Jiseok Chae
jsch@kaist.ac.kr

**Address**
E2-1 3227, KAIST
291 Daehak-ro,
Yuseong-gu,
Daejeon 34141,
Republic of Korea

# Jiseok Chae
채지석

## Interests

### Professional
- Continuous Optimization for Machine Learning
- Design and Analysis of Machine Learning Algorithms
- Computational Mathematics

## Education

### Mar. 2021 – Present, KAIST
Integrated M.S./Ph.D. Program, Mathematical Sciences
- Advisor : Prof. Donghwan Kim

### Mar. 2016 – Feb. 2021, KAIST
B.S., Mathematical Sciences
Minor: Computer Science

## Publications

### Two-timescale Extragradient for Finding Local Minimax Points
**Jiseok Chae**, Kyuwon Kim, Donghwan Kim
Twelfth International Conference on Learning Representations (ICLR 2024)

### Open Problem: Is There a First-Order Method that Only Converges to Local Minimax Optima?
**Jiseok Chae**, Kyuwon Kim, Donghwan Kim
36th Annual Conference on Learning Theory (COLT 2023)

### HEaaN-STAT: a privacy-preserving statistical analysis toolkit for large-scale numerical, ordinal, and categorical data
Younho Lee, Jinyeong Seo, Yujin Nam, **Jiseok Chae**, Jung Hee Cheon
IEEE Transactions on Dependable and Secure Computing, Issue 4, 2023

## Honors and Awards

### Graduated *summa cum laude*
Undergraduate GPA : 4.06/4.3                                    Feb. 2021

### National Scholarship for Science and Engineering
Korea Student Aid Foundation (KOSAF)                            2016–2020

### Dean's List
College of Natural Sciences, KAIST                             2019 Spring
School of Freshman, KAIST                                      2016 Spring

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# Professional Experience

### Jun. 2019 – Aug. 2019, *Research Programmer Internship*, CryptoLab

- Developed HEaaN.STAT, a statistical data analysis program using the homomorphic encryption scheme HEaaN.
    - Joint work with **Korea Credit Bureau**
- Invented a table lookup method for categorical data encrypted in HEaaN.

# Teaching Experience

### KAIST

- *Head Teaching Assistant*:
    - MAS110 Linear Algebra for Data Science

        2022 Spring – 2024 Spring

        * The founding head TA of the newly established course.
- *Programming Teaching Assistant*:
    - MAS109 Introduction to Linear Algebra

        2022 Spring – 2024 Spring

        * Director of teaching MATLAB and designing MATLAB materials
        * Planner of programming assignments throughout the semester
- *Teaching Assistant*:
    - MAS101 Calculus I                              2021 Spring, 2021 Fall
    - MAS374 Optimization Theory                              2021 Fall
- *Undergraduate Teaching Assistant*:
    - MAS101 Calculus I                        2018 Spring, 2019 Spring
    - MAS102 Calculus II                                        2018 Fall

# Skills

### (Natural) Languages

- Korean (First Language)
- English (Native Level of Proficiency: New TEPS 532/600)
- Japanese (High-Intermediate Level: SNULT 72/100)

### (Programming) Languages & Software:

- Python (including NumPy, PyTorch, . . . )
- MATLAB              ○ C++                    ○ LaTeX

# Other Activities

- *Regular member* of the Korea Cube Culture United (KCCU)