

Minjoon Kim

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Research Interests

Equivariant deep learning and 3D vision. I am interested in representations of 3D objects that are governed by the geometry of the object itself rather than by the data a model happens to see. Symmetry makes this concrete: when an object has a nontrivial symmetry group, its canonical frames form an orbit rather than a single answer, and one can decide in advance whether a representation is able to express it. I approach these questions with the tools I was trained in, mainly representation theory and topology.

Education

2023 – present	B.S. in Mathematics , POSTECH, Pohang, South Korea Expected graduation: February 2027
2020 – 2022	Hansung Science High School , Seoul, South Korea

Experience

2025 – present	Undergraduate Researcher , Computer Vision Lab, POSTECH Advisor: Prof. Minsu Cho. Equivariant representations for 3D orientation and geometric assembly.
Fall 2026 – present	Learning Seminar on Kazhdan–Lusztig Theory , Department of Mathematics, POSTECH Representation theory seminar organized by Prof. Valentin Buciumas: Hecke algebras, Kazhdan–Lusztig bases and polynomials, and their connections to geometry and combinatorics.
Feb 2024 – Aug 2025	Algebraic Geometry Seminar , Department of Mathematics, POSTECH Participant in a research seminar led by Prof. Kyoung-Seog Lee.

Publications

Under review	Distributional Estimation of 3D Object Orientation Minjoon Kim , Chunghyun Park, Minsu Cho Submitted to NeurIPS 2026
Under review	Evaluating Vision-Language Models on Fine-Grained East Asian Cultural Understanding Gyuwon Park, Minjoon Kim , Junhyuk Tak, Taewon Jung, Hyounghun Kim Submitted to the VLM4RWD Workshop, NeurIPS 2026

Awards

2025	Silver Prize , Mathematics Competition for University Students in Korea Korean Mathematical Society
2024	Bronze Prize , Mathematics Competition for University Students in Korea Korean Mathematical Society