

Jiin Choi

jiin4900@gmail.com · cosjiimos.github.io · [Google Scholar](#) · ORCID 0009-0003-2513-6895

RESEARCH INTEREST

research

My work lies at the intersection of human–computer interaction (HCI) and artificial intelligence (AI), focusing on *interactive intent alignment for design-space exploration*. Specifically, I study how to decompose user prompts, interaction logs, and model responses into design elements that enable users to (1) iteratively refine their intents to guide GenAI-driven design tools, and (2) audit and steer the model's behavior to ensure it aligns with those intents and supports better user experience in individual cognitive space.

EDUCATION

studies

Ph.D. & M.S. Integrated Degree Mar 2023 – Present

Interior Architecture Design · Hanyang University, Seoul

Advised by Prof. Kyung Hoon Hyun

Design AI Lab & Human-Centered AI Design Institute

Bachelor of Science in Interior Architecture Design Mar 2018 – Feb 2023

Hanyang University, Seoul · Minor in Computer Science

PUBLICATIONS

† equal contribution

— Conference and Journal Papers — International

[J4] Workflow-Net: Toward Understanding Designer Workflows in Generative AI-Driven Systems through Comparing Node- and Prompt-Based Interfaces

Jo, T. H.†, **Choi, J.†**, Jin, S., Lee, S. W., Jang, Y., Park, S. W., Ban, S., & Hyun, K. H. (2026).

Archives of Design Research · SCOPUS · CO-FIRST

[J3] Part-level 3D Shape Generation Driven by User Intention Inference with Preferential Bayesian Optimization

Lee, S. W., **Choi, J.**, & Hyun, K. H. (2026).

Scientific Reports, vol. 16, Article 7715 · SCIE · IF 4.6 ↗ doi

[C2] GenPara: Enhancing the 3D Design Editing Process by Inferring Users' Regions of Interest with Text-Conditional Shape Parameters

Choi, J., Lee, S. W., & Hyun, K. H. (2025).

Proc. ACM CHI Conference on Human Factors in Computing Systems (CHI '25), Yokohama, Japan · BK TOP-TIER · H5 139 · FIRST ↗ doi

[J2] CMLsearch: Semantic Visual Search and Simulation through Segmented Colour, Material, and Lighting in Interior Image

Jin, S.†, **Choi, J.†**, & Hyun, K. H. (2025).

Journal of Computational Design and Engineering, 12(1), 179–299 · SCIE · CO-FIRST ↗ doi

[C1] The Impact of Sketch-guided vs. Prompt-guided 3D Generative AIs on the Design Exploration Process

Lee, S. W., Jo, T. H., Jin, S., **Choi, J.**, Yun, K., Bromberg, S., Ban, S., & Hyun, K. H. (2024).

Proc. ACM CHI Conference on Human Factors in Computing Systems (CHI '24), Honolulu, HI, USA · **BK TOP-TIER** · **H5 139** [↗ doi](#)

[J1] Typeface Network and the Principle of Font Pairing

Choi, J., & Hyun, K. H. (2024).

Scientific Reports, vol. 14, Article 30820 · **SCIE** · **FIRST** [↗ doi](#)

— **Posters, Demos, and Workshop Papers**

[P1] Modeling Sequential Design Actions as Designer Externalization on an Infinite Canvas

Yun, Y.†, Lee, S. W.†, **Choi, J.†**, & Hyun, K. H. (2026).

CHI '26 Extended Abstracts, Barcelona, Spain · **CO-FIRST** [↗ doi](#)

[W1] Toward AI-driven Multimodal Interfaces for Industrial CAD Modeling

Choi, J.†, Jang, Y.†, & Hyun, K. H. (2025).

CHI '25 Workshop · Bridging HCI and Industrial Manufacturing · **CO-FIRST** [↗ preprint](#)

— **Conference and Journal Papers — Domestic / 국내**

[DC6] An Agent-based Guidance System for Spatial Analysis Checklist Review

Choi, J., & Hwang, Y. S. (2025). 공간 분석 체크리스트 점검을 위한 에이전트 기반 가이드 시스템.

Proceedings of KSDS Annual Conference, 40–41 · **FIRST**

[DC5] An LLM-driven Font Pairing Guide System Based on Design Intent

Choi, J., & Hyun, K. H. (2025). 대규모 언어 모델을 활용한 디자인 의도 기반 폰트 조합 가이드 시스템.

Proceedings of KSDS Annual Conference, 48–49 · **FIRST**

[DC4] An LLM-driven Method for Element-level 3D Shape Editing

Choi, J., Lee, S. W., Jang, Y., Jin, S., Jo, T. H., & Hyun, K. H. (2024). LLM을 활용한 디자인 요소 단위 3차원 형태 편집 방법 제안.

Proceedings of KSDS Annual Conference, 108–109 · **FIRST**

[DC3] An Element-level 3D Shape Editing Method via Latent-Space Reduction in 3D Generative AI

Lee, S. W., **Choi, J.**, Jin, S., Jo, T. H., Jang, Y., & Hyun, K. H. (2024). 3차원 생성형 AI의 잠재 공간 축소를 통한 디자인 요소 단위 3차원 형태 편집 방법 제안.

Proceedings of KSDS Annual Conference, 56–57

[DC2] A 3D Scene-Graph-Based Interface for Spatial Generation and Editing using Colour & Material Information

Jin, S., Jang, Y., **Choi, J.**, Jo, T. H., Lee, S. W., & Hyun, K. H. (2024). 색채, 재질 정보 중심의 3차원 장면 그래프 기반 공간 생성 및 편집 인터페이스 제안.

Proceedings of KSDS Annual Conference, 236–237

[DC1] Multi-View Image Generation with a Single Sketch Image

Lee, S. W., **Choi, J.**, & Hyun, K. H. (2024).

KSDS International Invited Exhibition Catalogue, 123

PATENTS

11 filings

REGISTER User Intent-Based Context-Reflective Product Image Generation System and Method

Apr 13, 2026

사용자 의도 기반 맥락 반영형 제품 이미지 생성 시스템 및 방법
KR 10-2026-0033081
Hyun, K. H., **Choi, J.**, & Jang, Y.

REGISTERED Method and Apparatus for Providing Interior Product Search Service
Mar 19, 2026
인테리어 제품 검색 서비스 제공 방법 및 장치
KR 10-2943193 (App. 10-2023-0171111)
Hyun, K. H., Jin, S., & **Choi, J.**

FILED Visual Attribute Knowledge Graph-Based Personalized Design Generation System and Method
Dec 30, 2025
시각 속성 지식그래프 기반 개인화 디자인 생성 시스템 및 그 방법
KR 10-2025-0215047
Hyun, K. H., & **Choi, J.**

FILED System and Method for Design Artifact-Based Image Generation
Nov 28, 2025
디자인 아티팩트 기반 이미지 생성 시스템 및 방법
KR 10-2025-0184966
Hyun, K. H., Lee, S. W., **Choi, J.**, & Jin, S.

FILED System and Method for Analyzing Action-Centered Design Process Workflows
Nov 28, 2025
행동 중심 디자인 과정 워크플로우 분석 시스템 및 방법
KR 10-2025-0184967
Hyun, K. H., Jo, T. H., **Choi, J.**, & Lee, S. W.

FILED Method and System for Generating Advertising Content
May 29, 2025
광고 콘텐츠 생성 방법 및 시스템
KR 10-2025-0070339
Hyun, K. H., Lee, S. W., **Choi, J.**, & Jang, Y.

FILED Text-Conditional Shape Parameter Utilization System for Inferring Design Preferences in 3D Design Space
Apr 24, 2024
3D 디자인 공간 속 디자인 선호 추론을 위한 텍스트 조건부 형상 매개변수 활용 시스템
KR 10-2024-0054885
Hyun, K. H., & **Choi, J.**

REGISTERED Method of Generating Design Based on User Preference
Apr 3, 2024
사용자 선호도 기반의 디자인 생성 방법
KR 10-2023-0159030 / 10-2792802
Hyun, K. H., Lee, S. W., & **Choi, J.**

FILED 3D Shape Manipulation Method and System with Multi-objective Preferential Bayesian Optimization
Apr 22, 2024
다목적 선호도 베이지안 최적화 기반 3D 형상 편집 시스템 및 그 방법
KR 10-2024-0054886
Hyun, K. H., Lee, S. W., & **Choi, J.**

FILED 3D Design Trade-off Optimization Support System
Apr 24, 2024

3D 형태 편집에서 다목적 선호도 페이지안 최적화를 통한 디자인 선호도 트레이드오프의 균형을 지원하는 시스템 및 그 방법

KR 10-2025-0053863

Hyun, K. H., Lee, S. W., & Choi, J.

FILED Method of Generating Design Based on User Preference

Jan 12, 2024

— US continuation

US 18/411,182

Hyun, K. H., Lee, S. W., & Choi, J.

RESEARCH EXPERIENCE

lab

Research Intern Oct 2022 – Feb 2023

Design Informatics Lab (DILAB), Hanyang University

Collected and cleaned project data (images, logs, surveys), structured it into a schema/DB, and conducted statistical and qualitative analyses to produce actionable reports.

TEACHING

courses

Teaching Fellow (4WEEKS) · Design Computing (HOM4025) Spring 2026

Department of Interior Architecture Design, Hanyang University

Instructor: Prof. Kyung Hoon Hyun

Teaching Assistant · Design Computing (HOM4025) Spring 2025

Department of Interior Architecture Design, Hanyang University

Instructor: Prof. Kyung Hoon Hyun

Teaching Assistant · Design Computing (HOM4025) Spring 2024

Department of Interior Architecture Design, Hanyang University

Instructor: Prof. Kyung Hoon Hyun

Teaching Assistant · Design Computing (HOM4025) Spring 2023

Department of Interior Architecture Design, Hanyang University

Instructor: Prof. Kyung Hoon Hyun

INDUSTRY

internships

Design Intern Jul 2019 – Aug 2022

One Day One Communication (ODOC), Seoul

Ran user research to capture requirements, produced wireframes, mockups, and prototypes, and structured and analyzed usability findings to deliver design recommendations.

Architecture / Interior Design Intern Jul 2020 – Dec 2020

Arch Architects, Seoul

Produced CD sets and detail drawings, organized spec/schedule sheets, and coordinated code/consultant updates for build-ready documentation.

AWARDS

honors

Stockholm Furniture Fair Exhibition Feb 2023

WAS (Waste As Source) Project · Stockholm, Sweden

Honorable Mention · Nov 2022

SERVICE
academic

The 35th Space Prize for International Students of Architecture Design
Work: *Relocated Cinema*

Excellent Work · 2021

The Klasse 2021 — Indoor Architecture Competition
Work: *Société #*

Excellent Work · 2020

Busan Citizen Idea Contest — Wanwol-dong Alley Regeneration

Reviewer

ACM UIST 2025-2026

ACM CHI 2025-2026

ACM DIS 2026 — Paper · Poster

ACM C&C 2026

IMX 2026 — Technical Paper

ACM IUI 2026 — Poster

Workshops & Talks Attended

[Sensemaking Workshop](#) CHI2026

— Exploring how designers make sense of AI outputs across iterations

[Mind & Motion Workshop](#) UIST2026

[Bridging HCI and Industrial Manufacturing Workshop](#) CHI2025