ANDREW JOUN KIM

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EDUCATION

CARNEGIE MELLON UNIVERSITY (Pittsburgh, PA, USA) **Aug 2025 – May 2029**

- Cumulative QPA: 3.33/4.0
- Carnegie Institute of Technology | Majoring in Material Science & Engineering and Biomedical Engineering

SEOUL INTERNATIONAL SCHOOL (SIS) (Seongnam, South Korea) **Aug 2021 – May 2025**

- Cumulative GPA: 97.33/100; SAT 1: 1570 (R&W - 780, Math - 790)
- Awards: USA Bio-Olympiad Semi-finalist; HOSA 3rd Place (Nationals Qualifier) in Biomedical Laboratory Sciences; KAIAC Basketball Champions; Team Finalist & Best Speaker, Korea Business Competition

WORK EXPERIENCE

Tutor, **CLUBZ! TUTORING** (Remote) **Oct 2026 – Present**

- Provide tutoring in AP Biology, Chemistry, and Physics, tailoring lessons and practice problems to students' goals and learning style.
- Track student progress across sessions, identifying weaknesses and adjusting to improve performance on tests and AP examinations.

Summer Research Intern, **INNOVATIVE DOSIMETRY LAB @ YONSEI** (South Korea) **Sept 2025 – May 2026**

- Constructed 3D organ models referencing medical imaging data using TotalSegmentator for use in Monte Carlo simulations.
- Gained hands-on experience with computational simulation software (PHITS) to model physical processes in human anatomy.

Laboratory Assistant, **CARNEGIE MELLON CLOUD LAB** (Pittsburgh, PA, USA) **Sept 2025 – May 2026**

- Cloud Lab in Pittsburgh, PA is one of the first few "self-driven laboratories" leveraging AI to conduct biochemical research.
- Handles receiving and appropriate storing of chemicals and laboratory materials, manages inventory and organization in materials.

Project Intern, **NEARTHLAB DRONE TECHNOLOGY** (South Korea) **Jun 2024 – Nov 2024**

- Developed prototype drone that sprays natural solution into public bodies of water to prevent infection due to antibiotic resistance.
- Published article in the company journal on the introduction of drones to biomedical field and their efficiency in real-life application.

Research Assistant, **FLOW-X LABORATORY; KYUNG HEE UNIVERSITY** (South Korea) **Jul 2023 – Aug 2023**

- Designed 3-dimensional models of lung and cardiovascular system to understand fluid-structure interactions in the human body.
- Worked together with pediatric surgeons and created digital models of patients' CT and MRI scans to guide critical operations.

RESEARCH EXPERIENCE

Principal Researcher, **INDEPENDENT RESEARCH** **Jun 2024 – Sept 2024**

- Engineered AI-powered antibiotic-resistant bacteria predicting drone that prevents rise in resistant bacteria from climate change.
- Leveraged plants extract as inhibitors of permafrost pathogens from resistance-related plasmid transformation with superbugs.
- "Developing a Phytoextract System to Inhibit Superbug Transformation in Pathogens from Permafrost Thaw."

Principal Researcher, **INDEPENDENT RESEARCH** **Jun 2023 – Sept 2023**

- Investigated natural treatment for infection and disease caused by lack of infrastructures and resources in post-war areas.
- Confirmed the anti-inflammatory and apoptosis-inducing treatment methods of Evening primrose plants mainly in Ukraine.
- "Preventing Waterborne Infection and Pulmonary Disease in War-Torn Regions Using Evening Primrose Extract."

RESEARCH AWARDS

- Columbia Junior Science Journal Semi-finalist Dec 2024
- Samsung HumanTech Paper Award Finalist Dec 2024
- Gold Medalist, Genius Olympiad Science Division Jun 2024
- Second Place, Sigma Xi Student Research Showcase Apr 2024
- Gold Award, Pacific-Asia Science Olympiad Health & Human Biology Apr 2024

LEADERSHIP & ACTIVITIES

Pre-Probationary Member, **CMU EMERGENCY MEDICAL SERVICES** **Sept 2025 – May 2026**

- Respond to medical emergencies on campus with the campus Police Department to ensure safety of students, visitors and staff.
- AHA CPR & First Aid certified and intends on becoming an Emergency Medical Technician in the state of Pennsylvania.

Executive Committee, **PLUS-X** **Jun 2023 – Aug 2024**

- Hosted "EcoQuest Challenge" which included more than 100 participants globally to fundraise money for 3947 trees in Vietnam
- Coordinated "AquaQuest 6K" where 100 participants ran a symbolic 6 km to raise 10,000,000 KRW for water security in Africa.

***Captain & Point Guard*, BASKETBALL** **Nov 2021 – May 2025**

-Designed individualized conditioning drills, coached middle school team, and implemented team outings to promoting chemistry.
-Led team to 22-23 Conference Champions and KAIAC Tournament Champions for three consecutive seasons (21-22, 22-23, 23-24).

Head Percussionist, **HS ORCHESTRA & BAND** **Aug 2021 – Jun 2024**

- Performed in the Wind Ensemble and HS Orchestra as well as attending rehearsals 4 days a week.
- Awarded 2 consecutive Platinum KIMEA Award for HS Band and 2 consecutive Platinum KIMEA Award for HS Orchestra.

***Editor-in-Chief*, *Science & Technology Chief Editor*, DUX MAGAZINE** **Aug 2019 – May 2025**

- Wrote and edited articles for the science and technology department on monthly topics in charge of 50 students worldwide.
- Published 20 volumes of magazines to share and inform knowledge on modern scientific and technological issues.

SKILLS & TOOLS

- Languages: English, Korean, Mandarin
- Laboratory Skills: Cell culture, spectroscopy, chromatography, PCR, gel electrophoresis
- Computer: Python, PHITS, BLAST/BLAT, MATLAB, Monte Carlo Simulations, TotalSegmentator