Hyung-Kwon Ko

College of Computing
KAIST, Daejeon
hyungkwonko@gmail.com
https://hyungkwonko.info

About

Hyung-Kwon Ko is a researcher at KAIST Interaction Lab. His main research areas include Human-Computer Interaction, Human-Centered AI, and Information Visualization. He designs, prototypes, and evaluates interactive systems to innovate people's working paradigms based on a thorough investigation of their need. Experienced in AI models from both academia and industry, he is currently interested in how foundation models (e.g., DALL-E) could help people in visual art domains perform creative works.

Education

2019 – 2021	**Seoul National University**, Seoul, Korea
	Master of Science in Computer Science and Engineering (Advisor: Dr. Jinwook Seo)
2014 – 2019	**Hanyang University**, Seoul, Korea
	Bachelor of Science in Mathematics, Minor in Industrial Engineering

Publications

Conference & Journal Papers

[b6] Ko, H.-K., Park, G., Jeon, H., Jo, J., Kim, J., Seo, J. (2023).
Large-scale Text-to-Image Generation Models for Visual Artists' Creative Works.
Proceedings of the International Conference on Intelligent User Interfaces (IUI '23), 1-15.

[a5] Ko, H.-K.*, An, S.*, Park, G., Kim, S.K., Kim, D., Kim, B., Jo, J., Seo, J. (2022).
We-toon: A Communication Support System between Writers and Artists in Collaborative Webtoon Sketch Revision.
Proceedings of the ACM Symposium on User Interface Software and Technology (UIST '22), 1-14.

[a4] Jeon, H.*, Ko, H.-K.*, Lee, S., Jo, J., Seo, J. (2022).
Uniform Manifold Approximation with Two-phase Optimization.
Proceedings of IEEE Conference on Visualization and Visual Analytics (VIS '22), 80-84.

[a3] Jeon, H., Ko, H.-K., Jo, J., Kim, Y., Seo, J. (2021).
Measuring and Explaining the Inter-Cluster Reliability of Multidimensional Projections.
IEEE Transactions on Visualization and Computer Graphics (In Proceedings of VIS '21*)*, 28(1):551-561.

[a2] Jung, S., Choe, K., Park, S., Ko, H.-K., Seo, J. (2021).
Mixed-Initiative Approach to Extract Data from Pictures of Medical Invoice.
IEEE Pacific Visualization Symposium (PacificVis '21), 111-115.

[a1] Ko, H.-K., Jo, J., Seo, J. (2020).
Progressive Uniform Manifold Approximation and Projection.
EG/VGTC Conference on Visualization (EuroVis '20), 133-137.

Workshop Papers

[w1] Ko, H.-K., Son, K., Jin, H., Choi, Y., Chen, X. (2023).
ChatGPT for Moderating Customer Inquiries and Responses to Alleviate Stress and Reduce Emotional Dissonance of Customer Service Representatives.
CHI 2023 Workshop on Generative AI and HCI

Preprints & Publications in Progress

[b3]	Shin, H., Lee, Y., <u>Ko, H.-K.</u>, Kim, J. (2023).
	Enabling Prototyping of AI-infused UIs with Task-level Specifications.
	(In Progress)

[b2]	Yun, S., Jeon, H., <u>Ko, H.-K.</u>, Seo, J. (2023).
	Scalable Readability Evaluation of Graph Layouts on Distributed Environments.
	(In Progress)

[b1]	Jeon, H., Aupetit, M., Lee, S., <u>Ko, H.-K.</u>, Kim, Y., Seo, J. (2022).
	Distortion-Aware Brushing for Interactive Cluster Analysis in Multidimensional Projections.
	Arxiv Preprint (Under Review)

* denotes equal contributions.

Experience

06/2022 – Present	**KAIST Interaction Lab (KIXLAB)**, Daejeon, Korea
	Researcher (Advisor: Dr. Juho Kim)

10/2021 – 06/2022	**Naver Webtoon Corp.**, Seongnam, Korea
	AI Research Scientist, Webtoon AI

04/2021 – 09/2021	**Naver Webtoon Corp.**, Seongnam, Korea
	AI Research Intern, Webtoon AI

03/2019 – 08/2019	**Human-Computer Interaction Lab**, Seoul, Korea
	Research Intern (Advisor: Dr. Jinwook Seo)

01/2019 – 02/2019	**LG Electronics Inc.**, Seoul, Korea
	Research Intern, CTO Division

06/2018 – 08/2018	**Wesleyquest Inc.**, Seoul, Korea
	Research Associate

Honors and Awards

2023	ACM Travel Grants (Travel support for IUI '23: $980 USD), *ACM SIGCHI*
2022	Gary Marsden Travel Awards (Travel support for UIST '22: $2,800 USD), *ACM SIGCHI*
2018	Big Data Contest (3rd Place, Prize Money: $900 USD), *NIA and Korea Big Data Forum*
2018	AI Novel Writing Competition (2nd Place, Prize Money: $18,000 USD), *KT Corporation and KOCCA*
2017	Academic Research Competition (2nd Place, Prize Money: $180 USD), *Hanyang University*
2014 – 2018	Merit-based Scholarship (6 semesters), *Hanyang University*

Invited Talks and Seminars

1. *Large-scale Text-to-Image Generation Models for Visual Artists' Creative Works*
   Shandong University, Qingdao, China. January 2023.

Academic Services

PAPER	ACM CHI ('23), CHI LBW ('23), C&C ('23)
REVIEWING	IEEE PacificVis ('20, '21)

Student Volunteering	ACM UIST ('22), IUI ('23)

Press Coverage

Nov 2022	[The Road to Becoming a Published Researcher](#), *IEEE Computer Society*
Aug 2018	[Writing Novels on Its Own... AI Contests Human Creativity](#), *KBS (Korean)*