YOUNGWON KIM

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EDUCATION

Jun 2023	**Ph.D., Measurement & Statistics**
	College of Education, University of Washington, Seattle, WA
	Dissertation: *Modern prediction algorithms for factor analyses: Comparing accuracy-efficiency trade-offs* (Advisor: Dr. Elizabeth Sanders)
May 2017	**M.A., Educational Psychology**
	University of Texas at Austin, Austin, TX
	Thesis: *A clash of constructs? Re-examining grit in light of academic buoyancy and future time perspective* (Advisor: Dr. Diane Schallert)
Feb 2011	**B.A., International & Area Studies, Counseling Psychology, & Social Welfare**
	Handong Global University, Pohang-si, Gyeongbuk, South Korea

AREAS OF INTERESTS

- Clinical AI: Machine learning (ML), large language models (LLMs), foundation models, predictive modeling, oncology, electrical health record (EHR) analytics
- Statistics and Measurement
- Causal Inference
- Human Behavior & Society**:** Psychology, mental/physical health, social determinants

RESEARCH EXPERIENCE

Oct 2024 - Present ***Machine Learning Postdoctoral Researcher***	**AIW team, Truveta,** Bellevue, WA • Developed longitudinal ML/LLM risk models for colorectal and lung cancers using high-dimensional temporal EHR data • Built predictive models for Kansas City Cardiomyopathy Questionnaire (KCCQ) score estimation • Developed oncology foundation models and designed clinical validity evaluation frameworks • Architected Model Context Protocol (MCP) tools to integrate predictive models with interactive data visualizations, automated prompt optimization, and clinical workflows
Sep 2024 – Mar 2025 ***Visiting Scholar*** *Aug 2023 – Sep 2024* ***Postdoctoral Fellow***	**Causality, Applications, and Research in Education and Statistics, Harvard Graduate School of Education**, **Harvard University**, Cambridge, MA **Project:** *Practical tools for large-scale evaluation of text data in randomized trials in education* (Drs. Luke Miratrix, Reagan Mozer, and Shireen Al-Adeimi) • Conducted research on the performance and accuracy of large language models versus machine learning algorithms for automated essay scoring • Developed the R package (rcttext) to effectively leverage text in the context of randomized controlled trials (RCTs) • Created academic papers, tutorial materials, and blog posts to assist applied researchers in utilizing text in RCT contexts
Jun 2019 – Jun 2023 ***Statistical Consultant***	**Center for Social Science Computation and Research, University of Washington**, Seattle, WA (Dr. Jerald Herting) • Provided statistical and programming consulting services to students and faculty from across UW Seattle campus • Offered guidance on research designs, data cleaning, data analysis, and use of data analysis and visualization software (*Mplus*, *Python*, *R*, *SPSS, SQL,* and *Tableau*) • Conducted remote synchronous and asynchronous workshops on *R* and *SPSS*

RESEARCH EXPERIENCE (Cont'd)

Jun 2022– Aug 2022
Research Intern

Human Services Division - Education Systems Program Area, American Institutes for Research (AIR), Arlington, VA (Dr. Cong Ye)
- Developed a school-level social vulnerability index for the CEE (COVID-19 and Equity in Education) projects
- Participated in AIR Hackthon using the CEE longitudinal database and 2022 Summer Intern Expo

May 2018 – Jun 2022
Research Assistant

School of Education & Human Development, Texas A&M University, College Station, TX
Project: *Asian international graduate students' professional development and psychological well-being* (Dr. Katie Koo)
- Interviewed international graduate students and transcribed the interviews
- Coded and analyzed transcripts on the usage of social media, language proficiency, academic achievement, career development, social support, mental and physical health issues of international students
- Contributed to writing proposals for conference presentations and manuscripts for publication

Mar 2020 – Dec 2020
Research Assistant

Center for the Study of Teaching and Policy, University of Washington, Seattle, WA

Project: *Teacher workforce* (Drs. Ana Elfers and Marge Plecki)
- Co-designed and implemented statistical models to examine the teacher workforce in Washington State with respect to teacher retention and mobility
- Co-authored results for presentation, white paper, and publication

Jul 2018 – Sep 2018
Data Wrangler

Health Sciences Library, University of Washington, Seattle, WA (Dr. Lorrie Dong)
- Performed data cleaning and created dashboards for National Network of Libraries of Medicine (NNLM)
- Created *R* functions to automate data-cleaning processes

Feb 2015 – Aug 2017
Research Assistant

Higher Education Learning and Persistence Lab, College of Education, University of Texas at Austin, Austin, TX (Dr. Carlton Fong)
- Collected documents and coded data for meta-analyses on psychosocial factors and critical thinking of community college students
- Conducted meta-analyses to examine growth- and fixed-mindset profiles and associations with stress, need satisfaction, coping strategies, and fear of failure

TEACHING EXPERIENCE

University of Washington

Sep 2021 – Dec 2021   **EDPSY 576: Multilevel Modeling**, College of Education
Apr 2019 – Jun 2019   **PSYCH 315: Understanding Statistics in Psychology**, Department of Psychology
Sep 2018 – Mar 2019   **PSYCH 209: Fundamentals of Psychological Research**, Department of Psychology
Sep 2017 – Dec 2017   **EDPSY 302: Child Development and Learning**, College of Education

Handong Global University

July 2020 & 2021   **Online Summer Workshop on Applied Statistics**, School of Counseling Psychology and Social Welfare

University of Texas at Austin

Jan 2017 – May 2017   **SDS 332: Statistical Models for the Health and Behavioral Sciences**, Department of Statistics and Data Sciences
Sep 2015– Dec 2016   **MKT282: Marketing Analytics & Applications**, McComb School of Business

PUBLICATIONS

Peer-reviewed articles

Kim, Y. W., Lau W., Patel, N., Kendrick K., Wu, A., Feldman, T., Ahern R., Oka, A. (under review). Electronic health record-based estimation of Kansas City Cardiomyopathy Questionanaire scores in heart failure. *Circulation: Population Health and Outcomes*.

Kim, Y. W., Mozer, R., Miratrix, L., & Al-Ademi, S. (under review). Chatgpt vs. machine learning: Assessing the efficacy and accuracy of large language models for automated essay scoring. *International Journal of Artificial Intelligence of Education*.

Koo, K., **Kim, Y. W.**, Lee, Y., & Rodriquez, S. (under review). What does it mean to be an Asian in a pandemic? Exploring experiences of racism and discrimination among Asian international students in the United States during COVID-19. *Journal of Counseling Psychology*.

Fong, C. J., Schallert, D. L., Williamson, Z. H., Lin, S., Williams, K. M., & **Kim, Y. W.** (2023). Are self-compassionate writers more feedback literate? Exploring undergraduates' perceptions of feedback constructiveness. *Assessing Writing, 57*. https://doi.org/10.1016/j.asw.2023.100761

Elfers, A., Plecki, M., **Kim, Y. W.**, & Bei, N. (2022). How retention and mobility rates differ for teachers of color? *Teachers and Teaching, 28,* 724-741. https://doi.org/10.1080/13540602.2022.2098271

Fong, C. J., Schallert, D. L., Williams, K. M., Williamson, Z. H., Lin, S., **Kim, Y. W., &** Chen, L. (2021). Making feedback constructive: The interplay of undergraduates' mastery goal orientation with feedback specificity and friendliness. *Educational Psychology,* 1-19. https://doi.org/10.1080/01443410.2021.1951671

Fong, C. J. & **Kim, Y. W.** (2021). A clash of constructs? Re-examining grit in light of academic buoyancy and future time perspective. *Current Psychology, 40*(4), 1824-1837. https://doi.org/10.1007/s12144-018-0120-4

Koo, K., **Kim, Y. W.**, Lee, Y., & Nyunt, G. (2021). "It's my fault": Exploring experiences and mental wellness among Korean international graduate students. *Journal of International Students*, *11(4)*, 790-811. https://doi.org/10.32674/jis.v11i4.2801

Fong, C. J., Schallert, D. S., Williams, K. M., Williamson, Z. H., Warner, J. R., Lin, S., & **Kim, Y. W.** (2018). When feedback signals failure but offers hope for improvement: A process model of constructive criticism. *Thinking Skills and Creativity, 30,* 42-53. https://doi.org/10.1016/j.tsc.2018.02.014

Fong, C. J., Williams, K. M., Williamson, Z. H., Lin, S., **Kim, Y. W.**, & Schallert, D. L. (2018). "Inside out": Student appraisals for achievement emotions regarding constructive criticism, positive feedback, and negative feedback on writing. *Motivation and Emotion, 42,* 236-257. https://doi.org/10.1007/s11031-017-9658-y

Fong, C. J., Davis, C. W., Kim, Y., **Kim, Y. W**., Marriott, L. A., & Kim, S. (2017). Psychosocial factors and community college student success: A meta-analytic investigation. *Review of Educational Research, 87(2),* 388-424. http://doi.org/10.3102/0034654316653479

Fong, C. J., Kim, Y., Davis, C. W., Hoang, T., & **Kim, Y. W.** (2017). A meta-analysis on critical thinking and community college success. *Thinking Skills and Creativity, 26,* 71-83. http://doi.org/10.1016/j.tsc.2017.06.002

CONFERENCE PRESENTATIONS

International Society for Pharmacogenomics and Outcomes (ISPOR)

Kim, Y., Lau, W., Alipour, E., Zeng, S., Oka, A., Nanduri, J. (2026, May). *Characterizing oncology patient journeys and health state transitions using a data-driven Markov transition matrix in large-scale electronic health records*. Paper submitted at the ISPOR Annual Meeting. Philadelphia, PA.

CONFERENCE PRESENTATIONS (Cont'd)

International Society for Pharmacogenomics and Outcomes (ISPOR, Cont'd)

Zeng, S., **Kim, Y**., Lau, W., Alipour, E., Oka, A., Nanduri, J. (2026, May). *Zero-shot lung cancer risk prediction from longitudinal electronic health records with chain of agents framework.* Paper submitted at the ISPOR Annual Meeting. Philadelphia, PA.

Lau, W., Alipour, E., **Kim, Y**., Zeng, S., Oka, A., Nanduri, J. (2026, May). *Can a generative patient journey joundation model alleviate the burden of cancer screening?.* Paper submitted at the ISPOR Annual Meeting. Philadelphia, PA.

Alipour, E., Lau, W., **Kim, Y**., Zeng, S., Oka, A., Nanduri, J. (2026, May). *Patient joureny foundation model for scalable imputation of missing units of measurement in electronic health records data.* Paper submitted at the ISPOR Annual Meeting. Philadelphia, PA.

American Medical Informatics Association (AMIA)

Lau, W., **Kim, Y**., Parasa, S., Haque, M. E., Oka, A., Nanduri, J. (2025, Nov). *Predicting early-onset colorectal cancer with large language models.* Paper submitted at the AMIA Annual Meeting. Atlanta, GA.

American Society of Clinical Oncology (ASCO)

Lau, W.**, Kim, Y**., Parasa, S., Haque, M. E., Darai, S., Rao, R., Pillai, J., Oka, A.(2025, May). *Development and validation of machine risk prediction models for detection of Early-Onset colorectal Cancer: Data from 30 health systems in the United States.* Paper accepted at the ASCO Annual Meeting. Chicago, IL.

Joint Statistical Meetings (JSM)

Kim, Y., Mozer, R., Miratrix, L., & Al-Ademi, S. (2024, August). *ChatGPT vs. machine learning: Assessing the efficacy and accuracy of large language models for automated essay scoring.* Paper presented at the JSM Annual Meeting. Portland, OR.

Association for Education Finance & Policy (AEFP)

Kim, Y., Mozer, R., Miratrix, L., & Al-Ademi, S. (2024, March). *Assessing essay grading with machine learning and large language models: A comparative study on efficacy and accuracy.* Paper presented at the AEFP Annual Meeting. Baltimore, MD.

National Council on Measurement in Education (NCME)

Kim, Y. & Sanders, E. A. (2023, April). *Exploratory measurement modeling with Lasso.* Paper presented at the NCME Annual Meeting. Chicago, IL.

Bei, N., Sanders, E. A., Abe, N., & **Kim, Y**. (2021, June). *Measuring item process data with network analysis methods.* Paper presented at the NCME Annual Meeting (Virtual).

International Meeting of the Psychometric Society (IMPS)

Kim, Y. & Sanders, E. A. (2023, July). *Exploratory measurement modeling with Lasso.* Paper presented at the IMPS Annual Meeting. College Park, MD.

American Educational Research Association (AERA)

Kim, Y. & Sanders, E. A. (2024, April). *Enhancing factor analysis: Evaluating factor retention accuracy with measurement error.* Paper presented at the AERA Annual Meeting. Philadelphia, PA.

Koo, K., Kwon, J., & **Kim, Y**. (2022, April). *Strive to survive in a pandemic in a foreign country: Korean international students' well-being during covid-19.* Paper presented at the AERA Annual Meeting. San Diego, CA.

Kim, Y. (2021, April). *Understanding the role of academic achievement and psychosocial factors on adolescent depression: A latent growth model.* Paper presented at the AERA Annual Meeting (Virtual).

CONFERENCE PRESENTATIONS (Cont'd)

American Educational Research Association (AERA, Cont'd)

Koo, K, **Kim, Y.**, Lee, Y., & Rodriquez, S. (2021, April). *What does it mean to be an Asian in a pandemic? Exploring experiences of racism and discrimination among Asian international students in the United States during covid-19.* Paper presented at the AERA Annual Meeting (Virtual).

Elfers, A., Plecki, M., **Kim, Y.**, & Bei, N. (2021, April). *Examining differences in the retention and mobility of teachers of color by racial/ethnic group.* Paper presented at the AERA Annual Meeting (Virtual).

Kim, Y. (2020, April). *Executive function difficulty, self-esteem, happiness, gender, and parent's income as the predictors of digital addiction.* Paper accepted for presentation at the AERA Annual Meeting, San Francisco, CA. (Conference canceled)

Koo, K., **Kim, Y.**, Lee, Y., & Nyunt, G. (2020, April). *What makes them happy? A qualitative study on Korean international graduate students' experiences and psychological well-being.* Paper accepted for presentation at the AERA Annual Meeting, San Francisco, CA. (Conference canceled)

Kim, Y. (2019, April). *Trajectories of parents' socioeconomic status, child-parent interaction, children's self-control, school readiness, and academic performance.* Paper presented at the AERA Annual Meeting, Toronto, ON.

Fong, C. J., Davis, C., Li, D., & **Kim, Y.** (2017, April). *A meta-analysis of noncognitive factors and community college student success at 4-year institutions.* Paper presented at the AERA Annual Meeting, San Antonio, TX.

Fong, C. J., **Kim, Y.**, Lin, S., & Hoang, T. (2017, April). *Do Noncognitive Interventions Enhance Community College Student Success? A Systematic Review and Meta-Analysis.* Paper presented at the AERA Annual Meeting, San Antonio, TX.

Williamson, Z. H., Fong, C. J., Lin, S., Williams, K. M., **Kim, Y.**, & Schallert, D. L., (2017, April). *Self-Kindness in the Face of Criticism: Self-Compassion Influences Undergraduates' Perceptions of Constructive Feedback.* Paper presented at the AERA Annual Meeting, San Antonio, TX.

Fong, C. J., Kim, Y., Davis, C. W., **Kim, Y.**, Marriott, L. A., & Kim, S. (2016, April). *Psychosocial and self-regulatory correlates of community college student success: A systematic review and meta-analysis.* Paper presented at the AERA Annual Meeting, Washington, D.C.

Fong, C. J., Kim, Y., Davis, C. W., **Kim, Y.**, Marriott, L. A., & Kim, S. (2016, April). *Psychosocial and self-regulatory correlates of community college student success: A systematic review and meta-analysis.* Paper presented at the AERA Annual Meeting, Washington, D.C.

Fong, C. J., Kim, Y., Davis, C. W., **Kim, Y.**, Marriott, L. A., & Kim, S. (2016, April). *Psychosocial and self-regulatory correlates of community college student success: A systematic review and meta-analysis.* Paper presented at the AERA Annual Meeting, Washington, D.C.

Fong, C. J., Schallert, D. L., Williams, K. M., Williamson, Z. H., Lin, S., Chen, L., **Kim, Y.** (2016, April). *Making feedback constructive: The interplay of undergraduates' mastery goal orientation with feedback specificity and friendliness.* Paper presented at the AERA Annual Meeting, Washington, D.C.

Korean-American Educational Researchers Association (KAERA)

Kim, Y. (2020, April). *Understanding the role of academic achievement and psychosocial factors on adolescent depression: A latent growth model.* Paper accepted at the KAERA Annual Meeting, San Francisco, CA. (Conference canceled)

Koo, K., & **Kim, Y.** (2020, April). *The effectiveness of focusing art therapy on PTSD and cultural adjustment among North Korean refugee girls.* Paper accepted for presentation at the KAERA Annual Meeting, San Francisco, CA. (Conference canceled)

Koo, K., **Kim, Y.**, & Lee, Y. (2019, April). *What makes them happy? Korean international graduate students' personal and professional experiences and emotional health.* Paper presented at the KAERA Annual Meeting, Toronto, ON.

CONFERENCE PRESENTATIONS (Cont'd)

Other Referred Conferences

Koo, K., **Kim, Y.**, & Lee, Y. (2019, March). *What makes them happy? Asian international graduate students' personal and professional experiences and emotional health.* Paper presented at the ACPA Annual Meeting, Boston, MA.

Fong, C. J., Davis, C., Li, D., **Kim, Y.**, & Hartman, C. E. (2016, August). *A meta-analysis of noncognitive factors and community college transfer student success at four-year institutions.* Paper presented at the Texas Higher Education Symposium, Austin, TX.

Lin, S., Fong, C. J., & **Kim, Y.** (2016, April). *Make up your mind: A person-centered approach to growth and fixed mindsets among Chinese undergraduates*. Paper presented at the Chinese American Education Research & Development Association, Washington, D.C.

Kim, Y., Fong, C. J., Davis, C. W., Hoang, T., & **Kim, Y.** (2016, March). *A meta-analysis on critical thinking and community college student achievement.* Paper presented at the Council for the Study of Community Colleges Annual Meeting, Plano, TX.

INVITED TALKS AND PRESENTATIONS

Kim, Y. (2026, January). *Clinical AI Research with Large-Scale Healthcare Data.* Talk presented at the Healthcare Simulation and Optimization Lab, Incheon National University.

Kim, Y. (2024, November). *Large language models research in Education.* Talk presented at the VIP Data-Driven Education program, Georgia Institute of Technology.

Kim, Y. (2023, October). *Modern prediction algorithms for factor analyses: Comparing accuracy-efficiency trade-offs.* Talk presented at the Mathematical Sciences Research Seminar, Bentley University (Virtual).

Kim, Y. (2023, October). *Enhancing factor analysis: Evaluating factor retention accuracy with measurement error.* Talk presented at the lab meeting of Causality, Applications, and Research in Education and Statistics, Harvard Graduate School of Education / Harvard Department of Statistics, Harvard University, Cambridge, MA.

Kim, Y. (2021, April). *Racism and the racialized experience among Asian international students in the U.S.* Invited panel by ACPA 2021 International Colloquium Support for international students during and after Covid-19: Best practices from a global perspective (Virtual).

Kim, Y. (2020, July). *Racism and racialized identities: The experience among Asian international students in the United States.* Invited panel by ACPA Commission for Global Dimensions of Student Development (Virtual).

SERVICE

Oct 2020 – Current ***Ad-hoc Reviewer***	● Journal of International Students and Current Psychology
Oct 2022 ***Program planning committee member***	● Section 2 (Statistical theory and quantitative methodologies), Division D program planning committee meeting, AERA, Washington, D.C.
Aug 2021 – Aug 2022 ***Student Support Chair***	● Associated Students of the College of Education (ASCE), University of Washington, Seattle
Aug 2021 – Aug 2022 ***GSC Liaison***	● AERA Division D Graduate Student Committee (GSC) Liaison, American Educational Research Association, Washington, D.C.
Apr 2021 – Jun 2021 ***Mentor***	● Next Generation Mentorship Program (NGMP), Office of Student Diversity and Inclusion, College of Education, University of Washington, Seattle
Jul 2019 – Jan 2020 ***Student Representative***	● New Hire Search Committee, Measurement & Statistics, College of Education, University of Washington, Seattle

AWARDS/HONORS

2019	Young Researcher Award, Korean-American Educational Research Association (KAERA)
2015 – 2021	OTEFE Foundation Scholarship, OTEFE Foundation, Inc.