Personalized Computing.

Education

Korea Advanced Institute of Science & Technology (KAIST)   *Daejeon, Korea*
M.S. School of Computing   *Feb 2024–present*
- Advisor: Prof.Uichin Lee, Interactive Computing Lab (ICLab)

Korea Advanced Institute of Science & Technology (KAIST)   *Daejeon, Korea*
B.S. School of Computing, Minor in Electrical Engineering   *Feb 2018–Feb 2024*

Publications

(*J: Journal, C: Conference*)

J.1 **Affectstream: Kafka-Based Real-Time Affect Monitoring System Using Wearable Sensors**
Jeonghyun Kim, Duri Lee, and Uichin Lee.
SoftwareX, Vol. 31, 102325, 2025.

C.1 **HateBuffer: Safeguarding Content Moderators' Mental Well-Being through Hate Speech Content Modification**
Subin Park*, **Jeonghyun Kim***, Jeanne Choi, Joseph Seering, Uichin Lee, and Sung-Ju Lee.
Proceedings of the ACM on Human-Computer Interaction (*PACM HCI*), Vol. 9, Issue 7, ACM CSCW '25.

Experience

KAIST Interactive Computing Lab   *Daejeon, Korea*
Graduate Student, Advised by Uichin Lee   *Feb 2024 - Present*
- Research on stress management systems that enhance self-awareness through wearable and mobile sensing
- Research a data streaming platform to support real-time affect monitoring using wearable sensor data
- Advisor: Prof.Uichin Lee, *KAIST School of Science*

KAIST HCI Lab   *Daejeon, Korea*
Undergraduate Individual Research   *June 2021 - Dec 2021*
- Research on improving issues caused by the lack of haptic feedback in AR environments
  - Studied the effectiveness of haptic feedback in GUI button interactions within AR environments
  - Explored interaction design of depth-funneling gloves in AR environments
  - Researched enhancing haptic feedback of depth-funneling gloves
- Advisor: Prof.Geehyuk Lee, *KAIST School of Computing*

ReDWit, Development Team   *Daejeon, Korea*
CUop Internship   *Sep,2022 – Dec,2022*
- Developed an in-house attendance management web service
- Redesigned and improved a Slack bot
- Implemented update features and fixed bugs for the electronic lab notebook service "GOONO"

ReDWit, Development Team   *Daejeon, Korea*
Internship   *Dec,2021 – Feb,2022*
- Contributed to the GOONO 3.0 update, an electronic lab notebook service
- Integrated React Query into the project

Projects

Development of Human Digital Technologies for Prediction and Management of Emotion Worker's Mental Health Risks

Institute for Information & communication Technology Planning & evaluation (IITP)   *Feb 2024 – Present*

- Developing and validating an interactive human digital twin technology that simulates and synchronizes the mechanisms of individual stress risk factors in a virtual environment, in order to provide personalized stress risk management solutions for mitigating mental health risks caused by emotional labor.

Development of a Data Streaming Platform to Support Real-time Affect Monitoring Using Wearable Sensor Data

Institute for Information & communication Technology Planning & evaluation (IITP)   *Feb 2024 – Aug 2025*

- Developing a Kafka-based real-time affect monitoring system using wearable sensors.

Designing Tools for Mental Health Protection in Content Moderation

CS584 Human-Computer Interaction   *Feb 2024 – Oct 2024*

- Understanding the Impact of Mitigated Text on Emotional Burden and Decision-Making in Text Moderation.

KAIST Mad Camp   *Daejeon, Korea*

Hackathon program for intensive programming and startup   *June 2020 – Aug 2020*

- Developed a mobile app that provides contact, gallery, and weather information, github
    - Android Studio, Java
- Built a mobile SNS app inspired by Cyworld, github
    - Android Studio, Java, mySQL, node.js
- Created a movie search website categorizing films by continent, github
    - HTML, mySQL, node.js
- Developed a website introducing vegan restaurants in Korea, github
    - React, MongoDB, node.js

Skills

Programming	Python, Java, JavaScript, TypeScript, C/C++, C#
Software & Frameworks	React.js, Node.js, Next.js, Android Studio, Pytorch, Unity3D, MongoDB, MySQL, Pytorch, Numpy, Scikit-learn
DevOps	Docker, Kubernetes, AWS, Git
Design & Research	Figma, Qualitative & quantitative analysis for user study

Teaching Experience

2025 Winter Internship Program in Interactive Computing Lab   *KAIST ICLab*

Teaching Assistant for Internship Program:

Topic 1: On-device Context Sensing using Smart Watches & Topic 2: Mobile Data Collection System

- 2025 Winter

Teaching Assistant for CS206 Data Structure course   *KAIST SoC*

Assisted in preparing and grading assignments, and supported students' understanding of fundamental data structures and algorithms in Java.

- 2024 Spring, 2024 Fall, 2025 Spring, 2025 Fall

Awards & Honors

Graduate Research Fellowship for Master's Student   *NRF*

A national fellowship awarded by the NRF to foster Master's students' early research capabilities and academic excellence   *2024-2025*

Outstanding TA Award   *KAIST*

Teaching assistant for CS206 Data Structure course   *2025.07*

Outstanding TA Award   *KAIST*

Teaching assistant for CS206 Data Structure course   *2024.08*

Lim Mi-sook Scholarship

A scholarship that supports KAIST School of Computing female students who demonstrate outstanding leadership

KAIST

2023.11

National Science and Engineering Scholarship

A government-funded program in South Korea for outstanding students entering science and engineering fields

KAIST

2018.06

KAIST Presidential Fellowship

A selective KAIST program supporting top undergraduates with academic excellence and leadership potential to become global science and technology leaders

KAIST

2018-2023