

# Jae Young Choi

HUMAN-AI INTERACTION · UBIQUITOUS COMPUTING · VISUALIZATION

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## Education

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### KAIST (Korea Advanced Institute of Science and Technology)

Sep. 2024 - PRESENT

Daejeon, South Korea

M.S. IN INDUSTRIAL DESIGN

- Advisor: Prof. Tak Yeon Lee

### POSTECH (Pohang University of Science and Technology)

Mar. 2018 - Aug. 2024

Pohang, South Korea

B.S. IN CHEMICAL ENGINEERING (MAJOR) / COMPUTER SCIENCE AND ENGINEERING (MINOR)

- GPA: 3.61/4.3 (Magna Cum Laude)

### Gyeonggi Science High School for the Gifted

Mar. 2015 - Feb. 2018

Suwon, South Korea

MAJOR IN PHYSICS / CHEMISTRY

## Publications

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### Toward Flexible Psychiatric History-Taking and Visualization: Exploring Clinician Perspectives with LLMs

2026

Yugyeong Jung, Thu Hoang Anh Vo, Hyun Seung Moon\*, **Jae Young Choi**\*, Hyangkyeong Oh, Ujin Lee, Eunjoo Kim, Tak Yeon Lee, and Uichin Lee (\* equal contribution)

2026 CHI conference on Human Factors in Computing Systems (CHI '26) (R&R)

### Gaze2Prompt: Turning Eye-Tracking Data into Visual Prompts for Multimodal LLMs



2025

**Jae Young Choi**, Seon Gyeom Kim, Jaywoong Jeong, Ryan Rossi, Jihyung Kil, and Tak Yeon Lee

Companion of the 2025 ACM International Joint Conference on Pervasive and Ubiquitous Computing (UbiComp '25)

### Grounded Generation of Embellished Bar Chart Ensuring Chart Integrity

2025

Seon Gyeom Kim\*, **Jae Young Choi**\*, Phillip Y. Lee, Jaeryung Chung, Ryan Rossi, Jihyung Kil, Eunyee Koh, and Tak Yeon Lee (\* equal contribution)

2025 IEEE Visualization and Visual Analytics (VIS '25)

### Chart-to-Experience: Benchmarking Multimodal LLMs for Predicting Experiential Impact of Charts



2025

Seon Gyeom Kim, **Jae Young Choi**, Ryan Rossi, Eunyee Koh, and Tak Yeon Lee

2025 IEEE 18th Pacific Visualization Conference (PacificVis '25)

## Experiences

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### Naiden Inc.

Jul 2023 – Aug 2023

Seoul, South Korea

IoT ENGINEER (INTERN)

- Implemented reliable sensor-to-gateway data transmission for manufacturing IoT
- Integrated streaming data into Google Cloud with SQL-based storage/management.

### Seoul Metro

Oct 2020 – Jul 2022

Seoul, South Korea

MILITARY SERVICE

- Conducted subway patrol and safety management across assigned stations.

### D-Signer

Jun 2019 – Aug 2019

Seoul, South Korea

UI DESIGNER (INTERN)

- Led brand design and mobile/web UI for *Unpalette*, a social media for designers.
- Delivered assets and prototypes using Figma/Photoshop; gained lean startup experience through rapid iterations with stakeholders.

### APGC-Lab (POSTECH Start-up Incubation Center)

Feb 2019 – Jul 2019

Pohang, South Korea

CONTENTS CREATOR

- Produced videos for YouTube, conducted founder interviews, and supported on-site event operations.

## Honors, Awards & Grants

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### Grand Prix (Mentor of Awarded Team)

Nov 2025

KAIST Undergraduate Research Participation (URP)

|   |                                       |
|---|---------------------------------------|
| <b>Best Poster Award</b>                                      | Oct 2025                              |
| ACM UbiComp '25   |                                       |
| <b>National Runner-Up (Top 3)</b>                             | Sep 2025                              |
| 2025 James Dyson Awards                                       |                                       |
| <b>Best Paper Award</b>                                       | Apr 2025                              |
| IEEE PacificVis '25   |                                       |
| <b>1st Prize Winner (1st from 20 Korean top school teams)</b> | Jan 2025                              |
| 2025 BlackOut Hackathon                                       |                                       |
| <b>Silver Award Winner (Top 4)</b>                            | Jun 2024                              |
| 45th Cheil Idea Festival                                      |                                       |
| <b>Research Scholarship (~ USD 5,000)</b>                     | Feb 2024                              |
| Samsung Display   |                                       |
| <b>1st Prize Winner</b>                                       | Jun 2023                              |
| ChatGPT & Gen-AI Usecase Contest, POSTECH                     |                                       |
| <b>Academic Excellence</b>                                    | Fall 2022, Spring 2023, Fall 2023     |
| POSTECH   |                                       |
| <b>Korean Chemistry Olympiad</b>                              | Summer 2016, Winter 2015, Summer 2015 |
| Korean Chemical Society                                       |                                       |

## Professional Trainings

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|---|---------------------|
| <b>SK Telecom FLY AI Challengers (AI Bootcamp)</b>  | Jun 2024 – Aug 2024 |
| SK TELECOM  |                     |
| <ul style="list-style-type: none"> <li>Learned LLM Ops technologies including Azure, Kubernetes, Ollama, and VLM.</li> <li>Developed <i>m.Al Tutor</i>, an AI-powered math tutoring service for underprivileged middle school students using LLMs and mobile device.</li> </ul> |                     |
| <b>Apple Foundation Program</b>   | Apr 2024 – May 2024 |
| APPLE DEVELOPER ACADEMY   |                     |
| <ul style="list-style-type: none"> <li>Learned iOS development with SwiftUI and Apple's design thinking methodology, Challenge-Based Learning (CBL).</li> </ul>   |                     |
| <b>Google UX Design Certificate</b>   | Jul 2021 – Dec 2021 |
| COURSERA  |                     |
| <b>Gyeongbuk AI Blockchain Startup Incubating Program, POSTECH</b>  | Aug 2019            |
| POSTECH   |                     |

## Projects

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|--|-------------|
| <b>O2Stick</b>   | Spring 2025 |
| PRODUCT DESIGN   | KAIST       |
| <ul style="list-style-type: none"> <li>Designed and prototyped a compact device that reliably generates oxygen in emergency situations.</li> <li>Developed a power-free mechanism using the dissolution process of the ubiquitous material Sodium Percarbonate to produce oxygen.</li> <li>Selected as a National Runner-Up for the <i>James Dyson Award 2025</i>, and advanced to the International Round. (also submitted to iF Design Award)</li> </ul>               |             |
| <b>Text Per Second</b>   | Fall 2024   |
| ARTWORK  | KAIST       |
| <ul style="list-style-type: none"> <li>A multi-device web performance envisioning a near future where AI agents engage in endless conversation, generating an uncontrollable surge of dialogue and automation beyond human oversight. (Inspired by Eric Schmidt's reflections on autonomous AI and Goethe's <i>The Sorcerer's Apprentice</i>)</li> <li>Implemented interactive communication across mobile devices using <i>Socket.io</i> and <i>Next.js</i>.</li> </ul> |             |
| <b>Keywords in CHI</b>   | Fall 2024   |
| INTERACTIVE DATA STORYTELLING  | KAIST       |
| <ul style="list-style-type: none"> <li>An interactive web visualization narrating the evolution of research topics in CHI papers up to 2024.</li> <li>Conducted data collection, text embedding, dimensionality reduction, and interactive web visualization.</li> </ul>   |             |

## **Inverse Design of Aesthetic Radiative Cooler Using Particle Swarm Optimization**

2024

UNDERGRADUATE THESIS

POSTECH

- Explored inverse design mechanisms for multilayer structures to achieve color-controlled radiative cooling through thermal radiation.
- Research on self-emissive energy systems for sustainable thermal management.

## **Toward Next-Generation Displays: Analysis of Textile OLED Technology Trends**

2024

REPORT FOR RESEARCH SCHOLAR

Samsung Display

- Analyzed key technology trends in textile OLEDs, comparing fabric-based and fiber-based platforms for next-generation wearable displays.
- Investigated critical challenges and solutions in textile OLED fabrication, including matrix addressability, monorail structures for deposition uniformity, and ultrathin strain-buffering for mechanical reliability.

## **ChatRPG: A Gen-AI-Powered Immersive TRPG Assistant**

Fall 2023

TERM PROJECT

POSTECH

- Explored the feasibility of using LLMs as Game Masters in tabletop role-playing games.
- Integrated image generation, LLM fine-tuning, and extensions to IoT environments.

## **WebGandhi: Detecting and Filtering Hate Speech on the Internet using LLM**

Fall 2023

TERM PROJECT

POSTECH

- Developed a Chrome extension for detecting and filtering online hate speech using fine-tuned LLMs.
- Focused on LLM fine-tuning and NLP-based hate speech detection.

## **GPT is All You Need for the Frontend**

2023

COMPETITION

POSTECH

- Demonstrated the early feasibility of using GPT to automatically generate JavaScript functionality from static HTML code.
- Awarded 1st Prize in the *ChatGPT & Gen-AI Use-case Contest*.

# **Teaching Experiences**

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## **Invited Talk, ID.40018 Data Analysis for Designers**

Fall 2025

KAIST

## **Mentor, KAIST Undergraduate Research Participation (URP)**

Spring 2025

KAIST

## **TA, Department Website Management**

Fall 2024, Spring 2025, Fall 2025

Industrial Design, KAIST

# **Skills**

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**Programming** Python, C/C++, Matlab, R, Kotlin, SwiftUI, Node.js, LaTeX

**Web Dev** React, HTML5, Firebase

**Cloud & LLM Ops** Google Cloud Platform, Microsoft Azure, Kubernetes, Ollama, OpenAI APIs

**Design Tools** Figma, Adobe Photoshop, Illustrator, Premiere Pro, XD

**Design Research** Affinity Diagramming, Thematic Analysis, Diary Study

**Languages** Korean (Native), English (Fluent)