Dae Hyun Kim

Engineering Hall 4, Room D718, 50 Yonsei-ro, Seodaemun-gu, Seoul, Republic of Korea, 03722 $\begin{array}{c} dhkim16@yonsei.ac.kr\\ https://dhkim16.github.io\\ +82\text{-}10\text{-}5218\text{-}7651 \end{array}$

EDUCATION

Stanford University Stanford, CA

Master of Science & PhD in Computer Science Sep 2015 – Jan 2022

Advisor: Maneesh Agrawala

Dissertation: Understanding the Interactions between Text and Visualizations

California Institute of Technology

Bachelor of Science in Computer Science

Sep 2011 – Jun 2015

Graduation with Honor (GPA: 4.2/4.3)

Research Interests

human-computer interaction, data visualization, human-AI interaction, intent recognition in multimodal context, communication around data, communication support systems, natural language interfaces, intelligent agents.

EMPLOYMENT

Yonsei University
Assistant Professor

Mar 2025 - Current

KAIST

Daejeon, Republic of Korea

Postdoctoral researcher (w/ Juho Kim) / Alternative for military service (36 mths)

Dec 2021 – Feb 2025

Stanford UniversityStanford, CAResearch Assistant (w/ Maneesh Agrawala)Apr 2016 – Dec 2021Research Assistant (w/ Percy Liang)Jan 2016 – Mar 2016Research Assistant (w/ Doug James)Sep 2015 – Dec 2015

Tableau Research Palo Alto, CA

Research Intern (w/Vidya Setlur) Jun 2020 – Sep 2020

California Institute of Technology Pasadena, CA

Summer Undergraduate Research Fellow (w/ Shinsuke Shimojo & Sang Wan Lee)

Summer Undergraduate Research Fellow (w/ Mohamed Omar)

Jun 2014 - Aug 2014

Jun 2013 - Aug 2013

Samsung Engineering Seoul, Republic of Korea

Intern (Business Innovation Team)

Aug 2012 – Sep 2012

Seoul National University

Seoul, Republic of Korea

Undergraduate Research Intern (Intelligent Database Systems Laboratory w/ Sang-goo Lee)

Jun 2012 – Aug 2012

Samsung Fire & Marine Insurance Seoul, Republic of Korea

Intern (General Product Development Team)

Mar 2011

Conference & Journal Papers

- [c.11] <u>Dae Hyun Kim</u>, Hyungyu Shin, Shakhnozakhon Yadgarova, Jinho Son, Hariharan Subramonyam, Juho Kim. "AINeedsPlanner: A Workbook to Support Effective Collaboration Between AI Experts and Clients." *Proceedings of the 2024 ACM Designing Interactive Systems Conference (DIS)*. 2024.
- [c.10] Jihyeong Hong, Yokyung Lee, <u>Dae Hyun Kim</u>, DaEun Choi, Yeo-Jin Yoon, Gyu-cheol Lee, Zucheul Lee, Juho Kim. "A Context-Aware Onboarding Agent for Metaverse Powered by Large Language Models." *Proceedings of the 2024 ACM Designing Interactive Systems Conference (DIS)*. 2024.

- [c.9] Hyung-Kwon Ko, Hyeon Jeon, Gwanmo Park, <u>Dae Hyun Kim</u>, Nam Wook Kim, Juho Kim, and Jinwook Seo. "Natural Language Dataset Generation Framework for Visualizations Powered by Large Language Models." *Proceedings of the 2024 CHI Conference on Human Factors in Computing Systems (CHI)*. 2024.
- [c.8] Hyunwoo Kim, Khanh Duy Le, Gionnieve Lim, <u>Dae Hyun Kim</u>, Yoo Jin Hong, and Juho Kim. "DataDive: Supporting Readers' Contextualization of Statistical Statements with Data Exploration." The 29th Annual ACM Conference on Intelligent User Interfaces (IUI). 2024.
- [c.7] <u>Dae Hyun Kim</u>, Seulgi Choi, Juho Kim, Vidya Setlur, and Maneesh Agrawala. "EmphasisChecker: A Tool for Guiding Chart and Caption Emphasis." *IEEE Transaction on Visualization and Computer Graphics (TVCG)*. 2024. Presented at:
 - The IEEE Visualization Conference (VIS), Oct. 2023
- [c.6] <u>Dae Hyun Kim</u>, Vidya Setlur and Maneesh Agrawala. "Towards Understanding How Readers Integrate Charts and Captions: A Case Study with Line Charts." *Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems (CHI)*. 2021.
- [c.5] Vidya Setlur, Enamul Hoque, <u>Dae Hyun Kim</u>, and Angel X. Chang. "Sneak Pique: Exploring Autocompletion as a Data Discovery Scaffold for Supporting Visual Analysis." *Proceedings of the 33rd Annual ACM Symposium on User Interface Software and Technology (UIST)*. 2020.
- [c.4] <u>Dae Hyun Kim</u>, Enamul Hoque, and Maneesh Agrawala. "Answering Questions about Charts and Generating Visual Explanations." Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems (CHI). 2020.
- [c.3] <u>Dae Hyun Kim</u>, Enamul Hoque, Juho Kim, and Maneesh Agrawala. "Facilitating Document Reading by Linking Text and Tables." Proceedings of the 31st Annual ACM Symposium on User Interface Software and Technology (UIST). 2018.
- [c.2] <u>Dae Hyun Kim</u>, Alexander H. Mun, and Mohamed Omar. "Chromatic Bounds on Orbital Chromatic Roots." *The Electronic Journal of Combinatorics*. 2014.
 - Presented at:
 - Joint Mathematics Meetings, Mathematical Association of America / American Mathematical Society, Jan. 2014
 - Southern California Fall Sectional Meeting, Mathematical Association of America, Oct. 2013
- [c.1] Juyoun Jin, Kyeung Min Joo, Yoonhee Nam, <u>Dae Hyun Kim</u>, Se Jeong Lee, Mi-Young Jo, Younggeon Jin et al. "Schedule-Dependent Synergistic Effect of Rituximab on Methotrexate Chemotherapy Against Lymphoma of the Central Nervous System." Experimental and Therapeutic Medicine. 2010.

Patents

- [p.2] Jihyeong Hong, Yokyung Lee, <u>Dae Hyun Kim</u>, DaEun Choi, Yeo-Jin Yoon, Gyu-Cheol Lee, Zucheul Lee, and Juho Kim. "Method for Providing a Dynamic Response Using Non-Player Character and Apparatus Thereof." Filed in Korea in 2024
- [p.1] Vidya Setlur, Enamul Hoque, <u>Dae Hyun Kim</u>, and Angel X. Chang. "Utilizing Autocompletion as a Data Discovery Scaffold for Supporting Visual Analysis." *US Patent No.* 11,868,343, issued 2024; Also filed in China (CN116097246A) and EU (EP4147141A1) in 2021

Workshops, Posters & Demos

- [w.2] Hyung-Kwon Ko, Hyeon Jeon, Gwanmo Park, <u>Dae Hyun Kim</u>, Nam Wook Kim, Juho Kim, and Jinwook Seo. "A Vega-Lite Dataset and Natural Language Generation Pipeline with Large Language Models." The IEEE Visualization Conference (VIS) Workshop: NLVIZ: Exploring Research Opportunities for NL, Text, and Data Visualization. 2023.
- [w.1] <u>Dae Hyun Kim</u>*, Yoonsu Kim*, Hyungyu Shin, Jinho Son, and Juho Kim. "Towards Understanding the Challenges and Remedies in AI Application Development Planning." *Korea Computer Congress* 2023 (KCC). 2023.

ARCHIVED MANUSCRIPTS & WORKING PAPERS

- [m.3] Phan et al. "Humanity's Last Exam." arXiv preprint arXiv:2501.14249. 2025.
- [m.2] <u>Dae Hyun Kim</u>, Taeyoung Kong, and Seungbin Jeong. "Finding Solutions to Generative Adversarial Privacy." arXiv preprint arXiv:1810.02069. 2018.
- [m.1] <u>Dae Hyun Kim</u>, Hsing Lee, Travis Maron, Charles R. Plott, and Ruijie Teo. "Multiple Item, Ascending Price Auctions: An Experimental Examination of Alternative Auction Sequences." Social Science Working Paper No. 1406 California Institute of Technology. 2015.

AWARDS & SCHOLARSHIP

Samsung Scholarship

Sep 2015 – Jun 2020

5-year \$50,000 per year merit-based scholarship awarded by Samsung for graduate studies. Awarded to around thirty students with Korean citizenship.

Henry Ford II Scholar Award

Jun 2014

Award for the engineering student at Caltech with the best academic record at the end of the junior year. Awarded to only one student in the Division of Engineering and Applied Science.

Presidential Science Scholarship (International)

Sep 2011 - Mar 2015

4-year \$50,000 per year merit-based scholarship awarded by the South Korean Government for undergraduate studies. Awarded to only around ten students with Korean citizenship.

Teaching

Yonsei University	Seoul, Republic of Korea
CSI6312: Data Visualizations and Natural Language (Instructor)	${ m Mar}\ 2025-{ m Jun}\ 2025$
CAS4102: AI Capstone Design (Instructor)	$Mar\ 2025 - Jun\ 2025$
Stanford University	Stanford, CA
CS 448B/SYMSYS 195V: Data Visualization (Course Assistant)	Sep $2021 - Dec 2021$
CS 448B/SYMSYS 195V: Data Visualization (Course Assistant)	Sep $2020 - Dec 2020$
CS 193A: Android Programming (Course Assistant)	${ m Jan} \ 2017 - { m Mar} \ 2017$

California Institute of Technology

Pasadena, CA

CS 002: Introduction to Programming Methods (Teaching Assistant)

Jan 2015 - Mar 2015

Advising & Mentoring

Yonsei (As Professor)	Seoul, Republic of Korea
Taewon Yoo (MS @ Yonsei)	Mar 2025 - Current
Suyeon Seo (BS @ Yonsei)	Mar 2025 – Current

KAIST (As Postdoc)	Daejeon, Republic of Korea
Samuel "Sam" Yassefa (BS, Intern @ KAIST)	Jan 2025 – Current
Gosu Choi (BS, Intern @ KAIST)	Dec 2024 - Current
Daeheon Jeong (BS @ Sogang University, Intern @ KAIST \rightarrow MS @ KAIST)	$Jan\ 2024 - Feb\ 2025$
Shakhnozakhon "Noza" Yadgarova (BS, Intern @ KAIST)	Dec 2023 - Feb 2025
Jiangnan Xu (PhD @ RIT, Visiting Researcher @ KAIST \rightarrow Postdoc @ Tempere Univ.)	Jan 2024 - Sep 2024
Haeseul Cha (BS, Intern @ KAIST)	Jan 2024 - Sep 2024
Bekzat Tilekbay (MS @ KAIST)	$Jan\ 2024-Mar\ 2024$
Hai-Nam "Nam" Cao (BS, Intern @ KAIST \rightarrow MS @ KAIST)	Jun 2023 - Dec 2023
Jihyeong Hong (MS @ KAIST \rightarrow Naver)	Mar 2023 - Oct 2023
Da Eun Choi (MS @ KAIST \rightarrow PhD @ KAIST)	Feb 2023 – Oct 2023
Hyunwoo Kim (PhD @ KAIST)	Dec 2021 - Oct 2023
Jiyoon "Nicole" Lee (BS, Intern @ KAIST)	Mar 2023 - Aug 2023
Yoonsu Kim (MS @ KAIST \rightarrow PhD @ KAIST)	$Mar\ 2022 - Jun\ 2023$
Seulgi Choi (MS @ KAIST)	$Jul\ 2022-Mar\ 2023$
Stanford (As PhD Student)	Stanford, CA

INVITED TALKS & SEMINARS

Understanding and Facilitating Human-Human/AI Context-Dependent Communication

Korea University May 2024

Understanding the Interactions between Text and Visualizations

Seoul National University

Riiid

Jan 2024

Jul 2021

Natural Language Processing for CQA

Conference on Computer Vision and Pattern Recognition (CVPR) Chart Question Answering Workshop Jun 2021

Natural Language Interfaces for Visualizations

Naoki Eto (MS @ Stanford → Software Engineer @ Nuro)

Tableau Research Jan 2020

ACADEMIC SERVICE

Committees: UIST 2025 (Associate Chiar), DIS 2025 (Associate Chair (AI and Design Subcommittee)), PacificVis 2024 Visual Data Storytelling Contest (Contest Judge), ACL 2022 In2Writing Workshop (Program Committee)

Reviews: CHI 2025; UIST 2024; VIS 2024; CHI 2024; TOCHI 2023; CHI 2023; VIS 2023; CHI 2022 LBW; CHI 2022; UIST 2021; VIS 2021; CHI 2021; EuroVis 2021; UIST 2020; VIS 2020; CHI 2019

Recognitions for Outstanding Reviews: CHI 2025(×2); CHI 2023

Apr 2017 - Jun 2017