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, 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

[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), 14 pages.

[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), 5 pages.

[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.

PREPRINTS & PUBLICATIONS IN PROGRESS

[b5]　　Ko, H.-K., Son, K., Jin, H., Kim, J. (2022).
Crowdiffusion: Steering the Text Prompt of Large-scale Text-to-Image Generation Models by Demonstration.
(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)

[b1]   Jeon, H., Aupetit, M., Lee, S., Ko, H.-K., 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*
04/2021-10/2021	**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

2022	Gary Marsden Travel Award (Full 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*

Academic Services

PAPER REVIEWING	ACM CHI ('22) IEEE PacificVis ('20, '21)
STUDENT VOLUNTEERING	ACM UIST ('22)

Last updated: Oct 20, 2022

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)*

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