

DAEUN HWANG

Seattle, WA

hdaeun@uw.edu

daeunhwang.com/research

FIELDS OF INTERESTS

Human-Computer Interaction, Agency and Creativity with AI, Music Information Retrieval, Educational Technology

EDUCATION

University of Washington, United States

Sept. 2025 - Present

Ph.D. in Information Science. Advised by Dr. Jin Ha Lee & Dr. Jason C. Yip.

Anticipated graduation date: June 2028

University of California Santa Cruz, United States

Sept. 2023 - June 2025

M.S. in Computational Media. Advised by Dr. Edward F. Melcer.

Graduate researcher with full tuition & stipend support, GPA: 4.0/4.0

Yonsei University, South Korea

Mar. 2018 - June 2023

Bachelor of Science, Information & Interaction Design / Micro-major in Computer Programming

GPA: 3.9/4.3

PUBLICATIONS

Conference Papers

- Cho, Y., **Hwang, D.**, Lam, A., Lee, J. H., & Yip, J. C. (2026). Becoming a healthy player: Exploring teen esports players' perspectives on mental well-being through participatory design. *Proceedings of the ACM CHI Conference on Human Factors in Computing Systems (CHI '26)*.
- Hirsch, L., **Hwang, D.**, Johns, M., & Isbister, K. (2025, July). HCI for Climate Resilience: Developing an Individual and Community Focused Framework through a Grounded Theory Approach. *In Proceedings of the 2025 ACM Designing Interactive Systems Conference* (pp. 1740-1757).
- Liang, Z., **Hwang, D.**, Chen, S., Hoang, N. H., Khotchasing, K., & Melcer, E. F. (2025). User Preferences for Interaction Timing in Smartwatch Sleep Hygiene Games. *In Proceedings of the 2025 CHI Conference on Human Factors in Computing Systems* (pp. 1-17).
- Johnson-Bey, S., Liao, K., Shields, S., **Hwang, D.**, Wardrip-Fruin, N., Mateas, M., & Melcer, E. (2024). Building Visual Novels with Social Simulation and Storylets. *In International Conference on Interactive Digital Storytelling* (pp. 145-161). Cham: Springer Nature Switzerland.
- **Hwang, D.**, & Melcer, E. F. (2024). Mindfulness Techniques Taught Through Game Mechanics. *In Companion Proceedings of the 2024 Annual Symposium on Computer-Human Interaction in Play*. (pp. 300-305).
- **Hwang, D.**, & Melcer, E. F. (2024). Exploring engagement in Idle Game Design. *2024 IEEE Conference on Games (CoG)*, 1-8.
- **Hwang, D.**, & Park, S. (2023). EMO100DB: An Open Dataset of Improvised Songs with Emotion Data. *International Conference of Music Perception and Cognition 2023*.
- **Hwang, D.**, Oh, S., & Jun, S. (2022). Does Interactive Media Art Engage an Audience More Than Non-Interactive One Does?. *KSDS 2022 Conference Proceeding*, 220-221.
- **Hwang, D.**, Choi, M., Jung, H., Baek, Y., Lee, H. B., Lee, Y., Ho, J., Lee, J., & Jun, S. (2022). Meari: Interactive Smart Screen Designed to Tailor Personal Hiking Routes. *KSDS 2022 Conference Proceeding*, 262-263.
- **Hwang, D.**, Chung, Y., Yoo, Y., Jun, S., & Holoubek, T. (2020). Sbin: Smart, Interactive and IoT-Based Rotating Garbage Classifying Bin. *KSDS 2020 Conference Proceeding*, 172-173.

Journal Articles

- Hoang, N. H., Villeneuve, J., Morrison, H., Tu, A., Karunarathna, T., **Hwang, D.**, ... & Melcer, E. (2026). Delivering Sleep Hygiene Interventions through Smartwatch-based Serious Sleep Games. *Sleep Medicine*, 138, 108585. Shields, S., Lafosse, C., Johnson-Bey, S., **Hwang, D.**, Wardrip-Fruin, N., & Melcer, E. F. (2025). Could vs Should: Exploring Prompting Strategies and Writer Perspectives Towards LLM Assistance in Storylet Authoring. *IEEE Transactions on Games*.
- Liang, Z., Melcer, E., Khotchasing, K., Chen, S., **Hwang, D.**, & Hoang, N. H. (2024). The Role of Relevance in Shaping Perceptions of Sleep Hygiene Games Among University Students: Mixed Methods Study. *JMIR Serious Games*, 12, e64063.
- Ryu, H., Bang, H., **Hwang, D.**, & Kang, Y. (2023). Exploring the Extent of Usability for Augmented Profile Interfaces in Enhancing Conversation Experiences. *Interacting with Computers* 2023.
- **Hwang, D.**, & Kang, Y. (2023). How Does Constructive Feedback in an Educational Game Sound to Children?. *International Journal of Child-Computer Interaction*, 36, 100581.

Poster/Workshop Presentations

- **Hwang, D.**, Shields, S., Calderwood, A., Johnson-Bey, S., Mateas, M., Melcer, E. (2025). "Clicking some of the silly options": Exploring Player Motivation in Static and Dynamic Educational Interactive Narratives. *CHI 2025 Workshop on Augmented Educators and AI*; Apr. 26, 2025; Yokohama, Japan.
- **Hwang, D.**, & Hwang, H. (2024). Understanding Human Perception of Music Plagiarism Through a Computational Approach. *25th Conference of the International Society for Music Information Retrieval (ISMIR)*; Nov. 17, 2024; San Francisco, CA.
- **Hwang, D.**, X, Cai, E. Melcer, & E. Carstendottir. (2024). A Music Information Retrieval Approach to Classify Sub-genres in Role Playing Games. *25th Conference of the International Society for Music Information Retrieval (ISMIR)*; Nov. 17, 2024; San Francisco, CA.

WORK EXPERIENCE

Google LLC

Mar. 2026 - Present

Student Researcher

- Formulated and executed an end-to-end research agenda examining user agency, cognitive friction, and delegation in agentic commerce, authoring a first-author paper currently under review at ACM IUI 2027.
- Synthesized mixed-methods data and in-depth user studies into 5 behavioral design heuristics, delivering 3 strategic presentations to Cloud AI product, UX, and engineering teams.
- Consulted across 3 evaluative research sessions for Google Labs (Flow and Lyria teams), uncovering critical interaction bottlenecks in generative media systems.
- Architected internal recruitment and telemetry pipelines, authoring an onboarding framework adopted by incoming student researchers.

Incheon Start-up Park

June 2021 - Nov. 2023

User Experience (UX) Consultant

- Provided strategic UX consulting for 6 tech startups, establishing interaction architectures, localization frameworks, and user metrics for international commercialization.
- Executed 20+ usability tests, 10+ scenario-based observational studies, and 5+ field evaluations, directly translating qualitative behavioral data into actionable engineering requirements.

Korea Food for the Hungry International*July 2021 - Dec. 2021**System Consultant*

- Architected a centralized tracking framework reporting pipeline for organizational Objectives and Key Results (OKRs), deployed across global teams.
- Analyzed internal workflow bottlenecks through structured employee interviews, iteratively refining tooling to improve system adoption and data consistency.

DUBU Inc. (Formerly DoBrain)*Nov. 2020 - June 2021**Global Marketing Intern*

- Designed and shipped the international web application, establishing accessible design systems, responsive UI components, and brand guidelines for global markets.
- Analyzed user funnels and drop-offs using SQL, optimizing onboarding workflows and ad creative strategies that led to a 12% lift in conversion rates.
- Led qualitative user research sessions with parents to identify their needs and user experience.

RESEARCH EXPERIENCE

KidsTeam UW*Mar. 2026 – June 2026**Advisor: Prof. Jason C. Yip*

- Designed and facilitated weekly participatory co-design sessions with children aged 7–11, examining creative agency, multimodal prompting, and technology-mediated collaboration.
- Employed intergenerational co-design methodologies to translate complex algorithmic concepts into intuitive, child-centered interactive interfaces.

Academical: Interactive Narrative Systems (NSF Funded)*Apr. 2024 – June 2025**Advisors: Prof. Edward Melcer, Prof. Noah Wardrip-Fruin, Prof. Michael Mateas*

- Investigated human-in-the-loop generative AI workflows and adaptive storylet authoring across an NSF-funded initiative, yielding 3 co-authored publications (IEEE Transactions on Games, ICIDS, and CHI).
- Designed controlled empirical studies evaluating player agency and prompting behaviors, comparing LLM-assisted generation with deterministic branching architectures.
- Developed and tested dynamic character state machines and responsive visual feedback systems for real-time narrative adaptation.

Gamifying Sleep Health / ALT Games Lab & KUAS' Ubicomp Lab*Oct. 2023 - Nov. 2024**Advisor: Prof. Edward Melcer, Prof. Zilu Liang*

- Led design ideation session for sleep-aiding pet game and building Japanese town game
- Participated in desk research for existing sleep hygiene gamification mechanics

Enhancing Coastal Climate Resilience using Applied Technology*June 2024 - Dec. 2024**Advisor: Prof. Katherine Isbister, Dr. Linda Hirsch*

- Conducted theory-based coding for the analysis of expert interviews
- Created sketches to support ideation and solution design development

Development of Servitization on Smart Air Clean System Airbot Airblock using Acoustic Waves and Clean Plasma Technology / Korea Air Industry Promotion Association*Oct. 2022 - Dec. 2022**Advisor: Prof. Younah Kang*

- Led usability testing, diary studies, and experimental observational research within Virtual Reality settings
- Collaborated with engineering and design teams to deliver actionable UX insights to stakeholders
- Deployed server connection using Firebase and python, to send signals indicating different scenarios in VR environments

Design for Experience Lab / Yonsei University*Mar. 2021 – Aug. 2023*

Advisor: Prof. Younah Kang

- Executed mixed-methods studies (diary studies, semi-structured interviews, VR evaluations) on multimodal sensory feedback, resulting in a first-author paper in IJCCI.
- Programmed custom evaluation testbeds utilizing Python, Firebase, and VR hardware to log user behavioral telemetry and latency patterns.

Computational Science and Engineering Lab / Yonsei University*July 2020 - Aug. 2020*

Advisor: Prof. Eunjung Lee

- Studied machine learning models using Python and Matlab as a summer research intern
- Explored different model and data visualizations

TECHNICAL SKILLS

Programming & Data	R, IBM SPSS Statistics, Python, CSS, Javascript, mySQL, Git, Firebase, Supabase
Qualitative Research	Usability testing, in-depth interviews, diary studies, observational research, thematic coding
Quantitative Research	Experimental design, A/B testing, survey design, behavioral data analysis, log analysis
Design & Prototyping	Figma, Adobe Suite (Premiere Pro, Photoshop, InDesign, Illustrator), P5js, Sonic Pi

LANGUAGES

Korean	Native, First language
English	Fluent, TOEFL iBT 116/120
Spanish	Fluent, DELE C1 (Second-highest level)
Portuguese	Beginner (Simple conversations)

AWARDS AND ACKNOWLEDGEMENTS

High Honors (top 3% of the students in their respective field of study), <i>Yonsei University</i>	<i>June 2022</i>
The Great Challenge Global Korean Youth Video Gold Prize, <i>MBC & YMCA</i>	<i>Oct. 2021</i>
Social Innovation Ambassador, <i>Institute for Higher Education</i>	<i>Sept. 2021</i>
Honors (top 10% of the students in their respective field of study), <i>Yonsei University</i>	<i>June 2021</i>
Grand Prize Designer, <i>Yonsei Merchandise Society</i>	<i>June 2021</i>
Innovation Light-up 1st Scholarship Holder, <i>Institute for Higher Education</i>	<i>Sept. 2020</i>
Dooeul 21st Scholarship Holder, <i>Dooeul Scholarship Foundation</i>	<i>Oct. 2018</i>

CERTIFICATES

Career Essentials in Generative AI by Microsoft and LinkedIn, <i>Microsoft</i>	<i>June 2024</i>
Programming Foundations: Beyond the Fundamentals, <i>LinkedIn</i>	<i>June 2024</i>
Project Management Foundations: Requirements, <i>LinkedIn</i>	<i>June 2024</i>
Responsible Conduct of Research for Engineers, <i>CITI Program</i>	<i>May 2024</i>
International Research, <i>CITI Program</i>	<i>May 2024</i>

TEACHING EXPERIENCE

Teaching Assistant: Project Management, University of Washington	<i>Sept. 2026 - Dec. 2026</i>
Teaching Assistant: Project Management, University of Washington	<i>Jan. 2026 - Mar. 2026</i>
Teaching Assistant: Research Methods, University of Washington	<i>Sept. 2025 - Dec. 2025</i>

Teaching Assistant: Game AI, University of California Santa Cruz	Mar. 2025 - June 2025
Teaching Assistant: Game Design, University of California Santa Cruz	Jan. 2025 - Mar. 2025
Teaching Assistant: Rapid Prototyping, University of California Santa Cruz	Sept. 2024 - Dec. 2024
Teaching Assistant: Foundations of Video Game Design, University of California Santa Cruz	Sept. 2023 - Dec. 2023
Mentor: Social Innovation Mentoring with Youth, Institute for Higher Education	April 2022 - Aug. 2022
Teaching Assistant: User Experience and Research Methods Course, Yonsei University	Sept. 2021 - Dec. 2021
Solution Design Mentor: Career Exploration Program, Incheon Office of Education	Sept. 2021
Camp Assistant: UNOSD 5th SDGs Youth Summer Camp	Aug. 2021
Teaching Assistant: Programming for Integrated Science and Engineering, Yonsei University	Sept. 2020 - Dec. 2020
Buan English Camp Mentor	July 2019 - Aug. 2019
Operator : Social Engagement Mentoring Camp, Yonsei University	July 2019
Mentor: Creative Problem Solving Camp	July 2018 - Aug. 2018

SPECIAL TALKS

Talk Show Guest: Social Innovation Talk Concert 2022 IHEI Show-off Festa II	Jan. 2023
Social Innovation Lecture - <i>Innovation Isn't Too Far From Us</i>	May 2022

VOLUNTEER ACTIVITIES

CHI 2026 Student Volunteer	Apr. 2026
CSCW 2022 Student Volunteer	Nov. 2022
UIST 2022 Student Volunteer	Nov. 2022
IUI 2022 Student Volunteer	Mar. 2022
Dongshimwon (Center for children with disabilities) Volunteer	Mar. 2019 - June 2019
Korea Food for the Hungry International Sponsor Letter Translator (Spanish - Korean)	Sept. 2018 - Jan. 2019
Mapo Community Rehabilitation Center Family Camp Volunteer	July 2018

REFERENCES

Dr. Edward F. Melcer

Associate Professor, Computer Science / Computational Media
 Carleton University / University of California, Santa Cruz
 Email: EdwardMelcer@cunet.carleton.ca

Dr. Younah Kang

Associate Professor, Information and Interaction Design
 Yonsei University
 Email: yakang@yonsei.ac.kr