1. Describe your short term and long term academic and professional intentions. \* (250-word limit)

I am graduating with my second master’s in electrical engineering with a focus on space systems engineering this summer of 2026 and from there start my PhD in aerospace engineering. My research interests include robust GNC algorithms that can reject disturbance and model free and adaptive algorithms. Research and teaching are my academic and professional intentions. Short term I plan on mentoring undergraduate students. At standard this would be programs such as the AIM Interactive Mentoring Program and the Honors Thesis Mentorship Program. I want to help undergrads, especially first generation, navigate something that no one in their family has ever done before and remove as many barriers as possible. My goal in this mentorship is to guide them through their undergraduate career and then into their future careers. Whether that is in a professional setting or moving onto higher education. Professionally my long-term intension is to develop novel guidance navigation and controls algorithms for space applications during interplanetary travel. This would include high fidelity modeling and simulation for deep space mission design and trajectory optimization and other guidance algorithms with online optimization. For deep space navigation, this would be research, development, and implementation of filter estimators that don’t heavily rely on the model or are even model free, through techniques such as noise compensation and dynamic model compensation. This would also include online covariance matching for the state, process, and measurement noise. For controls this would include model free disturbance control algorithms with adaptive gains. For mentoring this would include starting a research lab as a professor. This lab would focus on the technical aspects of guidance navigation and control for deep space missions. But it will also serve a higher purpose of targeting students from marginalized communities. Offering mentorship, academic and professional growth to these students. Again, removing another barrier. This program would pair undergraduate and graduate students together, where the graduate student would lead the technical aspect of the research and mentor the undergraduate student assigning them appropriate problems where they will develop their skills. Again, removing the barriers for these students so they can focus on their professional and academic endeavors, while the lab is able to provide and inclusive, safe, and welcoming environment for students to grow.

1. Please tell us when you: \* (All fields required)
   1. Engaged with someone with a different perspective
   2. Acted with courage

i think i can talk about the time when a professor got mad at me for helping students create a final exam study document. the context is that a had a group of students that would show up t my office hours for astornomy and the professor didn't make them or didnt' rpovide a study guide for them. this is a frehsman level class and they didn’t know how to prepare for the exam. The students don’t come from STEM backgrounds so they were very nervous for this exam. When the students would come to office hours they would ask me if I could make a practice exam for them but I told them that I couldn’t do it for them but I can help them make one. I guided them into making their own by first going through the slides with them then seeing where they got stuck. From there I would have students that were more comfortable in this subject take a lead and develop questions as other students covered other subjects. Then we would separate into groups while everyone would take notes within their groups and teach each other. From there the groups would look at each others notes and develop a larger final exam study guide. The professor found out about this and talked to me one on one about doing this for the students. The professor felt that it was unfair that I was doing all of this for the students and that I was doing all of the work for them. I was reluctant at first but decided to speak with him about the matter. I understood where he was coming from but I also explained him my perspective too. He was a new professor and this was his first time teaching undergraduate students from this background. So I explained to him that they don’t have the same background and have different study methods. And they are also freshman in their first STEM class ever and a lot of them were intimidated by that. I know it’s wrong to do the work for them, but as a teaching assistant

* 1. Fell short of expectations

My first semester of graduate school I was not prepared for the

1. Please tell us eight improbable facts about you. These could include facts that people wouldn’t expect to be true and/or facts that others are surprised to learn about you. \* (*All fields required*)
   1. I almost got dismissed from my first semester of grad school due to academic probation
   2. I worked 4 jobs during my first graduate degree and worked full time while pursuing my second graduate degree
   3. I’m the first person in my family to pursue education beyond 8th grade and by extension, high school, undergrad, and graduate school
   4. I’ve had over 25 jobs my entire life, where my first job was fixing houses and cars with my uncle and dad
   5. I’ve travelled across the country 3 times pursuing different career opportunities
   6. I’ve developed, tested, and implemented software and hardware that are onboard spacecrafts in orbit
   7. I used to be a math teacher and after school program coordinator at the boys and girls club
   8. Although being Vietnamese and growing up in a Vietnamese household, I didn’t grow up eating Vietnamese food.
2. Connect the dots. How have the influences in your life shaped you? \* (Limit: 550 words)

Growing up food was so important to my family and I; it was a means to get together to not only fill our stomachs but our hearts as well by spending time together. My parents are both refuges from the Vietnam war. Coming over and starting a new life, they traded the struggle of war and almost losing their lives for a second chance at life here in the states. They did everything they could to raise my 4 siblings and I. We grew up in section 8 housing and government assistance. My mom would always know how to make food stretch, somehow feeding four kids. Luckily, we were offered free breakfast and lunch at school, and they would send us home with perishable food. My mom would somehow make all that food stretch and was able to feed all 4 kids off that. For dinner she would often make hard shell tacos or fry eggs with rice and fish sauce. 1 egg for each person in a family of 6, half a carton of eggs when a dozen used to be about $2 that would be dinner for our family for years. Sometimes dinner would be a combo dinner from a Burger King, KFC, or Subway coupon. I was always excited for school because they would have my favorite things in the cafeteria, my favorite being breakfast pizza in the morning and crispitos for lunch. My parents did the best they could to raise my siblings and I, even though they didn’t have the role models they needed. My mother’s father was a prisoner of war for nearly a decade, and she didn’t even meet him until he was released. My father fled with 2 out of his 7 siblings when he was just 11 years old, losing his father along the way. That generational trauma of war, poverty, and survival played out in their marriage as well and led to emotional and physical abuse which led to their separation. School was always a safe space for me, I was always fed and taken care from 8 am to 3 pm 180 days of the year. This safe environment was where I was able to cultivate a deep sense of learning and exploring. In kindergarten my passion for space started when I found a series of books about the solar system. From there I was hooked on space. The first things I learned about were Kepler’s Law’s and Galileo’s life and how he was excommunicated by his ideas.