Jae Young **Choi**

HUMAN-AI INTERACTION · UBIQUITOUS COMPUTING · VISUALIZATION

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Education

KAIST (Korea Advanced Institute of Science and Technology)   *Sep. 2024 - PRESENT*
M.S. IN INDUSTRIAL DESIGN   *Daejeon, South Korea*
- Advisor: Prof. Tak Yeon Lee

POSTECH (Pohang University of Science and Technology)   *Mar. 2018 - Aug. 2024*
B.S. IN CHEMICAL ENGINEERING (MAJOR) / COMPUTER SCIENCE AND ENGINEERING (MINOR)   *Pohang, South Korea*
- GPA: 3.61/4.3 (Magna Cum Laude)

Gyeonggi Science High School for the Gifted   *Mar.2015 - Feb.2018*
MAJOR IN PHYSICS / CHEMISTRY   *Suwon, South Korea*

Publications

Gaze2Prompt: Turning Eye-Tracking Data into Visual Prompts for Multimodal LLMs 🏆 Best Poster Award   *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 contributions)
2025 IEEE Visualization and Visual Analytics (VIS '25)

Chart-to-Experience: Benchmarking Multimodal LLMs for Predicting Experiential Impact of Charts 🏆 Best Paper Award   *2025*
Seon Gyeom Kim, Jae Young Choi, Ryan Rossi, Eunyee Koh, and Tak Yeon Lee
2025 IEEE 18th Pacific Visualization Conference (PacificVis '25)

Experiences

Naiden Inc.   *Jul 2023 – Aug 2023*
IOT ENGINEER (INTERN)   *Seoul, South Korea*
- 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*
MILITARY SERVICE   *Seoul, South Korea*
- Conducted subway patrol and safety management across assigned stations.

D-Signer   *Jun 2019 – Aug 2019*
UI DESIGNER (INTERN)   *Seoul, South Korea*
- 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*
CONTENTS CREATOR   *Pohang, South Korea*
- Produced videos for YouTube, conducted founder interviews, and supported on-site event operations.

Honors, Awards & Grants

Best Poster Award   *Oct 2025*
ACM UbiComp '25

National Runner-Up (Top 3)   *Sep 2025*
James Dyson Awards

Best Paper Award   *Apr 2025*
IEEE PacificVis '25

1st Prize Winner (1/20 from Korean top school teams) *Jan 2025*
2025 BlackOut Hackathon

Silver Award Winner (Top 4) *Jun 2024*
45th Cheil Idea Festival

Research Scholarship (~ USD 5,000) *Feb 2024*
Samsung Display

1st Prize Winner *Jun 2023*
ChatGPT & Gen-AI Usecase Contest, POSTECH

Academic Excellence *Fall 2022, Spring 2023, Fall 2023*
POSTECH

Korean Chemistry Olympiad *Summer 2016, Winter 2015, Summer 2015*
Korean Chemical Society

Professional Trainings

SK Telecom FLY AI Challengers (AI Bootcamp) *Jun 2024 – Aug 2024*
SK TELECOM
- Learned LLM Ops technologies including Azure, Kubernetes, Ollama, and VLM.
- Developed *m.AI Tutor*, an AI-powered math tutoring service for underprivileged middle school students using LLMs and mobile device.

Apple Foundation Program *Apr 2024 – May 2024*
APPLE DEVELOPER ACADEMY
- Learned iOS development with SwiftUI and Apple's design thinking methodology, Challenge-Based Learning (CBL).
- Designed and prototyped an iOS app for personalized travel curation.

Google UX Design Certificate *Jul 2021 – Dec 2021*
COURSERA
- Completed the foundational coursework in user experience (UX) design.

Gyeongbuk AI Blockchain Startup Incubating Program, POSTECH *Aug 2019*
POSTECH
- Proposed a startup idea for an emoticon creation and sharing platform.

Projects

O2Stick *Spring 2025*
PRODUCT DESIGN *KAIST*
- Designed and prototyped a compact device that reliably generates oxygen in emergency situations.
- Developed a power-free mechanism using the dissolution process of the ubiquitous material *Sodium Percarbonate* to produce oxygen.
- Selected as a National Runner-Up (Top 3) for the *James Dyson Award 2025*, and advanced to the International Round. (also submitted to the iF Award)

Text Per Second *Fall 2024*
ARTWORK *KAIST*
- 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 *The Sorcerer's Apprentice*)
- Implemented interactive communication across mobile devices using *Socket.io* and *Next.js*.

Keywords in CHI *Fall 2024*
INTERACTIVE DATA STORYTELLING *KAIST*
- An interactive web visualization narrating the evolution of research topics in CHI papers up to 2024.
- Conducted data collection, text embedding, dimensionality reduction, and interactive web visualization.

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*.

Skills

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, GPT APIs
Design Tools	Figma, Adobe Photoshop, Illustrator, Premiere Pro, XD
Design Research	Affinity Diagramming, Thematic Analysis, Diary Study
Languages	Korean (Native), English (Fluent)