

Danbi Kim

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EDUCATION

Korea Advanced Institute of Science and Technology(KAIST), Daejeon, South Korea

- M.S. in Mechanical Engineering 2025-Present
 - Advisor: Prof. Hansohl Cho (<https://continuum.kaist.ac.kr/>)
 - Currently on leave of absence
- B.S. in Mathematics and Aerospace Engineering 2020-2024
 - GPA: 3.86/4.3 (*Magna Cum Laude*)

WORK EXPERIENCE

WorldQuant BRAIN Research Consultant

- Generated alpha signals using WorldQuant BRAIN platform across U.S. equity markets. 2026 Spring
 - Built an automated alpha simulation pipeline using the WorldQuant BRAIN API in Python.
 - Achieved *Gold* Level in the WorldQuant Challenge.
- WorldQuant IQC 2026 — Participant
 - Team-based alpha strategy development across multiple asset classes

PwC Consulting Research Assistant (Digital & AI)

- Development of VectorDB Synchronization Workflows for a RAG-Enhanced LLM Chatbot 2025 Fall
 - Refactored the end-to-end Confluence to Milvus VectorDB update pipeline, transitioning from full re-ingestion to an incremental source-level update model (reducing refresh time from 30 minutes to 2 minutes).
 - Designed automated database configuration and lifecycle management mechanisms, incorporating versioning, batch backups, and rollback support.
 - Increased system reliability under unstable enterprise Confluence APIs by incorporating retry mechanisms and API-level monkey-patching.

PROJECTS

KAIST Financial Analysis Club (KFAC)

- 41st Research Team Member 2026
 - Conducted industry and company analysis for *PharmaResearch*, including valuation using trading comparables (market approach) and discounted cash flow (DCF) methods

KAIST Science Outreach Program (KSOP) (<https://outreach.kaist.ac.kr/>)

- Operation Mentor for Winter Camp 2025 Winter
 - Supported student-led projects involving AI agents and creative programming tools (*Antigravity*)

RESEARCH EXPERIENCE

- Laboratory for Solid Mechanics & Materials in Extremes at KAIST 2023-2024
with [Prof. Hansohl Cho](#)
 - Summarized papers related to thin structure and generated a Python script for *Abaqus* simulation of hyperelastic thin plate.

- Global Navigation Satellite Systems Lab at KAIST with [Prof. Jiyun Lee](#)
 - Learned the basic background of the satellite system.
- Winter 2022

RELEVANT COURSEWORK

- Statistics & Optimization
 - Convex Optimization Techniques (2025, A0) | [Portfolio Optimization Project](#)
 - Probability & Statistics (2020, A+)
- Rigorous Mathematics
 - Introduction to AI with Mathematics (2024, A-)
 - Topology, Real Analysis I & II, Linear Algebra, Differential Equations
- Mathematical Modeling & Simulation
 - Aerospace System Design I
 - Software Application in Aerospace Engineering

SKILLS AND LANGUAGES

- English: Proficient (iBT TOEFL 104, expired), Korean: Native
- Programming Languages: Python, MATLAB | [iamdanbi](#)

HONORS AND ACHIEVEMENTS

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| • KAIST Q-Day Student Special Awards Winners (T) | 2024 |
| • The 29th KAIST Swim Meet: Freestyle 100m (F) Bronze | 2024 |
| • KAIST Aerospace Engineering Hong Chang Sun Scholarship | 2023 |