

# HYEMI SONG

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## Summary

**Research interests:** Information Visualization, HCI, Human-Centered AI, and Immersive Analytics.

**Main topic:** The complex interplay between Natural Language and Data Visualization in XR within generative AI-powered immersive analytics under the supervision of [Dr. Amitabh Varshney](#).

**Immigrant status:** US Permanent Resident (EB-1A Extraordinary Ability, self-petitioned, 2021).

## Educational background

**Ph.D.** Computer Science, University of Maryland College Park, 2022 - Present

**Master of Science**, Computer Science, University of Maryland College Park, 2022-2024

**Master of Fine Arts**, Digital + Media, Rhode Island School of Design

**Bachelor of Science**, Molecular Biology, The Catholic University of Korea

## Publications

J2 **Hyemi Song**, Matthew Johnson, Kirsten Whitley, Eric Krokos, Amitabh Varshney — Embodied Natural Language Interaction (NLI): Speech Input Patterns in Immersive Analytics, IEEE Transactions on Visualization and Computer Graphics (TVCG), IEEEVIS 2025 (acceptance rate of 24.4%)

P2 **Hyemi Song**, Sai Gopinath, Zhicheng Liu — Intents, Techniques, and Components: a Unified Analysis of Interaction Authoring Tasks in Data Visualization, Master's scholarly paper, University of Maryland, Preprint, 2024, (Invited for fast-track submission to CGF journal via EuroVis 2023), [LINK](#)

J1 Hannah K. Bako, Xinyi Liu, Grace Ko, **Hyemi Song**, Leilani Battle, Zhicheng Liu — Unveiling How Examples Shape Data Visualization Design Outcomes, IEEE Transactions on Visualization and Computer Graphics (TVCG), IEEEVIS 2024 (acceptance rate of 23.2%), [LINK](#)

P1 Zongxia Li, Paiheng Xu, Fuxiao Liu, **Hyemi Song** — Towards understanding in-context learning with contrastive demonstrations and saliency maps, Preprint 2023, [LINK](#)

T1 **Hyemi Song** — Walking in a Place, Walkestra, Rhode Island School of Design, MFA Thesis 2016, [LINK](#)

## Books & Book chapters

B2 **Hyemi Song**, Solar System, Annual Student Artists' Book Juried Contest, Rhode Island School of Design, 2015

B1 Steven Heller, Rick Landers, Raw Data, (Published Works: The temperature of my mind, Visualizing works), 2014

## Research and Professional experience

**University of Maryland College Park**, USA, 2022 - Present

Position: Research Assistant (Full-time, Advisor: Dr. Amitabh Varshney)

**Microsoft**, Redmond, USA, 2019 - 2022

Position: Senior Designer (Full-time) - Specialized in Data Visualization (Azure Machine Learning, Responsible AI)

**Datadog Inc**, New York, USA, 2017 - 2019

Position: Product Designer (Full-time) - Specialized in Data Visualization

**Massachusetts Institute of Technology**, MIT Senseable City Lab, Cambridge, USA, 2016 - 2017

Position: Research Fellow (Full-time, Data Visualization Specialist)

**NAVER Corporation**, Seoul, Korea, 2011 - 2014

Position: UX Researcher (Full-time) - Social Media, Search Engine

**VINYL Interactive**, Seoul, Korea, 2010 - 2011

Position: UX Researcher (Full-time) - New Media Art Installation

**2015 Brothers**, Seoul, Korea, 2009 - 2010

Position: Art Director (Full-time) - Advertisement

**PXD**, Seoul, Korea, 2008 - 2009

Position: UX Researcher (Full-time) - Web/Mobile Operation Systems and Applications

**Kiz Entertainment**, Seoul, Korea, 2004

Position: Animator (Full-time)

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**eyeballNYC**, New York, USA, 2015

**Samsung Electronics**, Seoul, Korea, 2007

**Cheil World Wide**, Seoul, Korea, 2006

Positions in three companies: Design Intern (Full-time)

## Teaching experience

**University of Maryland College Park**, 2022 Spring/Summer, 2023 Spring/Summer/Fall

Position: Teaching Assistant, Class: Introduction to Data Science, Web Application Development with JavaScript

**Rhode Island School of Design**, 2016 Winter

Position: Instructor, Class: Measuring the Universe (2016 RISD Winter Session)

## Grants, Fellowships & Scholarships

**University of Maryland College Park**, USA - Fellowship, Future Faculty Program, 2025-Present (\$2,000)

**ACM DIS**, USA - Awarded one-year ACM Professional Membership for paper review contribution, 2024

**IEEEVIS**, USA - Inclusive and Diversity Scholarship, 2023 (\$1,000, Registration Fee Weaver)

**University of Maryland College Park**, USA - Assistantship, 2022-Present

**University of Maryland College Park**, USA - Dean's Fellowship, 2022-2024 (\$5,000)

**Massachusetts Institute of Technology**, USA - Fellowship, 2016 - 2017 (\$40,000)

**Rhode Island School of Design**, USA - Assistantship/Fellowship, 2014 - 2016

**Samsung Art & Design Institute**, Korea - Scholarship, 2007 (\$4,000)

## Community service

**ACM CHI**- Session Chair (Case Studies), 2025, (declined due to visa issue)

**ACM CHI**- Reviewer, 2024 - Present, (Full papers: 2024, Case Studies: 2024)

**PacificVis**- Reviewer, 2024 - Present, (Full papers -TVCG Journal: 2024)

**ACM Designing Interactive Systems**- Reviewer, 2024 - Present, (Full papers: 2024)

**IEEEVIS** - Reviewer, 2023 - Present, (Full papers: 2023/2025, Short papers: 2024)

**UMD Graduate Admissions Committee**, 2023

**PacificVis** - Juror, 2022 - 2023

**IEEEVIS Arts Program** - Program Committee, 2018 - Present (Full papers, Exhibitions, Pictorials)

**A' Design Award & Competition**, Italy - Jury Member, 2018 - 2022

**Brown University, Computer Science Department**, USA - Portfolio Reviewer, 2019 - 2021

**Apexart**, USA - Jury Member, 2017

## Mentoring service

**Saumya Verma** - Master, UMD, iSchool

User Research Methods, 2024

**John Robert Cole** - Master, UMD, CS

Peer Mentorship UMD, 2024

## Invited talks, Lectures, Workshops (Selected)

**Ohio State University** Ohio, USA, 2022

Lecture: Data and Human Communication

**GyeongGi Cultural Foundation**, Seoul, Korea, 2021

Lecture: Data as a communication medium: art, design, and human

**San Jose State University** San Jose, USA, 2021

Lecture: Data and Human Communication

Workshop: Measuring the temperature of my mind

## Awards

**ACM Designing Interactive Systems**, USA - Awarded for Best Paper Review Contribution, 2024

**IEEE Arts Program, Melbourne**, Australia - Accepted for exhibition, 2023 (Project: Solar System)

**A'Design Award and Competition**, Italy - Winner (Gold), 2018-2019

**Information is Beautiful Awards**, USA - Long List, 2018

**World Changing Ideas Awards (by Fast Company)**, USA - Finalist, 2018

**IEEE Arts Program, Berlin**, Germany - Accepted for exhibition

**A'Design Award and Competition**, Italy - Winner (Iron), 2016-2017

**53rd American Graphic Design Awards, GDUSA**, USA -Winner (Student), 2016

**Spark International Design Awards**, USA - Finalist, 2016

**Annual Student Artists' Book Juried Contest**, USA - Accepted for exhibition and publication at RISD Fleet Library, 2015

**Adobe Design Achievement Awards**, USA - Semifinalist, 2008, 2015, 2016

**Adobe Design Achievement Awards**, USA - Honorable Mention 2007

**IF Design Award**, USA - Winner, 2010  
**Good Design Award**, Japan - Winner, 2010  
**Seoul Design Olympiad 2009**, Korea - Winner (Honorable Mention), 2009  
**SADI Graduation Award**, Korea - Experimental Portfolio Winner, 2008  
**11th Environmental Management Corporation Award**, Korea - Winner, 2006

## Media appearance

**Monthly Design** (Oldest Korean Design Magazine), Seoul, Korea, 2018  
 Feature Interview, Title - Data Visualization Designer, Hyemi Song / [LINK](#)  
**Data Vis Today**, USA, 2018  
 Feature Interview, Podcast (Episode 13) / [LINK](#)  
**IdN**, Hong Kong, 2018  
 Featured article (Project: CityWays), IdN is an international Design Magazine / [LINK](#)  
**The Guardian**, USA, 2016  
 News Article (Project: Urban Exposure), Data Visualization at MIT Senseable City Lab / [LINK](#)  
**Visual Loop**, Brazil, 2012  
 Featured article, Title - Finding stories of data visualization from twitter / [LINK](#)  
**Information Aesthetics**, USA, 2011  
 Featured article, Title - Visualizing Works: Hyemi Song's Innovative Portfolio / [LINK](#)  
**Visualising Data**, USA, 2011  
 Featured article, Title - Visualizing Works: Hyemi Song's Innovative Portfolio  
**Sadi Vision**, Korea, 2011  
 Featured article (Project: Visualizing Works)  
**IF Online Gallery**, USA, 2010  
 IF Online Gallery (Project: KT Olleh Square)  
**2009 Seoul Design Olympiad**, Korea, 2009  
 Annual publication for winners  
**Adobe Design Achievement Award Online Gallery**, USA, 2008  
 ADAA Online Gallery (Project: The temperature of my mind)

## Exhibitions

**IEEE Arts Program, Melbourne**, Australia, 2023 (Project: Solar System)  
**Design Korea Festival 2020, Design Beyond Data**, @Coex, Seoul, Korea, (Declined) 2020  
**IEEE Arts Program**, Berlin, Germany, 2018  
**A'design Award Winner exhibition**, @Mood, Italy, 2017  
**Shenzhen Design Week**, @Shenzhen Convention Center, China, 2017  
**RISD Nature Lab anniversary exhibition**, @Waterman Gallery, USA, 2017  
**Internet Festival**, @Waterman Gallery, Pisa, Italy, 2016  
**RISD Graduate Exhibition**, @Providence Convention Center, USA  
**Dark Matter**, @RISD Sol Koffler Gallery, USA  
**Image Landscapes**, @RISD Gelman Gallery, USA  
**Annual Student Artists' Book Exhibition**, @RISD Fleet Library, USA  
**2009 Seoul Design Olympiad**, @Jamsil Main Stadium, Korea  
**Sharing Experience 2009**, @Zero one center Gallery, Korea  
**Onepiece Magazine Ceremony Party 500**, Korea  
**Reviewing Hanul Exhibition**, @Space Hiut, Korea  
**GUANGZHOU Design Korea Exhibition**, Guangzhou, China  
**2nd D.I.P. Exhibition**, @SADI Space Gallery, Korea  
**21st D.I.P. Exhibition**, @SADI Space Gallery, Korea  
**SADI Graduation Exhibition**, @SADI Space Gallery, Korea  
**Hanul Exhibition**, @Shinhan Gallery, Korea  
**Chelsea College of Arts Graduation Exhibition**, @Hugon Road Gallery, UK

## Permanent collections

**Walking in a Place Walkestra**, Book, RISD Fleet Library, Rhode Island School of Design, 2016  
**Solar System**, Art Book, RISD Fleet Library, Rhode Island School of Design, 2015

## Skillsets

Front, Backend, Data Visualization, Immersive Analytics — Javascript, React, Redux, Express.js, MongoDB, Python, HTML, CSS, C#, D3js, VegaLit, Matplotlib, Three.js, PyTorch, Unity

Design & Research — Graphic Design, UX/UI design, Interaction Design, UX Research, Academic Research