Danbi Kim

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EDUCATION

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

- B.S. in Mathematics and Aerospace Engineering 2020-2024
  - GPA: 3.86/4.3 (*Magna Cum Laude*)
  - Courseworks: Introduction to Artifical Intelligence with Mathematics, Topology, Introduction to Aerospace Computational Mechanics

RESEARCH EXPERIENCE

Undergraduate Intern

- Laboratory for Solid Mechanics & Materials in Extremes at KAIST with Prof. Hansohl Cho 2023-2024
  - Summarized papers related to thin structure and generated a Python script for *Abaqus* simulation of hyperelastic thin plate.
  - Constructed programming code using Python to simulate the active particles.
  - Explored theoretical and experimental studies of Liquid Crystal Elastomers (LCEs) as part of understanding soft material mechanics.
- Global Navigation Satellite Systems Lab at KAIST with Prof. Jiyun Lee Winter 2022
  - Learned the basic background of the satellite system.

TEACHING EXPERIENCE

KAIST Science Outreach Program (KSOP) (https://outreach.kaist.ac.kr/)
Support students interested in the sciences but don't have proper opportunities via regular mentoring and eclectic scientific programs.

- Content Creation Mentor 2021 - 2024
  - Designed ten-week-long basic Python course materials and developed a mini-project to teach students who are new to computer programming.
  - Participated in the series of book introduction videos as a interview of mentors to encourage students to read.
- Education Mentor Spring 2022
  - Mentored ten high school students about their concerns and future career.
- Operation Mentor 2021
  - Supported the overall operation by mediating conflicts between people, preparing educational resources, and scheduling the program.

COURSEWORKS

- **MAS.40073 Introduction to Artifical Intelligence with Mathematics** 2024
  - Explored mathematical topics in AI, including random graphs, concentration inequalities, and information theory.

- **MAS.30031 Topology** 2024
  - Explored mathematical topics in AI, including random graphs, concentration inequalities, and information theory.
- **AE.49902 Special Lecutres in Aersopace Engineering** 2024
  <Introduction to Aerospace Computational Mechanics>
  - Developed a 2D finite element method (FEM) code using *MATLAB*.

SKILLS AND LANGUAGES

- English: Proficient (iBT TOEFL 104), Korean: Native
- Programming Languages: Python, MATLAB, C
  https://github.com/DANBILAND
- Computer aided design/engineering: SolidWorks, Abaqus.

HONORS AND ACHIEVEMENTS

- KAIST Q-Day Student Special Awards Winners (T) 2024
  - Awarded in the "Trust and Communication" category for contributing to the development of humanities and arts programs as the KSOP Media Team.
- KAIST Aerospace Engineering Hong Chang Sun Scholarship 2023
  - Established to create an educational environment where students with excellent grades can focus on their studies, in honor of Professor Hong Chang Sun.
- KAIST National Science and Technology Scholarship 2020-2023
  - Covered all four years of tuition and provided a small monthly stipend.

INTERESTS AND ACTIVITIES

Contribute to diverse social activities out of curiosity toward the world and strong intelligent desire, especially dedicate to sports activities with a team.

- KAIST representative Swimming Team *KAORI* team member
  - The 3rd Gimcheon Masters Swimming Competition: Backstroke 100m (F) Bronze Medal (2025)
  - The 29th KAIST Swim Meet: Freestyle 100m (F) Bronze (2024)
  - The 2nd Gimcheon Masters Swimming Competition: Freestyle 100m (F) 5th place (2024)
- The 4th KAIST Reading King: Individual Category Champion Award (2024)
- The 2nd KAIST Reading King: Individual Category Encouragement Award (2022)

Last updated August, 2025.