1. Tell us about your experiences as a New American. Whether as an immigrant yourself, or as a child of immigrants, how have your experiences as a New American informed and shaped who you are and your accomplishments? (?)

The breeze in Vietnam’s Central Highlands was the first hint of spring. By March 1975, it thickened into the roar of tanks. As the North advanced, my grandfather—who had served in the South Vietnamese army—ran with my newborn mother in his arms. A shell burst nearby, burning her face. Believing she had died, my grandparents slipped to a riverbank to bury her unseen. My grandfather lifted a canteen from a fallen U.S. soldier and poured water over her face in baptism. She blinked. That blink—fragile yet defiant—became the first heartbeat of every opportunity I’ve ever had.

Survival didn’t bring safety. Because of his service and our family’s Catholic faith, my grandfather spent nearly a decade in a re-education camp. My mother left school in middle school to help feed her siblings, working as a maid and eating leftovers from the plates she cleaned. Years later, the United States opened a lifeline through the Humanitarian Operation—Hạt Ô—offering families like mine a narrow door, a second chance to begin again. Immigration, for my family, meant letting go of what was to reach for what could be. Growing up between Vietnamese resilience and American possibility, I carried both the ache of what my family left behind and the promise of what we might become.

My mother’s courage in rebuilding our lives taught me that resilience isn’t abstract—it’s the daily choice not to give up. I watched her navigate housing forms and public-assistance offices, translating even when I barely understood the words. She worked two jobs—at a mail factory by day and a nail salon at night—saving toward the dream of owning a salon. She’d come home late, stretch our food stamps, and use tip money and Burger King coupons so we could share a warm meal. Only then would we study for her citizenship test: a fifth grader translating the three branches of government to someone who had last studied at my age. She would say, “Cúi đầu là sách vở, ngẩng đầu là tương lai”—look down to study; look up to your future. With that determination, she became a U.S. citizen.

As America became my mother’s refuge, school became mine. Every week we visited the library, each returning home with a borrowed world. One afternoon, I wandered to the shelf on space, picked up a book about the Moon, and was hooked. Within weeks, I devoured volumes on planets, the Sun, and asteroids. When my school offered little on astronomy, my English teacher stepped in—encouraging me to take advanced classes outside our school and showing me how to find scholarships. His mentorship mattered in a community where few students applied to four-year universities.

I chose Iowa State University—close enough to support my family, yet far enough to grow. A full scholarship lifted the financial weight from my mother’s shoulders and allowed me to focus. I became the first in my family to earn a college degree, a milestone built on her persistence, my teachers’ faith, and my own discipline. It taught me that every breakthrough begins when someone believes in your potential.

That belief followed me into research. Before I had even taken an orbital mechanics class, I reached out to a professor studying spacecraft trajectory optimization. Instead of turning me away, he invited me to join his team for the Global Trajectory Optimization Competition. Through that experience, I discovered the beauty of astrodynamics—and the transformative power of mentorship. Someone’s belief in me ignited a purpose beyond technical curiosity: to guide others as I was guided and to pursue a graduate education.

When I entered graduate school at the University of Illinois at Urbana–Champaign, I had no funding. To stay afloat, I worked two jobs while taking five classes, hoping to finish faster. Instead, I landed on academic probation with a 2.78 GPA. It was humbling—but setbacks are setups for something greater. I thought of my mother, who rebuilt from nothing in a country whose words she didn’t yet understand—working two jobs, realizing her American Dream of opening a nail salon, and still finding time to study for her citizenship test. Her strength reminded me that perseverance isn’t just endurance; it’s adaptation. I rebuilt too—rising to a 3.66 GPA and carrying that lesson into my current graduate program, where I stand at 3.94. Through that process, I learned how to help students facing similar challenges rebuild their own confidence.

At Illinois, my advisor gave me the chance to braid my two callings—teaching and research. Under his mentorship, I led a thesis on assessment in an Introduction to Rocketry course, testing staggered quiz structures to reduce fatigue, build self-efficacy, and help students persist. That trust reshaped me as an educator: effective teaching starts with empathy and intentional design. I carried that forward as a high-school math teacher and at the Boys & Girls Club, where I taught computer literacy so students without reliable access could become fluent, confident problem-solvers. As an Engineering Career Peer, I have also mentored undergraduates navigating their first professional steps—reviewing résumés, conducting mock interviews, and discussing offer negotiations. I’ve seen firsthand the moments their confidence turns into opportunity: students securing internships, full-time offers, and graduate-school admissions. Through Club for the Future and Lincoln Laboratory Educate, I now design K–12 workshops that help students see themselves in STEM. It’s how I honor the chances my family and mentors gave me—by widening the path so the next student doesn’t have to walk alone.

Because of my mother’s grit and sacrifice, I’ve built a purposeful career across the aerospace sector. At the Space Dynamics Laboratory, I developed state-estimation algorithms to catalog resident space objects. At Varda Space Industries, I helped build microgravity products in orbit. At Blue Origin, I worked on lunar-lander engine control. At Blue Canyon Technologies, I supported mission operations and led hardware and software testing for commercial, government, and private customers. Now, at MIT Lincoln Laboratory, I’m characterizing the probability of detection for resident space objects from electro-optical data to strengthen national space-domain awareness. Each role sharpened my technical judgment; more importantly, each clarified my purpose: to use engineering as a way to widen who gets to participate.

Gratitude, to me, is direction. My family’s story began with survival; mine continues with the responsibility to turn that survival into service—through education that opens doors, widens reach, and invites more people to be prepared and believed in. I don’t see education as a personal triumph but as a shared inheritance, a path paved by those who ran, rebuilt, and believed. My mother’s words still guide me—“Cúi đầu là sách vở, ngẩng đầu là tương lai,” look down to study; look up to your future—reminding me that learning is both devotion and horizon. To honor the courage that carried us here, I aim to widen the path for others: teaching, mentoring, and building programs that make space—on Earth and in orbit—more accessible. My mother once blinked her way back to life; my work is to ensure others have the chance to open their eyes to their own futures.

1. Tell us about your current and near-term career-related activities and goals, as well as why you decided to pursue the specific graduate program(s) and school(s) that you have. (?)

I’m building flight-ready autonomy for spacecraft—tools that answer “Where am I? Where am I going? How do I get there?” across LEO, cislunar, and deep-space regimes. Near-term, my PhD will focus on three pillars: (1) **online trajectory optimization** for real-time replanning, (2) **adaptive, model-compensating state estimation** that remains accurate under uncertainty and across orbit regimes, and (3) **robust, model-free disturbance rejection** for flexible modes, propellant slosh, and unmodeled dynamics. I’ll take each from **high-fidelity simulation → software test → hardware-in-the-loop**, targeting publishable results (2–3 first-author papers) and a CubeSat-class demo validated against explicit navigation-error thresholds. Long-term, I aim to release **open-source GNC infrastructure**—trajectory planning, adaptive navigation, and robust control—plus shared protocols for rendezvous, deorbit, and traffic management, so universities, startups, and agencies can adopt, certify, and extend reliable autonomy at lower cost.

I’m pursuing Stanford Aeronautics & Astronautics to work in the **Space Rendezvous Laboratory (SLAB)** with Prof. Simone D’Amico. SLAB’s mission squarely matches my focus: **astrodynamics + GNC + environment characterization + decision-making** to enable **distributed space systems** (formation flying, swarms), with rigorous validation via hardware-in-the-loop and flight demos. SLAB work includes autonomous multi-satellite navigation using only onboard vision (StarFOX/Starling), demonstrating the kind of field-validated autonomy I want to help push forward. Stanford is also a strong fit for my mentoring goals. Its **AIM (Asian American Interactive Mentoring)** program pairs undergraduates with grad students, faculty, staff, and alumni for one-on-one mentorship attentive to cultural context—I plan to serve as a mentor and channel my experiences as a first-gen New American into practical guidance on research, internships, and graduate pathways. Within Aero/Astro, additional mentoring and exposure pipelines connect students to research and graduate preparation—structures I’ll plug into to keep widening access to space careers.

In parallel with research, I’ll continue hands-on education and outreach (building on my rocketry-assessment redesign and K-12/classroom visits) by developing classroom-ready modules that mirror my lab work—e.g., small-sat testbeds for vision-based navigation and disturbance rejection—so students from under-resourced backgrounds can touch autonomy, not just read about it. Pairing **open tools** with **open teaching** is central to my plan: progress scales when others can build on it. Stanford’s SLAB gives me the research home to make flight-credible autonomy real; the AIM ecosystem and student-support pipelines give me a way to make the path behind me clearer for those coming next.