Donghee **Hong**

10-25, Hwasan-ro 187beon-gil, Jangan-gu, Suwon, Gyeonggi-do 16417, Republic of Korea

✉ dongheee149@gmail.com ; dh.hong@skku.edu | ⌂ www.donghee.me | ⌂ sth49

Research Interests

Visual analytics, parameter optimization, Human-in-the-Loop systems, user-centered design, human-AI collaboration

Education

Sungkyunkwan University (SKKU)   *Suwon, Korea*
M.S. IN ARTIFICIAL INTELLIGENCE (EXPECTED FEBRUARY 2026)   *Mar 2024 - Present*
- Cumulative GPA: 4.5/4.5

Sungkyunkwan University   *Suwon, Korea*
B.S. IN COMPUTER SCIENCE AND ENGINEERING   *Mar 2020 - Feb 2024*
- Cumulative GPA: 4.35/4.5 (98.5%), Major GPA: 4.38/4.5
- Graduated Summa Cum Laude, Class Rank: 2/160

Research Experience

Interactive Data Computing Laboratory (IDCLab), SKKU   *Suwon, Korea*
RESEARCH ASSISTANT (ADVISER: PROF. JAEMIN JO)   *Aug 2022 - Present*
- Led, as first author, the development of **HyPockeTuner**, a mobile interactive HPO system featuring EventCrumb, a novel event sequence visualization tailored for smartphones that unified HPO progress, user interventions, and outcomes on a single timeline
- Led research as first author on **Symetra**, a visualization system for analyzing hyperparameters and their impact on symbolic execution engines, and collaborated with domain experts in software testing
- Conducted multiple user studies including formative studies (N=8), case studies with domain experts (N=4), expert interviews (N=2), and controlled lab studies (N=12) to evaluate system designs and inform iterative development
- **SAE Feature Visualization** (Sep 2025–Present): Contributed to the development of a web-based interactive dashboard and visualizations for the analysis of Sparse Autoencoder (SAE) features in a neural network interpretability project

Data-driven AI Security HCI (DASH) Laboratory, SKKU   *Suwon, Korea*
RESEARCH ASSISTANT (ADVISER: PROF. SIMON SUNG-IL WOO)   *Dec 2020 - Jun 2022*
- Participated in various real-world application projects and contributed to the construction of large-scale datasets
- Notably, contributed to the development of a model for detecting fake faces, regardless of mask usage

Publications

UNDER REVIEW

[6] Paper under review at CHI 2026 (details withheld for anonymity)

[5] **Hong, D.**, Kim, M., Cha, S., & Jo, J. (under review at IEEE PacificVis). Symetra: Visual Analytics for the Parameter Tuning Process of Symbolic Execution Engines.

PUBLISHED

[4] **Hong, D.**, Kim, M., Cha, S., & Jo, J. (2025). Symetra: Visual Analytics for Tuning Symbolic Execution Engines. *IEEE VIS (Poster)*.

[3] Park, S., Park, J., & **Hong, D.**(2024). A System for Generating Image Prompts Using Large Language Models for Wheelchair Spoke Guard Design. *Proceedings of the Korean Computer Science Society Conference*, 918–920.

[2] Lee, S., Ko, D., Park, J., Shin, S., **Hong, D.**, & Woo, S. S. (2022, May). Deepfake Detection for Fake Images with Facemasks. *Proceedings of the 1st Workshop on Security Implications of Deepfakes and Cheapfakes*, 27–30.

[1] An, J., Kim, J., Lee, H., Kim, J., Kang, J., Shin, S., Kim, M., **Hong, D.**, & Woo, S. S. (2021, December). VFP290k: A Large-Scale Benchmark Dataset for Vision-Based Fallen Person Detection. *The Thirty-Fifth Conference on Neural Information Processing Systems Datasets and Benchmarks Track (Round 2)*.

Presentation

Hong, D. (2024, Oct). ViSTrics: A visual analytics tool for software testing. Korean Visualization Workshop (K-VIS), Seoul, Korea.

Selected Projects

PediaViz: Interactive Timeline Dashboard for Pediatric Medication and Test Analysis

IDCLAB, SKKU COLLABORATING WITH SEOUL NATIONAL UNIVERSITY HOSPITAL & NAVER CORPORATION *Feb 2024 - Present*

- Integrating natural language diagnostic data into the system, creating a multimodal system that seamlessly combines structured clinical measurements with unstructured textual assessments for comprehensive patient analysis
- Designed and implemented a web-based interactive dashboard that synchronizes patient growth records, lab results, and medication history on a unified timeline
- Built custom visualization components to help pediatricians identify patterns and correlations between treatments and test results

Spokeguard Design Assistant for Young Wheelchair Users

CO-DEEP LEARNING PROJECT, SKKU *Sep 2023 - Dec 2023*

- Developed an AI model that converts Korean design descriptions into appropriate image-generation prompts for young wheelchair users
- Addressed the accessibility gap for children with disabilities by eliminating the need for complex English prompts in text-to-image platforms

License Plate Recognition Mobile Application

UNDERGRADUATE RESEARCH PROGRAM (URP), SKKU *Jan 2021 - Sep 2021*

- Built end-to-end pipeline from dataset construction and model training to mobile application deployment
- Published on Google Play Store with 1,000+ downloads

Teaching Experience

TEACHING ASSISTANT

Introduction to Human-Computer Interaction (Fall 2024, Fall 2025); Information Visualization (Spring 2025); Problem Solving (Fall 2025); Computer Programming for Engineers (Spring 2023, Spring 2025); Python Programming Orientation for Freshmen (2021-2023)

TUTORING AND MENTORING

SKKU Peer Tutoring Program (Spring 2021); SKKU Software Mentoring Program (2020-2021)

Awards and Honors

SCHOLARSHIPS

Graduate Scholarship, SBS CULTURAL FOUNDATION *Sep 2024 - Feb 2026*

- Full tuition and annual stipend of $8,225
- Around 15 students selected nationwide (acceptance rate: 4%)

Graduate Scholarship, DAESANG FOUNDATION *Mar 2024 - Jun 2024*

- Stipend of $4,800 per semester

The Presidential Science Scholarship, KOREA STUDENT AID FOUNDATION *Mar 2022 - Dec 2023*

- Full tuition and annual stipend of $3,500
- Approximately 150 students selected nationwide

SKKU Software Scholarship, SKKU *Mar 2020 - Dec 2022*

- Full tuition for two years (contingent on maintaining an overall GPA above 3.5)

Additional Internal Scholarships, SKKU

- Extracurricular Challenge Scholarship (2023); Student Success-Leadership Scholarship (2021, 2022); Department Recommendation Scholarship (Fall 2021)

AWARDS

Grand Prize, Co-Deep Learning Project Competition, SKKU *Dec 2023*

- Ranked top 2 out of 16 teams

Participation Award, SW-Centered College AI Competition, SW-Centered University Association *Dec 2023*
- Ranked top 8 out of 194 teams

Dean's List Award, College of Computing and Informatics, SKKU *Spring & Fall 2020, Fall 2021*

Leadership and Extracurricular Activities

SKKU-BA-DIVE Program *London, UK*
Team Leader *Jan 2023*
- Led field research and interviews with industry professionals in IT and AI

Uni-DTHON Competition *Seoul, Korea*
Data-thon Track Leader *Dec 2021 - Dec 2022*
- Coordinated AI competition planning across six major universities in South Korea, designing competition problems and implementing leaderboard evaluation

Student Council, College of Computing and Informatics *Suwon, Korea*
Vice President *Nov 2021 - Nov 2022*
- Organized in-person academic events and facilitated communication between students, faculty, and partner universities

University Student Council Joint Committee *Seoul, Korea*
College Representative *Nov 2021 - Nov 2022*
- Represented the College of Computing and Informatics to discuss and decide on university development issues

Global Challenge Program *Silicon Valley, USA*
Deputy Team Leader *Jun 2022*
- Conducted field research and interviews with IT professionals

Community Service *Suwon, Korea*
Volunteer *2020 -2024*
- Over 100 hours of community service

Technical Skills

Research Methods	Semi-structured interviews, Thematic Analysis, Case Studies, Controlled Lab Studies, Formative Studies
Programming	TypeScript and JavaScript (Advanced, 3+ years production experience), Python (Advanced), Java, C and C++
Visualization & Frontend	D3.js & visx (Advanced, custom interactive visualizations), React (Advanced), Tailwind CSS, HTML/CSS
Data Analysis & Backend	Pandas, NumPy, Scikit-learn, FastAPI
Tools	Git, Figma, LaTeX, Adobe Premiere Pro