

YOUNG HYUN CHO

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Department of Statistics, Purdue University

Google Scholar

RESEARCH INTEREST

My research interest is in the intersection of **reinforcement learning**, **bandit algorithms**, **data privacy** and **statistics** to develop privacy-preserving data-driven decision-making methods.

EDUCATION

Purdue University

Aug 2021- Current

Ph.D Candidate, Statistics.

Advised by Will Wei Sun and Jordan Awan.

Seoul National University

March 2019- July 2021

Master of Science, Statistics.

Advised by Johan Lim.

Sogang University

March 2011- Feb 2019

Bachelor of Economics.

SELECTED RESEARCHES

Cho, Y.H., Sun, W. W. “Privacy-Preserving Dynamic Assortment Selection”

In preparation for *Operations Research*, arXiv:2410.22488

Cho, Y.H., Awan, J. “Formal Privacy Guarantees with Invariant Statistics”

Submitted to *Journal of Machine Learning Research*, arXiv:2410.17468

Cho, S., Shin, M., **Cho, Y.H.**, Lim, J. “Change point detection in high dimensional covariance matrix using Pillai’s statistics”

ASTA Advances in Statistical Analysis, 1-32

Cho, Y.H., Sun, W.W., Su, W “Privacy-Preserving Fine-tuning of Large Language Model”

On-going work; in preparation for *Operations Research*

Cho, Y.H., Chen, Y., Awan, J. “Bridging Privacy and Accuracy: Asymptotically Negligible Noise by Exponential Mechanism”

On-going work; in preparation for *Journal of American Statistical Association*

Cho, Y.H., Awan, J. “Differentially Private Conformal Prediction”

On-going work

HONORS AND AWARDS

George Casella Travel Award

Spring 2025

Department of Statistics, Purdue University

2025 American Statistical Association Student Paper Award from the Business and Economic Statistics Section

Privacy-Preserving Dynamic Assortment Selection

1st Prize, Purdue Statistics Graduate Student Workshop Competition Privacy-Preserving Dynamic Assortment Selection	<i>Fall 2024</i>
1st Prize, Poster Session in the Korean Statistical Society 2021 Spring Conference Detecting Change Points in Covariance Matrix from High Dimensional Sequence Data	
High-Potential Individuals Global Training Scholarship The Institute for Information communication Technology Planning and evaluation, Korea Visiting Language Technology Institute, Carnegie Mellon University	<i>Jan 2020 - Jun 2020</i>
Magna Cum Laude Sogang University	<i>Feb 2019</i>

TALKS AND POSTERS

2025 ICSA Applied Statistics Symposium (Invited Talk) Privacy-Preserving Fine-tuning of Large Language Model	<i>June 2025</i>
Theory and Practice of Differential Privacy 2025 (Poster) Bridging Privacy and Accuracy: Asymptotically Negligible Noise by Exponential Mechanism	<i>June 2025</i>
Purdue Statistics Graduate Student Seminar (Talk) Privacy-Preserving Dynamic Assortment Selection	<i>Nov 2024</i>
Theory and Practice of Differential Privacy 2024 (Poster) Formal Privacy Guarantees with Invariant Statistics	<i>Aug 2024</i>
Joint Statistical Meetings 2024 (Talk) Privacy-Preserving Dynamic Assortment Selection	<i>Aug 2024</i>
25th Annual CERIAS Security Symposium (Poster) Formal Privacy Guarantees with Invariant Statistics	<i>April 2024</i>
UCLA Synthetic Data Workshop (Poster) Privacy-Preserving Dynamic Assortment Selection	<i>April 2023</i>
Korean Statistical Society 2021 Spring Conference (Poster) Detecting Change Points in Covariance Matrix from High Dimensional Sequence Data	<i>April 2021</i>

TEACHING AND CONSULTING EXPERIENCES

Purdue University, Instructor STAT 301: Elementary Statistical Methods	<i>Fall 2024</i>
Purdue University, Teaching Assistant STAT 301: Elementary Statistical Methods STAT 516: Basic Probability and Applications STAT 598-503: Statistical Inference in Finance STAT 598-501: Probability in Finance	<i>Fall 2021, 2022, Spring 2023, Spring 2024</i> <i>Spring 2022</i> <i>Spring 2022</i> <i>Spring 2022</i>
Seoul National University, Teaching Assistant Special Lecture in R: Data Visualization and Exploratory Data Analysis Special Lecture in R: Clustering, PCA, Factor analysis Statistical Experiment Statistics	<i>Dec, 2020</i> <i>Dec, 2020</i> <i>Spring 2021, Fall 2020</i> <i>Fall 2019</i>

Seoul National University, Data Science Consultant

Fall 2019 - Spring 2021

Conducted 3 statistical consultations through the SNU Statistical Research Center

Sogang University

Math Help Center Tutor, Department of Mathematics

Spring 2018

Student Tutor: Econometrics, Economic Statistics, Macro Economics I

Spring 2017 - Fall 2018

OTHER PUBLICATIONS

Kim, S.J., Anh N.H., Jung, C.W., Long, N.P., Park, S., **Cho, Y.H.**, Yoon, Y.C., Lee, E.G., Kim, M., Son, E.Y., Kim, T.H., Deng, Y., Lim, J. and Kwon, S.W. "Metabolic and Cardiovascular Benefits of Apple and Apple-Derived Products: A Systematic Review and Meta-Analysis of Randomized Controlled Trials"

Frontiers in Nutrition 9, 766155

Kim, S.J., Anh, N.H., Diem, N.C., Park, S., **Cho, Y.H.**, Long, N.P., Hwang IG, Lim, J., Kwon, "S.W. Effects of β -Cryptoxanthin on Improvement in Osteoporosis Risk: A Systematic Review and Meta-Analysis of Observational Studies"

Foods 10 (2), 296

ACADEMIC SERVICE

Reviewer

Journal: The American Statistician

Session Chair

"Statistics, Artificial Intelligence and Large Language Models", ICSA 2025 Applied Statistics Symposium

TECHNICAL SKILLS

Programming Languages: proficient in Python, R, experienced in MATLAB

Softwares and Systems: PyTorch, TensorFlow, Linux, Cluster computing