Hee Jeong Han

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Education

Pennsylvania State University, University Park, Pennsylvania — Sep. 2020 – present
Doctor of Philosophy in Informatics [**GPA** 4.0 / 4.0]
Advisor: Saeed Abdullah

University of California, Irvine, Irvine, California — Sep. 2017 – Jun. 2019
Master of Science in Computer Science [**GPA** 3.76 / 4.0]
Advisor: Nikil Dutt
Thesis: Objective Stress Monitoring based on Wearable Sensors in Everyday Settings

Ewha Womans University, Seoul, Korea — Mar. 2012 – Feb. 2017
Bachelor of Science in Computer Science & Engineering
Advisor: Dong Sub Cho

University of Hawaii at Manoa, Manoa, Hawaii — Jan. 2014 – Dec. 2014
Exchange Student [22 credits]

École pour l'informatique et les techniques avancées, Paris, France — Jul. 2013
Graduate School of Computer Science and Advanced Technologies
Summer course for Web Security [3 credits]

Publications

PTSDialogue: Designing a Conversational Agent to Support Individuals with Post-Traumatic Stress Disorder
Hee Jeong Han, Sanjana Mendu, Beth K Jaworski, Jason E Owen, and Saeed Abdullah
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
DOI: https://doi.org/10.1145/3460418.3479332

Objective stress monitoring based on wearable sensors in everyday settings
Han, Hee Jeong, Sina Labbaf, Jessica L. Borelli, Nikil Dutt, and Amir M. Rahmani — 2020
Journal of Medical Engineering & Technology 44, no. 4: 177-189
DOI: https://doi.org/10.1080/03091902.2020.1759707

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

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

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

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

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

Research Experience

Graduate Research Assistant Sep. 2020 – Present
Wellbeing & Health Innovation (WHI) Lab
College of Informatics Science and Technology, Pennsylvania State University, University Park, Pennsylvania

PTSDialogue - A conversational agent to sustain patient engagement in PTSD Sep. 2020 – Present
Develops a conversational agent that can deliver therapeutic content and provide supportive accountability in PTSD and assesses feasibility and acceptability of the developed conversational agent for sustaining engagement with patients with PTSD.

Graduate Research Assistant Jun. 2018 – Jul. 2019
Dutt Research Group
Department of Computer Science, University of California, Irvine, Irvine, California

Healthcare IoT - Ubiquitous Stress Monitoring using Shimmer's Device 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.

Undergraduate Research Assistant Aug. 2015 – Jun. 2016
Computer Architecture and System Design Laboratory
Department of Computer Science and Engineering, Ewha Womans University, Seoul, Korea

Multimodal Pedestrian Counting System using Key-Matrix pad and Sonic-Bar
Proposed new pedestrian counting system. It contains two algorithms, Adaptive-DBSCAN and Pedestrian Algorithm. and two new hardwares, F-pad and Sonic-Bar.

Projects

Human-Centered Design Project Jan. 2021 – Jun. 2021
WiSDoM: Guiding Internet Users Toward Safer PrivacyDecisions
Built a Chrome extension tool that informs users about their disclosing behaviors. It is powered by a BERT-based objective disclose detection model.

IoT Data Management Project Apr. 2019 – Jun. 2019

Acquisition Manager

Built acquisition manager of the Perpetual DB, which requires a way to pass the raw data from various sources. The acquisition engine will handle message passing from various sources to the ingestion engine on Apache Kafka.

Individual Research Project Apr. 2018 – Jun. 2018

Stress Monitoring with PPG and GSR

Built the stress monitoring system using PPG sensor and GSR sensors on SHIMMER device. It contains the server, database and application for gathering data and showing the result.

Health Intelligence Project Apr. 2018 – Jun. 2018

Stress Monitoring with food intake

Investigated the relation between stress and food intake. Stress is analyzed by food intake based on heart rate and heart rate variability.

Embedded System Project Sep. 2017 – Dec. 2017

Physiological signals Monitoring

Calculated heart rate, respiration rate, and SPO2 based on collected data from hardware including PPG sensor and 3D accelerometer and investigated the relation between physiological signals and daily activities.

Computer Network Project Sep. 2016 – Dec. 2016

Long Life to you

Built a network between IoT devices and servers to provide exercise service for elder people.

Smart Software Project Mar. 2015 – Jun. 2015

Fettler

Investigated the sewage system using a Smart Car based on Arduino hardware. It finds the path autonomously based on infrared sensors for exploration of the sewage.

Awards

CRA-WP Grad Cohort for Women Apr, 2021
Silver Prize in the 2016 Ewha Engineering Student Portfolio Contest Dec. 2016
Hoakipa Scholarship, University of Hawaii at Manoa Jan. 2014 – Dec. 2014
Merit Scholarship from Megastudy Group, Seoul, Korea Mar. 2012 – Jun. 2012

Work Experience

Mother Tongue, Seoul, Korea Feb. 2017 – Aug. 2017

Editor, Writer

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

Health Technology Assessment International 10th Annual Meeting, Seoul, Korea Jun. 2013
Conference Staff
Aided foreign speakers and audience with administrative support, and managed keynote back-up system.

Extracurricular Activities

Ubicomp/ISWC 2021
Student Volunteer Sep. 2021

International Summer Undergraduate Research Fellowship, Jun. 2018 – Aug. 2018
University of California, Irvine, Irvine, California
Mentor
Mentored undergraduate researchers working on healthcare IoT

Career Mentoring, Ewha Womans University, Seoul, Korea Mar. 2013 – Jun. 2013
Leader of IT section Team
Researched Korean software and network equipment market from a prospected technology report, and also researched future technology such as Google Glass and 3Doodler

Korean Tutor for Foreign Students, Ewha Womans University, Seoul, Korea Mar. 2013 – May 2013
Tutor
Taught Korean to foreign students

Hanwoori, University of Hawaii, Manoa, Hawaii Jan. 2014 – Dec. 2014
Club Member
Actively participated in the Korean Culture Club to introduce Korea culture to university 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)