As a child, I didn't fully grasp the magnitude of my parents' decision to leave South Korea for the United States in pursuit of opportunity. Looking back, I realize that moving from Korea's test-oriented system to the U.S.'s broad curriculum allowed me to explore diverse subjects, sparking my passion for science.

This passion first took flight—quite literally—in elementary school when I crafted paper planes for Science Olympiad, which introduced me to aerodynamics and teamwork. In middle school, I spent hours using CAD software on my father's laptop to recreate engines from his workplace. By high school, my scientific pursuits advanced beyond my parents' educational background as I began research at Auburn University, simulating asteroid impacts using Fortran programming. Eager to share my excitement, I tried to explain my project to my parents, but when I mentioned the Arbitrary Lagrangian-Eulerian method, their faces glazed over. To them, my work looked like endless black screens filled with code. Dissatisfied, I transformed my data into powerful visuals of the asteroid's strike on the Earth's surface. The difference was stark: my parents could finally grasp the exhilaration of studying a cosmic event.

What began as an effort to bridge the communication gap with my parents evolved into something far more impactful. The visualizations I created were submitted to the 2021 Michael H. Freilich Student Visualization Competition at the AGU Fall Meeting, where they won the grand prize and were featured on NASA's Hyperwall. Building on this recognition, I transformed these datasets into a YouTube video with over 100,000 views. Through this experience, I realized that visuals can not only reach a wider audience but also illuminate the importance of research that might otherwise be obscured by technical jargon.

At Caltech, as a member of the Lamb Surface Processes Group, I focused on making scientific research accessible through visuals. Whether creating hazard maps or simulating river erosion to quantify erosion risks, I always considered whether my parents could understand my work. This guiding principle ensured the accessibility of my research to a broader community and informed my presentations at conferences and in my published papers.

I plan to pursue a graduate program to further my commitment to making science accessible, not only to my parents but to individuals from all backgrounds. My goal is to address language barriers and broader challenges that limit access to scientific education. Growing up in Alabama and attending a public school, I saw firsthand how students in underserved communities often miss out on opportunities, making science feel out of reach. Each week, I volunteer as a tutor for students in the Pasadena Unified School District. Whether helping with algebra homework or offering friendship advice, I find it fulfilling to watch their uncertainty transform into confidence. At Harvard, I look forward to building on my community service by participating in programs such as Cambridge School Volunteers and the Phillips Brooks House Association, helping students who might not see themselves in science gain the confidence to explore it further.