

# Hyewon Lee

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## EDUCATION

### Korea Advanced Institute of Science & Technology

Expected Graduation: Jun 2025

Daejeon, South Korea

**GPA 4.06/4.3**

- BS Candidate, **Computer Science** major, Industrial Design double major
- Dean's List (2021), Representative Student(2021), President Student(2022) of *School of Computing*

### New York University

Jan 2024 - Present

- KAIST-NYU minor, Integrated Design & Media

## EXPERIENCE

### Software Engineer Intern **SketchSoft**

Jul 2022 - Dec 2022

- Worked as a frontend engineer and developed the web-based 3D sketching tool Feather(**Three.js**).
- Developed 3D curve data transformation to GLTF, examining and evaluating various methods for size, draw call, and expandability. Implemented each approach, achieving a maximum 87% size reduction.
- Proposed a new export idea, building a full prototype of a movie generation feature that reduces work time by 60% compared with manual methods. Analyzed and conducted POC to demonstrate scalability.

### Software Engineer **SPARCS**

Mar 2021 - Present

- Work as a software engineer in the KAIST programmer association, SPARCS, which serves web-based services targeting university students. Build a decision-making tool for the organization, Biseo.
- Revised and implemented the UX process to handle 3 usability issues. Reconstructed state and db structure accordingly. Received positive feedback, leading to the distribution to the other 2 associations.
- Integrated atomic design to facilitate agile practices. Completed system design, development, and deployment within 2 months from 4 months through team collaboration.

### HCI Researcher Intern **KIXLAB**

Jul 2023 - Dec 2023

- Researched, developed, and evaluated a web-based authoring system for generating, assessing, and modifying pedagogical dialogues in collaboration with AI(**React, Redux, OpenAI API**). [github](https://github.com)
- Demonstrated a 2.1-fold improvement in dialogue quality and usability evaluation compared to traditional authoring processes through the system, validating research findings. (CHI 2024 accepted).

### Teaching Assistant *part-time* **KAIST School of Computing**

Mar 2021 - Feb 2022

- Taught effective programming methods by applying various data structures and algorithms during CS101 (Introduction to Programming, Python) lab session. Nominated as best tutor(2023).

## SKILLS

- Javascript/Typescript, HTML/CSS, Python, C/C++
- React, Redux, Three.js, PyTorch, Git, Firebase

## PROJECTS

- **MySelfieRoom** (2023) [github](https://github.com) [demo](#)  
Online photobooth platform which can take, edit, and share photos. Developed with **Typescript** and **React** as team lead. Built image processing procedure by state managing with **Recoil**.
- **RunThroughGravity** (2022) [github](https://github.com) [demo](#)  
Mini arcade game implemented with **p5.js** based on pure **Javascript**. Applied an observer pattern to organize game objects and utilized **Firebase** to manage users.
- **BlackGhost** (2022) [github](https://github.com)  
Interactive puzzle game used in the Korean reality game show, *Treasure Hunt*. Implemented based on **React** and packed as an app by **Electron**. Constructed automated play and termination with **Shell** Script running in the background process.