

# JAE HO CHANG

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## EDUCATION

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### M.A. in Applied Statistics

Mar 2018 – Feb 2020

Konkuk University

Seoul, South Korea

- Thesis title: *The Sparse High-Dimensional Linear Discriminant Analysis with Moderately Clipped LASSO*
- Thesis advisor: Dr. Sunghoon Kwon
- Academic advisor: Dr. Kyusang Yu

### B.A. in Applied Statistics

Mar 2012 – Feb 2018

Konkuk University

Seoul, South Korea

- Cumulative major GPA: 4.31/4.50
- Served in Republic of Korea Army from Feb 2014 to Nov 2015

## ACADEMIC AWARD

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### Poster awards

May 25, 2019

2019 Spring Conference

Korean Statistical Society

- Honorable mention awarded for the poster presentation of *Ultimate sharpening of Jensen's Inequality*

## TECHNICAL SKILL

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### Programming Languages

bash, R, Python

### Domain-specific Languages

HTML, SQL, Latex

### Softwares

Conda, PyCharm, docker, git, SPSS

### Platforms

AWS, GCP

## TEACHING EXPERIENCE

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### Part-time Lecturer

Jul 2020 – Oct 2020

GS Engineering & Construction

Seoul

- Elementary statistics: population, parameters, random variables, discrete and continuous types, expectation, sample distribution, hypothesis testing, simple and multiple linear regressions
- SPSS tutorials and practices

### Teaching Assistant

Mar 2018 – Dec 2019

Department of Applied Statistics, Konkuk University

Seoul

- Computer programming:
  - \*Regressions Analysis
  - †Theory of Likelihood Functions, Skew Normal and Related Distribution Families, Nonparametric Function Estimation
- Quizz marking:
  - \*Mathematical Statistics

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†Graduate courses

\*Undergraduate courses

## WORK EXPERIENCE

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### ML Engineer

Sep 2020 – Dec 2020

*Real Data*

*Seoul*

- Collaboration project on developing a self-driving vehicle module
- Was responsible for: image augmentation, image denoising, and training object detection model using CUDA and PyTorch

### Freelancer

May 2020 – Oct 2020

- Tutoring:
  - Statistics and theories for graduate students
  - Tutorials for using statistical softwares and programming languages
- Statistical Consulting:
  - (2020). Analysis of Performance Factors of KLPGA and LPGA Players, and Prediction of Winners. *Journal of the Korean society for Wellness*.
  - (2020). The Longitudinal Analysis of the Performance Factors Affecting the Korean Ladies Professional Golfer's Prize Money: Using Data from 2010 to 2019. *Journal of Golf Studies*.
  - (2020). A Case Study on Villagers' Participation and Project Achievement in Rural Development. *Journal Of The Korean Society Of Rural Planning*.

### Assistant Researcher

Jun 2018 – Sep 2018

*SK C&C, Korea University Medical Center*

*Seoul*

- Contributed to developing antibiotics recommendation system for the antibiotics stewardship:
  - Created predictive models for two major types of multi-drug resistant(MDR) diseases
  - Data cleansing and wrangling
  - Fitted classification models to predict the risk of each patient's MDR type
  - Built a Flask API to serve predictive models to the client

### Head Research Assistant

Mar 2018 – Dec 2019

*Statistical Consulting Office at Konkuk University*

*Seoul*

- Worked as the head research assistant: communication, data analysis, reporting
- A Meta-Analysis of the Stress Reaction Effect of Aromatherapy (Doctoral thesis in Art & Design, April 2018)
- A survey on the satisfaction of Korean traditional dessert classes (Korea Cultural Heritage Foundation, December 2018)

## ACADEMIC WORKS

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### Papers

2018 – Present

- Chang, J., Moon, H. & Kwon, S. (2021) High-dimensional Linear Discriminant Analysis with Moderately Clipped LASSO. *Communications for Statistical Applications and Methods*, 28(1), 21-37.
- Lee, S., Chang, J. & Kim, H. (2018) *Ultimate sharpening of Jensen's Inequality*. [manuscript submitted for publication.] The Department of Applied Statistics, Konkuk University.
- Lee, H., Chang, J., & Kim, G. (2020). A Study on the Conflict Structure of the Standing Committee through Topic Analysis of the National Assembly Minutes Health and Welfare Committee in the First Half of the 20th National Assembly. *Korean Party Studies Review*, 19(2), 131-167
- Lee, H., Kim, G., Chang, J. Kim, H. (2020). The Dynamics of Member's Bill Proposal: Health and Welfare Committee of the 20th National Assembly. *Journal of Future Politics*, 10(1), 33-65