

Curriculum Vitae: Hyoji Ha

Date of Birth: May 8, 1990

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Homepage: https://hyojie.github.io/Hyojiha_Homepage/

Google Scholar: <https://scholar.google.com/citations?hl=ko&user=RNZVkykAAAAJ>

Profile

Major Fields: Data Visualization, Information Design, Visual Design, Graphic Design, HCI, Informatics

Key Research Areas: Digital Humanities, Sentiment Analysis, Digital History, Applied Linguistics, AI-based Data Analysis, Interdisciplinary Research

Education & Employment

2025.03 - Present Research Assistant Professor

Institute of Humanities, Ajou University

2023.06 - 2025.02 Postdoctoral Researcher

Web 3.0 Technology Center / Graduate School of Metaverse, Sogang University

2013.09 - 2023.02 Integrated Master's & Ph.D. Program

Life Media Interdisciplinary Program, Ajou University

- Degree: Ph.D. in Media (Media Contents)

- Dissertation: Metaphor Vis Explorer: An exploration system to effectively analyze the visual metaphor used in sentiment visualization

- GPA: 4.48 / 4.50

2010.03 - 2013.08 B.A. in Media Studies

Ajou University

- Graduated with First Class Honors (GPA: 4.33 / 4.50)

Military Service

2019.08 - 2022.08 Expert Research Agent (Alternative Military Service)

Integrated Design Lab, Ajou University Graduate School

Research Experience & Internships

2025 - Present Humanities and Social Sciences Research Institute Support Program (NRF)

Role: Full-time Researcher, Institute of Humanities, Ajou Univ.

Topic: Establishment and Diffusion of Digital History: Focusing on the Network Study of the Ruling Elite in the Joseon Dynasty based on Life Cycle Historical Data

2023 - 2025 Individual Basic Research Program (NRF)

Role: Sole Researcher, Graduate School of Metaverse, Sogang Univ.

Topic: XR-based Immersive Multidimensional Data Visualization

2023 - 2024 Future Policing Technology Development Project (MSIT & KNPA)

Role: Joint Research (Sogang Univ., Korean National Police Univ., Tilon Co., Ltd.)

Topic: Research on the Development Direction of Police Metaverse Platform for Digital Scientific Policing

2023 - 2025 ICT Innovation Talent Cultivation Project (MSIT & IITP)

Role: Joint Research, Sogang Univ.

Topic: Web 3.0 Open Platform Technology Development

2020 - 2023 Mid-Career Researcher Support Program (NRF)

Role: Sole Researcher, Ajou Univ.

Topic: Sentiment Visualization Guidelines using Visual Metaphors

2018 - 2020 History Convergence Research (NRF)

Role: Joint Research, Ajou Univ.

Topic: Power Mechanism in Korean History based on Big Data Analysis

2017 - 2018 LINC+ Project (Ajou Univ.)

Role: Joint Research, Ajou Univ.

Topic: Visualization System Development for Multidimensional Medical Data Analysis

2015 - 2017 Convergence Research Center (CRC) Project (NRF)

Role: Joint Research, Ajou Univ.

Topic: Digital Poomasi for Mental Health in an Aging Society

2015 - 2016 Meteorological See-at Technology Development (KMA)

Role: Joint Research

Topic: Text Mining-based Traffic Accident Risk Prediction

2014 - 2019 BK21 Project (NRF)

Role: Joint Research, Ajou Univ.

Topic: Digital Therapy Convergence Talent Cultivation

2013 - 2014 Big Data Smart Service Pilot Project (MSIP & NIA)

Role: Joint Research

Topic: Smart News Service

2013 Internship: Data Science Lab, Advanced Institutes of Convergence Technology (SNU)

Role: Web Design and Data Visualization Planning

Publications

International Journals

- Kwanghyuk Moon, Hyoji Ha and Kyungwon Lee, "Design of Visual Interfaces for Debate Analysis: Cooccurrence Matrix and Circle Packing", Archives of Design Research (SCOPUS), 38(4). (November 2025):347-366.
- Hyoji Ha, Kwanghyuk Moon, Hyerim Joung, Hyegyeong Kim and Kyungwon Lee, "An exploration system to effectively analyze the visual metaphor used in sentiment visualization", Information Visualization (SCIE), (February 2024): 14738716241228593.
- Raja Mubashar Karim, Taehong Jeong, Hyoji Ha, Jaejong Ho, Kyungwon Lee and Hyun Joon Shin. "Improving user experience of color palette extraction by using interactive visualization based on hierarchical color model", International Journal of Human-Computer Studies (SCIE), 169. (January 2023):102924.
- Hyoji Ha, Hyerim Joung, Kwanghyuk Moon and Kyungwon Lee, "Constructing a Taxonomy for Sentiment Visualization Analysis Using Visual Metaphors", Archives of Design Research (SCOPUS), 35(2). (May 2022):181-207.
- Jaejong Ho, Hyoji Ha, Seok-Won Lee and Kyungwon Lee, "Using Conceptual Recurrence and Consistency Metrics for Topic Segmentation in Debate", Applied Sciences (SCIE), 12(6). (March 2022):2952.
- Hyoji Ha, Hyunwoo Han and Kyungwon Lee, "A Visualization System for Exploring Logo Trend and Design Shape Patterns" Applied Sciences (SCIE), 10(13). (July 2020):4579.
- Hyoji Ha, Jihye Lee, Hyunwoo Han, Sungyun Bae, Sangjoon Son, Changhyung Hong, Hyunjung Shin and Kyungwon Lee, "Dementia Patient Segmentation Using EMR Data Visualization: A Design Study" International Journal of Environmental Research and Public Health (SCIE,SSCI), 16(18). (September 2019):3438. (H-Index)
- Hyoji Ha, Hyunwoo Han, Seongmin Mun, Sungyun Bae, Jihye Lee and Kyungwon Lee, "An Improved Study of Multilevel Semantic Network Visualization for Analyzing Sentiment Word of Movie Review Data" Applied Sciences (SCIE), 9(12). (June 2019):2419. (H-Index)
- Hyoji Ha, Seongmin Mun, Gyeongcheol Choi, Eunbin Hong, Sangkuk Lee and Kyungwon Lee, "Visual Analysis on the Political Orientation of Historical Characters in the Joseon Dynasty: Focusing on Seo, Geojeong" Archives of Design Research (SCOPUS), 32(1). (February 2019):147-160.

Domestic Journals (국내저널)

- Jeong, S., Noh, Y., Hwang, J., Kim, J., Kim, H., & Ha, H. (2026). A study on rule-based text mining and named entity recognition approaches for data formalization of "The Memoirs of Casanova". Journal of the Korea Society of Computer and Information, 31(5), 165-178.
[Original] 정성훈, 노유진, 황정은, 김진선, 김하진 and 하효지. (2026). '카사노바

회고록'의 데이터 정형화를 위한 규칙 기반 텍스트 마이닝 및 개체명 인식 접근법 연구.
한국컴퓨터정보학회논문지, 31(5), 165-178.

- Song, J., Joo, H., Kwak, J., & Ha, H. (2026). Designing an AI-based therapeutic reading guide process for emotional support. *The Journal of the Korea Contents Association*, 26(3), 36-47.
[Original] 송지은, 주희정, 곽재현 and 하효지. (2026). 정서 지원을 위한 AI 기반 치유형 독서 가이드 프로세스 설계. *한국콘텐츠학회 논문지*, 26(3), 36-47.
- Ha, H., Han, H., Kim, Y., & Park, S. (2024). XR-based Data Visualization Supporting Heterogeneous Remote Collaboration. *Journal of the Korea Computer Graphics Society*, 30(3), 87-97.
[Original] 하효지, 김현우, 김영서, 박상훈, "이기종 원격협업을 지원하는 확장현실 기반 데이터 시각화" *컴퓨터그래픽스학회 논문지* 30.3.
한국컴퓨터그래픽스학회(2024.07):87-97.
- Ha, H., Han, H., Bae, S., Lee, J., Son, S., Hong, C., Shin, H., & Lee, K. (2016). A Study on Visualization Method for Semantic Cluster Analysis of Multidimensional Data. *Communications of the Korean Institute of Information Scientists and Engineers*, 34(11), 51-61.
[Original] 하효지, 한현우, 배성윤, 이지혜, 손상준, 홍창형, 신현정, 이경원, "다차원 데이터의 의미적 군집 분석을 위한 시각화 방법에 관한 연구" *한국정보과학회지* 34.11.
한국정보과학회(2016.11):51-61.
- Ha, H., Han, H., Mun, S., Bae, S., Lee, J., & Lee, K. (2016). Visualization of Movie Recommendation System Using Sentiment Word Distribution Map. *Journal of the Korea Society of Computer and Information*, 21(5), 19-29.
[Original] 하효지, 한현우, 문성민, 배성윤, 이지혜, 이경원, "감정어휘 분포맵을 이용한 영화추천 시스템의 시각화" *한국컴퓨터정보학회 논문집* 21.5. *한국컴퓨터정보학회(2016.05):19-29.*
- Choi, H., Mun, S., Ha, H., & Lee, K. (2015). Proximity based Circular Visualization for Similarity Analysis of UNGA Voting Patterns. *Journal of Design Convergence Study*, 14(4), 133-150.
[Original] 최한민, 문성민, 하효지, 이경원, "UN 국가의 투표 성향 유사도 분석을 위한 Proximity based Circular 시각화 연구" *디자인융복합학회지* 14.4. *디자인융복합학회(2015.08):133-150.*
- Mun, S., Ha, H., & Lee, K. (2015). Relationship Analysis between Movie Box Office Success and Sentiment Words in Reviews. *Journal of Design Convergence Study*, 14(4), 1-16.

[Original] 문성민, 하효지, 이경원, "영화의 흥행 성과와 리뷰 감정어휘와의 관계 분석" 디자인융복합학회지 14.4. 디자인융복합학회 (2015.08):1-16.

- Mun, S., Han, H., Ha, H., & Lee, K. (2014). Visualization Analysis of Factors Affecting Intention to Reuse Social Commerce. *Journal of Design Convergence Study*, 13(6), 137-152.

[Original] 문성민, 한현우, 하효지, 이경원, "소셜커머스 재이용의도에 영향을 미치는 요인에 관한 시각화 분석" 디자인융복합학회지 13.6. 디자인융복합학회 (2014.12):137-152.

- Park, D., Kim, G., Kang, N., Seo, B., Ha, H., & On, B. (2014). 3 News Visualization Using Algorithm Based on Journalism Value. *Journal of the HCI Society of Korea*, 9(2), 5-12.

[Original] 박대민, 김기남, 강남용, 서봉원, 하효지, 온병원, "저널리즘 가치에 기초한 알고리즘을 이용한 3 뉴스 시각화" 한국 HCI 학회지 9.2. 한국 HCI 학회 (2014.11): 5-12.

- Ha, H., Kim, G., & Lee, K. (2013). A Study on the Space of Sentiment Words in Movie Reviews and Context Analysis of Movie Viewing. *Journal of Design Convergence Study*, 12(6), 17-32. (H-Index)

[Original] 하효지, 김기남, 이경원, "영화 리뷰의 감정어휘 공간 및 영화 관람의 상황분석 연구" 디자인융복합학회지 12.6. 디자인융복합학회 (2013.12):17-32. (H-Index)

International Conferences

- Jaeheon Kwak, Jaeuk Lee, Hyoji Ha, Haewon Kim, Hyunwoo Han and Kyungwon Lee, "Identifying Validator Alliances by Voting Similarity in PoS Blockchain Governance via Visual Analytics System" Poster Abstract, IEEE VIS2025. (November 2025)
- Seongmin Mun, Donggwe Lee and Hyoji Ha, "AI-Driven reconstruction of life cycle from the household registers of the Joseon dynasty" Full Paper, ESHD2025. (September 2025)
- Hyoji Ha, Hyerim Joung and Sanghun Park, "A Taxonomy for Analyzing Dashboard Design in XR based Content and Data Visualization Tool" Poster Abstract, IEEE VIS2024. (October 2024)
- Kwanghyuk Moon, Hyoji Ha and Kyungwon Lee, "Towards Better Understanding: Proposing Effective Visualization Methods for Analyzing Argument in Debate" Poster Abstract, IEEE VIS2023. (October 2023)
- Hyoji Ha, Kwanghyuk Moon, Hyerim Joung, Hyegyeong Kim and Kyungwon Lee, "Exploration Tool for Effectively Interpreting the Visual Metaphor Process of Sentiment Visualization" Poster Abstract, IEEE VIS2022. (October 2022)
- Hyoji Ha, Kyungwon Lee, "A Taxonomy of Visualization Research Cases of Sentiment Analysis Data based on Visual Metaphors" Poster Abstract, IEEE VIS2020. (October 2020)
- Hyeonsik Gong, Hyoji Ha, Kyungwon Lee, "Interactive Radviz Visualization System Using Hierarchical Approach for Large-Multidimensional Data" Poster Abstract, IEEE VIS2020. (October 2020)

- Terin Yoon, Hyunwoo Han, Hyoji Ha, Juwon Hong, Kyungwon Lee, "A Conference Paper Exploring System Based on Citing Motivation and Topic" Short-paper, IEEE PacificVis 2020. (June 2020)
- Hyunwoo Han, Hyoji Ha, Jaejong Ho, Hyeonsik Gong, Junyup Hong, Soojung Lee, Juwon Hong, Kyungwon Lee, "An Interactive Paper Summarization System through Topic Network Visualization" Poster Abstract, IEEE PacificVis 2020. (June 2020)
- Terin Yoon, Hyunwoo Han, Hyoji Ha, Juwon Hong, Kyungwon Lee, "A Paper-Search System to Identify Citation Networks and Motivations" Poster Abstract, IEEE VIS2019. (October 2019)
- Hyunwoo Han, Terin Yoon, Hyoji Ha, Juwon Hong, Kyungwon Lee, "Method for improving RadViz's navigation function based on focusing and filtering" Poster Abstract, IEEE VIS2018. (October 2018)
- Hyoji Ha, Jihye Lee, Hyunwoo Han, Sungyun Bae, Suhyun Lim, Sangjoon Son, Changhyung Hong, Hyunjung Shin, Kyungwon Lee, "A Visualization System to subdivide Dementia Diagnosis Stages" Poster Abstract, ISMB/ECCB 2017 (IEEE BIOVIS 2017). (July 2017)
- Jihye Lee, Hyoji Ha, Hyunwoo Han, Sungyun Bae, Sangjoon Son, Changhyung Hong, Hyunjung Shin, Kyungwon Lee, "Visual Analytics for Biomedical Cluster Subdivision: A Design Study with Psychiatrists" Short-paper, Computer Graphics International 2017. ACM (June 2017)
- Hyoji Ha, Hyunwoo Han, Sungyun Bae, Jihye Lee, Sunjoo Bang, Sangjoon Son, Changhyung Hong, Hyunjung Shin, Kyungwon Lee, "A Visualization System for Clustering Dementia Patients based on Automated Similarity Analysis" Poster Abstract, IEEE VIS 2016. (October 2016)
- Hyoji Ha, Hyunwoo Han, Sungyun Bae, Kyungwon Lee, "A logo design tool based on procedural modeling of design elements" Poster Abstract, MCCSIS IHCI 2016. IADIS-SCOPUS (July 2016)
- Hyoji Ha, Seongmin Mun, Oh-Hyun Kwon, Kyungwon Lee, "Proximity Based Circular Visualization for Similarity Analysis of UNGA Voting Patterns" Poster Abstract, IEEE Big Data Visual Analytics (BDVA) 2015. (September 2015)
- Hyoji Ha, Sungyun Bae, Hyunwoo Han, Kyungwon Lee, "Logo Trend Visualization: Logo Design Shape Element Trend and Pattern Analysis" Poster Abstract, 8th International Symposium on Visual Information Communication and Interaction (VINCI'15). (August 2015)
- Hyoji ha, Wonjoo Hwang, Sungyun Bae, Hanmin Choi, Hyunwoo Han, Gi-Nam Kim, Kyungwon Lee, "CosMovis: Semantic Network Visualization by Using Sentiment Words of Movie Review Data" Full-Paper, IEEE Information Visualisation (iV'15). (July 2015) (H-Index)
- Hyoji Ha, Ginam Kim, Wonjoo Hwang, Hanmin Choi, Kyungwon Lee, "CosMovis: Analyzing Semantic Network of Sentiment Words in Movie Reviews" Poster Abstract, IEEE Symposium on Large-Scale Data Analysis and Visualization (LDAV 2014). (October 2014) (H-Index)

- Ginam Kim, Hyoji Ha, Byung-Won On, Kyungwon Lee, Manjai Lee "Bubble heap graphs" Poster Abstract, In Proceedings of IEEE Information Visualization Conference (InfoVis'13). (October 2013)

Domestic Conferences (국내 학술대회)

- Han, H., Yoon, T., Ha, H., Hong, J., & Lee, K. "Radvis Visualization Study for Effective Data Instance Extraction: Focusing on Focusing and Filtering Functions", PROCEEDINGS OF HCI KOREA 2019. HCI Society of Korea (February 2019)
[Original] 한현우, 윤태린, 하효지, 홍주원, 이경원 "효과적인 데이터 인스턴스 추출을 위한 Radvis 시각화 연구: 포커싱 및 필터링 기능을 중심으로", PROCEEDINGS OF HCI KOREA 2019 학술대회 발표 논문집. 한국 HCI 학회 (February 2019)
- Lee, K., & Ha, H. "Analysis of Sentiment Words and Movie Viewing Contexts for the Development of a Movie Recommendation System", KSDS 2013 Spring International Conference. Korean Society of Design Science (May 2013)
[Original] 이경원, 하효지 "영화추천 시스템 개발을 위한 감정어휘 및 영화를 보는 상황의 분석", 한국디자인학회 2013 봄 국제학술대회. 한국디자인학회 (May 2013)

Patents

International Patents

- Jaejong Heo, Kyungwon Lee, Hyoji Ha "Method and device of segmenting topics of content", US Patent No. US12073185B2 (Aug 27, 2024)
- Kyungwon Lee, Hyoji Ha, Hyunwoo Han, Sungyun Bae, Jihye Lee, Changhyung Hong, Sangjoon Son, Hyunjung Shin "Visualization method and device for multi-dimensional data analysis", US Patent No. US10818066B2 (Oct 27, 2020)

Domestic Patents (Korea)

- Kyungwon Lee, Jaejong Heo, Hyoji Ha, "Method and device of segmenting topics of content", KR Patent No. 1027810760000 (Mar 10, 2025)
- Kyungwon Lee, Hyoji Ha, Hyunwoo Han, Sungyun Bae, Jihye Lee, Sangjoon Son, Changhyung Hong, Hyunjung Shin, "Visualization method and device for multi-dimensional data", KR Patent No. 1019554210000 (Feb 28, 2019)
- Kyungwon Lee, Hyoji Ha, Ginam Kim, Wonjoo Hwang, Hanmin Choi, Hanseong Kang, "Data visualization method and system using reference semantic map", KR Patent No. 1017941370000 (Oct 31, 2017)
- Kyungwon Lee, Hyoji Ha, Hyunwoo Han, "Apparatus and method for visualizing hierarchized information of comment data", KR Patent No. 1017308830000 (Apr 21, 2017)

- Kyungwon Lee, Ginam Kim, Hyoji Ha, "Data visualization method and system using comment data of objects", KR Patent No. 1016028980000 (Mar 7, 2016)

Awards

- 2023 Outstanding Thesis Award (Dean's Award), Ajou University. Thesis: Metaphor Vis Explorer.
- 2013 DB Mashup Contest Excellence Award (NAVER CEO Award), Hosted by MSIP, NAVER, DAUM. Project: Eco-Tour 365.

Teaching Experience

- Introduction to Data for Humanities (Capstone Design) (Full time lecture), Ajou University (2026-1)
- AI-Literacy: Data and Artificial Intelligence (Full time lecture), Ajou University (2026-1)
- Seminar on Data Science for Humanities (Capstone Design) (Full time lecture), Ajou University (2025-2)
- Data Analysis Basic (Full time lecture), Ajou University (2025-1, 2025-2)
- Understanding Francophonie through Data Analysis (Full time lecture), Ajou University (2025-1)
- Graphic Design (Full time lecture), Ajou University (2022-2)
- Graphic Design (Illustrator tutorials for beginners step by step-online lecture), Ajou University (2018-1 to 2022-1)
- Information Design 2 (Full time lecture), Sungshin Women's University (2018-2)

Invited Talks & Special Lectures

- Data Vibe-Coding in Digital Humanities using Generative AI (Teaching Method Workshop), Institute of Humanities / Center for Teaching and Learning, Ajou University (Jun 2026)
- English Text Discourse Analysis and Visualization using AI technology, Dept. of English Language and Literature, Ajou University (Fall 2025)
- Information Visualization Design using Multidimensional Data, Sungshin Women's University (2017)
- Introduction and Practice of Information Visualization for Youth, Advanced Institutes of Convergence Technology, Seoul National University (2014)

Languages & Certifications

- Languages:

English: TEPS 430 (Equiv. TOEIC 900, TOEFL 105) - Jul 2018
TOEIC 815 - Aug 2013

- Certifications:

Korean History Proficiency Test Level 3 (Cert No: 34-364136)

Software Skills

Graphics Software: Figma, Illustrator, Photoshop, InDesign, PremierPro

Visualization Software: MS Power BI, E2D3, Tableau, UCINET6, Raw Graph 2.0, Unity

Statistical Software: SPSS, R, SAS

Programming: HTML, CSS, Processing, D3.js Data Visualization, Java, Javascript, C#