Hyung-Kwon Ko

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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 and develops interactive systems using AI to innovate people's working paradigm, in turn, changing their lives more intelligently and conveniently. Recently, he is 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: Jinwook Seo) |

| 2014-2019 | **Hanyang University**, Seoul, Korea |
| | Bachelor of Science in Mathematics, Minor in Industrial Engineering |

Publications

Conference & Journal Papers

[a5] Ko, H.-K.*, An, S.*, Park, G., Kim, S.K., Kim, D., Kim, B., 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).

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

[a3] Jeon, H., Ko, H.-K., Jo, J., Kim, Y., Seo, J. (2022).
Measuring and Explaining the Inter-Cluster Reliability of Multidimensional Projections.
IEEE TVCG (VIS 2021) 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 (PacificVis '21).

[a1] Ko, H.-K., Jo, J., Seo, J. (2021).
Progressive Uniform Manifold Approximation and Projection.
EG/VGTC Conference on Visualization (EuroVis '21).

Preprints & Publications in Progress

[b4] Shin, H., Lee, Y., Ko, H.-K., Kim, J. (2022).
Enabling Prototyping of AI-infused UIs with Task-level Specifications.
(In Progress).

[b3] Ko, H.-K., Park, G., Jeon, H., Jo, J., Kim, J., Seo, J. (2022).
Large-scale Text-to-Image Generation Models for Visual Artists' Creative Works.
Arxiv Preprint (Under Review).

[b2] Choi, J.*, Song, J.*, Jeon, H., Kim, Y., Ko, H.-K., Seo, J. (2022).
How Disentanglement Affects Users' Interpretation, Control, and Sentiment when Using Generative Models.
(Under Review).

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[b1]   Jeon, H., Aupetit, M., Lee, S., Ko, H.-K., Kim, Y., Seo, J. (2022).
          Large-scale Text-to-Image Generation Models for Visual Artists' Creative Works.
          Arxiv Preprint (Under Review).

(* denotes equal contributions)

Experience

06/2022-Present	**KAIST Interaction Lab (KIXLAB)**, Daejeon, Korea *Researcher, working with Dr. Juho Kim*
10/2021-06/2022	**Naver Webtoon Corp.**, Seongnam, Korea *AI Research Scientist, Webtoon AI*
04/2021-10/2021	**Naver Webtoon Corp.**, Seongnam, Korea *AI Research Intern, Webtoon AI*
03/2019-08/2019	**Human-Computer Interaction Lab**, Seoul, Korea *Research Intern, working with Dr. Jinwook Seo*
01/2019-02/2019	**LG Electronics**, Seoul, Korea *Research Intern, CTO division*
06/2018-08/2018	**Wesleyquest Inc.**, Seoul, Korea *Research Associate*

Honors and Awards

2022	Gary Marsden Travel Award (Full travel support for UIST 2022)
2018	Big Data Forum President Award (3rd Place)—National Information Society Agency and Korea Big Data Forum, Korea
2018	AI Novel Writing Competition (2nd Place, Prize Money: 20M KRW)—KT Corporation and Korea Creative Content Agency, Korea
2017	Academic Research Competition (2nd Place)—Hanyang University, Korea
2014-2019	Merit-based University Scholarship (6 semesters)—Hanyang University, Korea

Academic Services

PAPER REVIEWING	ACM CHI (2022) IEEE PacificVis (2020, 2021)
STUDENT VOLUNTEERING	ACM UIST (2022)

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