

Joonhyuk Ko

School Address

School of Engineering and Applied Science
University of Virginia
Charlottesville, VA 22903

Contact Information

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RESEARCH INTEREST

My interests lie in the intersection of machine learning, optimization, fairness, and privacy. Recently, I've been working in algorithmic fairness and differential privacy.

EDUCATION

University of Virginia

B.S. in Computer Science, B.A. in Mathematics

Aug 2022 – May 2026

GPA: 3.995/4.000

Relevant Courses:

Data Structures and Algorithms, Real Analysis, Probability, Linear Algebra, Partial Differential Equations, Theory of Computation, Software Engineering, Computer Systems and Organization

RESEARCH EXPERIENCE

Research Fellow

University of Virginia, Department of Computer Science

Advisor: **Dr. Ferdinando Fioretto**

May 2024 – Present

Charlottesville, VA

- Selected as a Dean's Undergraduate Engineering Research Fellow for Summer 2024.
- Attend weekly professional development workshops.

Research Assistant

University of Virginia, Department of Computer Science

Advisor: **Dr. Ferdinando Fioretto**

Jan 2024 – May 2024

Charlottesville, VA

- Analyzed fairness of data being collected from the American Community Survey.
- Developed a robust paradigm for survey methodology using convex optimization and statistical analysis.
- Utilized differential privacy on the survey paradigm to protect the privacy of respondents' sensitive information while providing accurate aggregate statistics.

TEACHING EXPERIENCE

Teaching Assistant

University of Virginia

Jan 2023 – Dec 2023

Charlottesville, VA

- Graded assignments and quizzes, and provided feedback to students for the following courses:
 - APMA 6410: Engineering Mathematics I (Fall 2023)
 - APMA 2130: Ordinary Differential Equations (Spring 2023)

Private Tutor

Self-employed

Jun 2023 – Aug 2023

Fairfax, VA

- Provided personalized instruction and guidance to high school students in AP Computer Science A curriculum.

- Focused on the best programming practices and problem-solving techniques to enhance students' understanding.

SKILLS

Programming Languages

Java, Python, C, JavaScript, TypeScript, MATLAB, SQL, L^AT_EX

Programming Tools/Libraries

NumPy, Pandas, Matplotlib, Seaborn, Scikit-learn, Gurobi, SciPy

Languages

English (native), Korean (native)

HONORS

Dean's Undergraduate Engineering Research Fellowship, 2024

Dean's List, 2022-2024