

Geonwoo Kim

UNDERGRADUATE | COMPETITIVE PROGRAMMER | DEVELOPER | RESEARCHER

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EDUCATION

Daegu Gyeongbuk Institute of Science and Technology (DGIST) School of Undergraduate Studies GPA: 4.21 / 4.30	Daegu, South Korea Feb 2026 - Present
Daejeon Science High School for the Gifted High School Diploma GPA: 3.70 / 4.30	Daejeon, South Korea Mar 2024 - Jan 2026

COMPETITIVE PROGRAMMING

UCPC 2026 Final Round Collegiate Team Programming Contest	Finalist - 28th of 60 teams; 149 preliminary teams 2026
Korea Olympiad in Informatics (KOI) Algorithms and Data Structures	National Competition 2017 - 2025
- National Silver Prize in four consecutive years (2017-2020) and Regional Grand Prize in 2017 and 2018. - In the High School Division: Silver and Bronze in the 2024 rounds; Bronze and Honorable Mention in both 2023 and 2025. - Completed the 33rd KOI Summer School (2024) and the 34th KOI Winter School (2025).	
Nexon Youth Programming Challenge (NYPC) National Programming Competition	Finalist, Ages 15-19 2024

EXPERIENCE

KimuStory - Ep 🌐 Production Discord Fishing Game 400,000+ users across 53,000+ Discord servers	Main Developer Feb 2022 - Present
- Build and maintain a stateful game service used by 400,000+ unique users across 53,000+ Discord servers. - Engineer interaction, progression, and backend systems with TypeScript, Node.js, discord.js, Redis, NestJS, REST APIs, and PostgreSQL, emphasizing concurrency, correctness, and fault handling.	

RESEARCH

Self-Correction Quantization for Korean Large Language Models Daejeon Science High School Graduation Research Program Proposed Self-Correction Quantization (SCQ)	Sole Researcher Mar 2025 - Nov 2025
- Proposed Self-Correction Quantization (SCQ), which fine-tunes a quantized model on self-generated corrections to recover Korean linguistic capability without an external correction corpus. - Compared PTQ, generic QAT, and SCQ on Korean LLMs up to 12.8B parameters: 4-bit PTQ reduced memory by about 84%, while SCQ improved the grammar-sensitivity score by 2.75x over PTQ with less general-reasoning degradation than generic QAT.	
3D Gaussian Splatting for Metaverse Content Development Science Gifted Creative Research (R&E) Grand Prize and Minister of Science and ICT Award	Team Lead Mar 2024 - Dec 2024
- Designed 33 controlled dataset conditions varying image count, brightness, and contrast; built a Python pipeline that automated training-data generation and evaluation with PSNR, SSIM, and LPIPS. - Used frequency-energy and local-contrast analyses to explain reconstruction-quality degradation and identify robust capture conditions.	

PROJECTS

Sangsaeng-ieum - AI Support Platform for Foreign Workers

AI Convergence Policy Discovery Hackathon

Honorable Mention

Team Lead

Mar 2025 - Jun 2025

- Led a four-person team in prototyping AI-assisted worker matching, a multilingual support chatbot, and guided electronic contract and administrative workflows.

SnowMix - AI-Assisted Web Accessibility

Web Accessibility Project

National Bronze Prize

Team Lead and Lead Developer

Jul 2024 - Nov 2024

- Built a browser extension and AI service that analyzes visual structure and dynamic content, produces navigable descriptions, and transforms images for color-blind users.
- Led a four-person team across planning and implementation using JavaScript, Python, and PyTorch.

ARKit Indoor Navigation for Visually Impaired Users

iOS Prototype for Spatial Mapping and Audio Route Guidance

Accessibility-Aware Indoor Navigation

Developer

Jun 2024 - Sep 2024

- Constructed a 3D graph from ARKit spatial anchors and implemented A* pathfinding with accessibility-aware edge weights for step-by-step audio navigation.
- Mapped and repeatedly tested dozens of points in a school building, refining coordinate handling and calibration to reduce sensor-induced routing errors.

LEADERSHIP AND ACTIVITIES

Pineapple Computer Club

Information Technology Club

Revitalized a long-running school club

President (2024)

Apr 2023 - Aug 2025

- Revitalized a long-running information technology club by organizing regular activities across programming, software projects, and broader computing topics.

Infomaker

Algorithm Problem-Solving Club

Led about 20 students

Founder and President

Mar 2024 - Dec 2025

- Founded the school's first algorithm problem-solving club and led about 20 students through lessons, contest practice, and peer solution reviews.
- Built a solved.ac-integrated practice and ranking system that generated workbooks by topic and adapted problem selection to different skill levels.

DSHStack Programming Contests

Student-Led Algorithm Competitions

Up to 180 external participants

Organizer, Problem Setter, and Reviewer

2024 - 2025

- Organized contests for roughly 40-60 in-school participants and about 180 external participants per event.
- Coordinated problem setting, generators, validators, adversarial tests, seven external reviewers, editorials, and live solution sessions using Polygon and testlib.

HONORS AND AWARDS

National and Regional Awards - Korea Olympiad in Informatics (KOI)

2017 - 2025

Honorable Mention - AI Convergence Policy Discovery Hackathon

Sangsaeng-ieum: An AI-Based Support Platform for Foreign Workers

Jun 2025

Provincial Governor's Award

Grand Prize - Science Gifted Creative Research (R&E)

Developing Metaverse Content through 3D Gaussian Splatting

Jan 2025

Minister of Science and ICT Award

Bronze Prize - 9th National High School Club Software Competition

SnowMix: An AI Web Accessibility System for Visually Impaired Users

Nov 2024

University President's Award

Bronze Prize - 30th Daejeon Student Science Exploration Olympiad

Exploring Applications of Stable Diffusion

Sep 2024

Superintendent of Education Award

ADDITIONAL EDUCATION

Information Technology Gifted Education Program

Elementary, Intermediate, and Advanced Courses

Daejeon Metropolitan Office of Education

2018 - 2020

- Progressed from a C++ Korean typing tutor (2018) to a Python/Qt vocabulary-learning application using the Open Korean Dictionary API (2019), then integrated a KoGPT2 conversational model into a Discord bot (2020).