Hyemi Song

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Summary

Hyemi Song is a researcher and designer interested in Information Visualization, HCI, and Immersive Analytics. Currently, she studies 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

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

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

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

University of the Arts London, London, UK
Foundation, Visual Communication Design

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

Research Experience

University of Maryland College Park, USA, 2022 - Present
Position: Research Assistant (Advisor: Dr. Amitabh Varshney)
Labs: UMD Graphics and Visual Informatics Laboratory, Human-Computer Interaction Lab
Currently working on Natural Language and Data Visualization Interplay in XR within generative AI-powered immersive analytics.

Massachusetts Institute of Technology, MIT Senseable City Lab, Cambridge, USA, 2016 - 2017
Position: Research Fellow, Data Visualization Specialist
Developed an award-winning project, Cityways, Driving DNA, Pisa Pool, Urban Exposure, and more.

NAVER Corporation, Seoul, Korea, 2011 - 2014
Position: UX Researcher
Designed mobile/web UX/UI for a Social Network Service, 'me2day' (Korea's equivalent of Twitter), and designed a search engine, 'NAVER' (the largest search engine in Korea).

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)

Industry Experience

Microsoft, Redmond, USA, 2019 - 2022

Position: Senior Designer
Specialized in Data Visualization, Designed for Machine Learning and AI products.
Designed Error Analysis Dashboard, Azure Machine Learning Studio, and more.

Datadog Inc, New York, USA, 2017 - 2019
Position: Product Designer
Specialized in Data Visualization. Designed/developed Service Map, Host, and Infra map.

VINYL Interactive, Seoul, Korea, 2010 - 2011
Position: UX/UI designer
Designed and developed the web/mobile Service Strategies & Proposals, interactive
installations, and digital media promotions for 10+ clients; SAMSUNG, Korea
Telecommunication, and more. KT Olleh Square won a prize from the iF design awards.

2015 Brothers, Seoul, Korea, 2009 - 2010
Position: Art Director
Designed and directed advertising projects for 20+ clients, including SKTelecom,
SAMSUNG, and Korea Technology.

PXD, Seoul, Korea, 2008 - 2009
Position: Interaction Designer
Developed and designed mobile/web UI/UX services for clients including SKTelecom and SAMSUNG.

Kiz Entertainment, Seoul, Korea, 2004
Position: Clay Animator
Participated in Clay animations for an advertisement, and TV Series with 5+ Clients, including Korean
Broadcasting System and Dino land.

eyeballNYC, New York, USA, 2015,
Samsung Electronics, Seoul, Korea, 2007,
Cheil World Wide, Seoul, Korea, 2006
Position: Design Intern

Research Projects

1. Natural Language and Data Visualization Interplay in Immersive Environments

   [1] **NL-Driven Interactions in Generative AI-Infused Immersive Analytics**, 2023 - Present (W.I.P.)
   Role: First Author

   [2] **Interaction Authoring for Data Visualization in Immersive Environments**, 2022 - Present (W.I.P.)
   Role: First Author

Publications

[3] Hannah K. Bako, Xinyi Liu, Grace Ko, **Hyemi Song,** Leilani Battle & Zhicheng Liu, Unveiling How Examples
Shape Data Visualization Design Outcomes, **IEEE VIS 2024**, Link

[2] Zongxia Li, Paiheng Xu, Fuxiao Liu, **Hyemi Song**, Towards understanding in-context learning with
contrastive demonstrations and saliency maps, **Preprint 2023**, arxiv.org/abs/2307.05052

[1] **Hyemi Song**, Walking in a Place, Walkestra, Rhode Island School of Design, **MFA Thesis 2016**

Books & Book Chapters

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

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

Grants, Fellowships & Scholarships

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

IEEEVIS, USA - Inclusive and Diversity Scholarship, 2023

University of Maryland College Park, USA - Dean's Fellowship/Assistantship, 2022-Present

Massachusetts Institute of Technology, USA - Fellowship, 2016 - 2017
Rhode Island School of Design, USA - Assistantship/Fellowship, 2014 - 2016
Samsung Art & Design Institute, Korea - Scholarship, 2007

Jury, Peer Review, Advising service

ACM Designing Interactive Systems- Reviewer, 2024 - Present, (Full papers: 2024)
IEEEVIS - Reviewer, 2023 - Present, (Full papers: 2023, Short papers: 2024)
PacificVis - Juror, 2022 - 2023
IEEEVIS Arts Program - Program Committee, 2018 - Present
A' Design Award & Competition, Italy - Jury Member, 2018 - 2022
Brown University, Computer Science Department, USA - Portfolio Reviewer, 2019 - 2021
Apexart, USA - Jury Member, 2017

Invited talks, Lectures, Workshop (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

Solar System (Artbook), RISD Fleet Library, Rhode Island School of Design, 2015

Coursework (UMD)

Explainable Natural Language Processing Link
Natural Language Processing Link
User Experience Research Methods Link
Information Visualization Link
Advances in XR Link

Info-Centric Design System Link
Interactive Technologies in Human-Computer Interaction
Visual Analytics
Bioinformatics (AU)
Embodied Media Design (AU)

Skillsets

Front, Backend, Data Visualization, Data Science, AR/VR
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