

# Hyoin An (She/Her/Hers)

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## EDUCATION

**The Ohio State University** Columbus, Ohio  
Ph.D. in Statistics (Dissertation Advisor: Dr. Steven MacEachern) Aug. 2019 - May. 2024 [anticipated]

**Ewha Womans University** Seoul, South Korea  
M.S. in Statistics, GPA: 4.20/4.30 (98.5/100) Mar. 2017 - Feb. 2019

**Ewha Womans University** Seoul, South Korea  
B.Econ & B.S. in Statistics, GPA: 3.94/4.30 (95.9/100) *Magna Cum Laude* Mar. 2012 - Feb. 2017

## TEAMWORK/INTERNSHIP EXPERIENCE

**Consumer Behavior Prediction using Airbnb Web Log data** Seoul, South Korea  
*Final project in Graduate Data Mining course* Mar. 2018 - Aug. 2018

- Predicted binary decision-making time (fast/slow) of Airbnb customers until the first reservation, using web log data provided by Kaggle and published the results
- Created derived variables that helped improve prediction performance and used various machine learning methods such as Support vector machine, Gradient Boosting, and XGBoost on R

**L Point Big Data Competition, Lotte Members** Seoul, South Korea  
*Grand Prize (Second place)* Feb. 2018

- Participated as a team of three students to provide customized contents for customers, given demographic information and purchase logs of 18 thousands of customers
- Programmed a recommender system using R which suggests items that were purchased by customers who have similar demographic information and/or similar purchasing history, as well as weather and events according to the time of the year

**Circle in a Square Advisors - Ameriprise Financial Services, LLC** Washington D.C.  
*Intern* Feb. 2016 - Jun. 2016

- Processed client sensitive data with Ameriprise software designed to generate reports
- Reviewed tracking reports, prepared client case preparation forms, and submitted client files for retention

## RESEARCH EXPERIENCE

**Pulmonary Arterial Hypertension Analysis**, The Ohio State University Columbus, Ohio  
*Graduate Research Associate* (Supervisor: Dr. Shili Lin) May. 2021 - Aug. 2021

- Built survival deep neural network models predicting 1 year survival of Pulmonary Arterial Hypertension patients using genetic pathways, checked variable importance, and compared performance of models using 10-fold cross validation on R and Python
- Fit Bayesian network models using clinical variables on Yale Open Data Access platform to analyze quality of life of Pulmonary Arterial Hypertension patients

**Cancer operation rate & SES Analysis**, Ewha Womans University Seoul, Korea  
*Research Assistant* (Supervisor: Dr. Won Bok Lee) Dec. 2018 - July. 2019

- Analyzed National Health Insurance data at Korean National Health Insurance Service and studied relation between operation rate of cancer and socioeconomic status
- Transformed and cleaned data using SAS, applied logistic regression, visualized results using R and ggplot2

**Chronic diseases and Nutrition Analysis**, Mokdong Ewha W. Univ. Hospital Seoul, Korea  
*Research Assistant* (Supervisor: Dr. Hye Ah Lee) Apr. 2018 - Feb. 2019

- Supported by Basic Science Research Program through National Research Foundation of Korea (NRF) funded by Ministry of Education (NRF-2017R1D1A1B03028719)
- Analyzed nutrition intake patterns to find linkage between nutrition intake patterns and chronic diseases using cohort data from Korean Genome and Epidemiology Study utilizing reduced rank regression, mixed models, and generalized estimating equations

**Sufficient Dimension Reduction**, Ewha Womans University  
*Research Assistant* (Supervisor: Dr. Jae Keun Yoo)

Seoul, Korea  
Mar. 2017 - Aug. 2018

- Studied sufficient dimension reduction(SDR) methodologies, focused on drawback of sliced average variance estimation(SAVE), and presented fused approach to SAVE
- Researched SDR literature, conducted numerical studies on dimension test, won bronze prize in poster competition at 2017 fall conference of the Korean Statistical Society, and published paper based on work

## PUBLICATIONS

Lee, H. A., **An, H.**, & Lee, E. (2020) Dietary patterns related to cardiovascular disease based on reduced rank regression analysis of healthy middle-aged Koreans: data from the community-based Korean Genome and Epidemiology Study (KoGES) cohort, *The American Journal of Clinical Nutrition*, Volume 111, Issue 6, Pages 1159-1169.

Lee, H. A. & **An, H.**, (2020) The Effect of High Carbohydrate-to-fat Intake Ratios on Hypo-HDL-cholesterolemia Risk and HDL-cholesterol Levels over a 12-year Follow-up, *Scientific Reports*, 10, 913.

Lee, H. A., **An, H.**, & Park, H. (2019) Identification of Dietary Patterns Related to Metabolic Diseases and Their Association with Cardiovascular Disease: From the Korean Genome and Epidemiology Study, *Nutrients*, Volume 11, Issue 10, 2434.

**An, H.**, Choi, Y., Oh, R. E., & Song, J. W. (2019) Consumer Behavior Prediction using Airbnb Web Log data, *The Korean Journal of Applied Statistics*, Volume 32, Issue 3, Pages 391-404.

**An, H.**, Won, S., & Yoo., J. K. (2017). Fused Sliced Average Variance Estimation, *Journal of the Korean Statistical Society*, Volume 46, Issue 4, Pages 623-628.

## HONORS AND AWARDS

University Fellowship, <i>The Ohio State University, Columbus, Ohio</i>	Fall 2019 - Spring 2020
Lubrizol Start-up Fellowship, <i>The Lubrizol Foundation, Wickliffe, Ohio</i>	August 2019
Brain Korea 21 Plus Fellowship, <i>Korean Ministry of Education</i>	Fall 2017 - Fall 2018
4th Place in Poster Competition, <i>Korean Statistical Society</i>	Fall 2018
Grand Prize in 4th L. Point Big Data Competition, <i>Lotte Members, Seoul, Korea</i>	February 2018
Bronze Prize in Poster Competition, <i>Korean Statistical Society</i>	Fall 2017
Admission Scholarship, <i>Ewha Womans University</i>	Spring, Fall 2017
Dean's List, <i>Ewha Womans University, Seoul, Korea</i>	Fall 2012 - Spring 2014, Fall 2015, Fall 2016
Korea WEST Fellowship, <i>Korean National Institute for International Education</i>	Spring 2016
Global Internship Scholarship, <i>Ewha Womans University, Seoul, Korea</i>	Spring 2016
Creative Social Science Academy Scholarship, <i>Ewha Womans University</i>	Fall 2015
Placement & Work Experience Scholarship, <i>Ewha Womans University</i>	Summer 2015
International Exchange Scholarship, <i>Mirae Asset Park Hyeon Joo Foundation, Seoul, Korea</i>	Spring 2015

## TEACHING EXPERIENCE

**Statistics for the Business sciences**, The Ohio State University  
*Graduate Teaching Assistant*

Aug. 2021 - Present  
Columbus, Ohio

- Lead and assist four online recitation sessions on weekly basis for about 80 students in each session
- Hold online tutoring hours and grade recitation assignments every week

**Introduction to Statistical Analysis I**, The Ohio State University  
*Graduate Teaching Assistant*

Aug. 2020 - May. 2021  
Columbus, Ohio

- Led two online recitation sessions on weekly basis for about 40 students in each session
- Held online tutoring hours and graded weekly recitation assignments
- Managed and graded group projects of 14 teams

## SKILLS

**Software:** R, Python, SAS, MS-office

**Language:** Korean (Native), English (Proficient)