DAEUN HWANG

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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 - Aug. 2026*
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.

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), *Yonsei University* *June 2022*

The Great Challenge Global Korean Youth Video Gold Prize, *MBC & YMCA* *Oct. 2021*

Social Innovation Ambassador, *Institute for Higher Education* *Sept. 2021*

Honors (top 10% of the students in their respective field of study), *Yonsei University* *June 2021*

Grand Prize Designer, *Yonsei Merchandise Society* *June 2021*

Innovation Light-up 1st Scholarship Holder, *Institute for Higher Education* *Sept. 2020*

Dooeul 21st Scholarship Holder, *Dooeul Scholarship Foundation* *Oct. 2018*

CERTIFICATES

Career Essentials in Generative AI by Microsoft and LinkedIn, *Microsoft* *June 2024*

Programming Foundations: Beyond the Fundamentals, *LinkedIn* *June 2024*

Project Management Foundations: Requirements, *LinkedIn* *June 2024*

Responsible Conduct of Research for Engineers, *CITI Program* *May 2024*

International Research, *CITI Program* *May 2024*

TEACHING EXPERIENCE

Teaching Assistant: Project Management, University of Washington *Sept. 2026 - Dec. 2026*

Teaching Assistant: Project Management, University of Washington *Jan. 2026 - Mar. 2026*

Teaching Assistant: Research Methods, University of Washington *Sept. 2025 - Dec. 2025*

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 - *Innovation Isn't Too Far From Us* *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
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Carleton University / University of California, Santa Cruz
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Dr. Younah Kang
Associate Professor, Information and Interaction Design
Yonsei University
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