Hee Jeong Han

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Education

Pennsylvania State University — *University Park, Pennsylvania, U.S.A*

Doctor of Philosophy in Informatics — *Aug. 2020 - Present*

- *Advisor*: Saeed Abdullah

University of California, Irvine — *Irvine, California, U.S.A*

Master of Science in Computer Science — *Sep. 2017 - Jun. 2019*

- *Advisor*: Nikil Dutt
- *Thesis title*: Objective Stress Monitoring based on Wearable Sensors in Everyday Settings

Ewha Womans University — *Seoul, Korea*

Bachelor of Science in Computer Science and Engineering — *Mar. 2012 – Feb. 2017*

- *Advisor*: Dong Sub Cho
- ABEEK (Accreditation Board for Engineering Education of Korea)

Publications

Hee Jeong Han, Sanjana Mendu, Beth K Jaworski, Jason E Owen, and Saeed Abdullah, "**Assessing Acceptance and Feasibility of a Conversational Agent to Support Individuals Living with Post-traumatic Stress Disorder**," in *Digital Health, 10*, 2024

Hee Jeong Han, Sanjana Mendu, Beth K Jaworski, Jason E Owen, and Saeed Abdullah, "**Preliminary Evaluation of a Conversational Agent to Support Self-management of Individuals Living with PTSD: An Interview Study with Clinical Experts**," in *JMIR Formative Research, 7, e45894* 2023

Hee Jeong Han, Suhas BN, Ling Qiu, and Saeed Abdullah, "**Automatic Classification of Dementia using Text and Speech data**," in *Multimodal AI in Healthcare, pp. 399-407. Springer, Cham* 2023

Hee Jeong Han, Sanjana Mendu, Beth K Jaworski, Jason E Owen, and Saeed Abdullah, "**PTSDialogue: Designing a Conversational Agent to Support Individuals with Post- Traumatic Stress Disorder**," in *Adjunct Proceedings of the 2021 ACM International Joint Conference on Pervasive and Ubiquitous Computing and Proceedings of the 2021 ACM International Symposium on Wearable Computers (UbiComp '21)* 2021

Hee Jeong Han, Sina Labbaf, Jessica L. Borelli, Nikil Dutt, and Amir M. Rahmani, "**Objective stress monitoring based on wearable sensors in everyday settings**," in *Journal of Medical Engineering & Technology 44, no. 4: 177-189*, 2020

Hee Jeong Han, Miso Kwon, You Hyun Kang, Dong Sub Cho, "**Pedestrian Management System for Real-time Pedestrian Detection**," in *Proceedings of Korea Multimedia Society Conference of the Spring*, 2016

- ***Best Paper Award***

Hee Jeong Han, You Hyun Kang, Miso Kwon, Dong Sub Cho, "**Pedestrian Pattern Classification For the Pedestrian Counting Systems using Key Matrix**," in *Proceedings of Korea Computer Congress*, 2016

- ***Best Paper Award***

Hee Jeong Han, You Hyun Kang, Miso Kwon, Dong Sub Cho, "**Pedestrian Safety Management Systems based on Multiple-input enabled F-pad**," in *Proceedings of The Korean Institute of Electrical Engineers(KIEE) Summer Conference*, 2016

You Hyun Kang, Miso Kwon, **Hee Jeong Han**, Dong Sub Cho, "**A System on the Formation of Pedestrian Pattern for Pedestrian Volume Analysis**," in *Proceedings of The 2016 Spring Conference of the Korea Information Processing Society (KIPS)*, 2016

Miso Kwon, You Hyun Kang, **Hee Jeong Han**, Dong Sub Cho, "**Adaptive for time-varing clustering DBSCAN**," in *Proceedings of 2016 Information and Control Symposium*, 2016

Posters

Hee Jeong Han, Suhas BN, Ling Qiu, and Saeed Abdullah, "**Dementia Diagnosis using Text and Speech Data**," in *ICDS Fall 2022 Symposium: Data Science, AI, and a Sustainable, Resilient, and Equitable Future*, 2022

Hee Jeong Han, Suhas BN, Ling Qiu, and Saeed Abdullah, "**ACOUSTICS : AutomatiC classificatiOn of sUbjectS with demenTIa and healthy Controls using text transcriptions and Speech data**," in *36TH AAAI Conference on Artificial Intelligence*, 2022

Research Experience

Wellbeing & Health Innovation (WHI) Lab

College of Informatics Science and Technology, Pennsylvania State University — *University Park, Pennsylvania, U.S.A*

Graduate Research Assistant — *Aug. 2020 - Present*

- Developed a conversational agent and assessed acceptability and feasibility of its for supporting mental health.
- Built a deep learning-based model to assess mental health symptoms from text data (e.g. PTSD, dementia).
- Investigate the feasibility and acceptance of using financial activity data as an objective behavioral marker and to detect early-warning signs in bipolar disorder.
- Understand how care partners currently support financial management for individuals with bipolar disorder, identify their challenges, and explore how technology can help address these issues.

Dutt Research Group

Department of Computer Science, University of California, Irvine — *Irvine, California, U.S.A*

Graduate Research Assistant — *Jun. 2018 – Jul. 2019*

- Proposed a new stress monitoring system. Its algorithm, using PPG, ECG and GSR sensors on wearable device, predicts stress level in everyday settings.

Computer Architecture and System Design Laboratory

Department of Computer Science and Engineering, Ewha Womans University — *Seoul, Korea*

Undergraduate Research Assistant — *Aug. 2015 – Jun. 2016*

- Proposed new pedestrian counting system. It contains two algorithms, Adaptive-DBSCAN and Pedestrian Algorithm. and two new hardwares, F-pad and Sonic-Bar.

Extracurricular Activities

Grace Hopper Celebration — *Philadelphia, Pennsylvania, USA*

Attendee — *Oct. 2024*

- World's largest tech conference for women and nonbinary people, focused on technology and innovation.

W3PHIAI-22 Data Hackallenge (Hackathon/Challenge)

First Winner — *Mar. 2022*

- Built an ensemble model with two deep learning-based architectures for text and speech analysis. The model achieved 89.8% accuracy when classifying individuals with dementia and health controls.

Ubicomp/ISWC 2021

Student Volunteer — *Sep. 2021*

- Assisted with the organization and management of the conference, supported speakers and attendees, and facilitated smooth event operations.

CRA-WP Grad Cohort for Women

Attendee — *Apr. 2021*

- A mentoring workshop that supports women graduate students in computing, offering guidance on academic and career advancement, networking, and professional development.

International Summer Undergraduate Research Fellowship — *University of California, Irvine*

Mentor — *Jun. 2018 – Aug. 2018*

- Mentored undergraduate researchers working on healthcare IoT.

Health Technology Assessment International 10th Annual Meeting *Seoul, Korea*

Student Volunteer *Jun. 2013*

- Aided foreign speakers and audience with administrative support, and managed keynote back-up system.

Career Mentoring *Ewha Womans University*

Leader of IT section Team *Mar. 2013 – Jun. 2013*

- Researched Korean software and network equipment market from a prospected technology report, and also researched future technology such as Google Glass and 3Doodler.

Skills

Research Methods Experimental Research, Human Subjects Research, Surveys, Interviews, Usability Testing.

Programming Languages and Tools Python, C/C++, Java, JavaScript, SPSS, JMP, LaTeX(Overleaf), Git.

Teaching Experience

2023 - 2024	IST 525: Computer-Supported Cooperative Work
2023 - 2024	IST 311: Object-Oriented Design and Software Applications
2023 Fall	IST 520: Foundations of Human-Centered Design
2022 - 2023	HCDD 340: Human-Centered Design for Mobile Computing
2022 Fall	HCDD 264: Design Practice in Human-Centered Design and Development

Awards

2016	**Silver Prize** 2016 Ewha Engineering Student Portfolio Contest
2014	**Hoakipa Scholarship** University of Hawaii at Manoa *Manoa, Hawaii, U.S.A*
2012	**Merit Scholarship** Megastudy Group *Seoul, Korea*

Work Experience

Mother Tongue *Seoul, Korea*

Editor, Writer *Feb. 2017 – Aug. 2017*

- Edited “Visual Phonics” for children learning English phonics first with images and songs. I wrote and edited “Middle School English Grammar 3800” series for 7th to 9th grade students.

Certification

Level 2 of Test Of Practical Competency in ICT (TOPCIT)

TOPCIT is a performance-evaluation-centered test designed to diagnose and assess the competency of ICT specialists and SW developers critically needed to perform jobs on the professional frontier.

Accreditation Board for Engineering Education of Korea (ABEEK)

Korean version of Accreditation Board for Engineering and Technology (ABET)

References available upon request.