Personal Statement

Growing up in a low-income household in the Bronx, I learned early on how to find and maximize resources efficiently. This skill extends beyond simply managing basic needs; it's about discovering hidden gems, like the best flea markets, thrift stores, and discount shops. As the oldest daughter of an immigrant Dominican family I also had been placed with the role of caregiver, translator and role model. Over time, this resourcefulness has evolved into a way of connecting with others and giving back to my community. I often observed scaffolding that remained in place for years without any visible progress or workers on it. If anything, I'd love to make things happen.

At Bowdoin College, I continued to assist my peers in various ways. As a Grader for Probability and a Learning Assistant for Data Structures, I provided academic support that reinforced my ability to communicate complex concepts clearly and patiently. I also served as a Middle School Math Tutor for America Counts in Maine, working with students both individually and in groups to help them grasp challenging problems, whether academically or socially. Outside of formal roles, I try to help my younger brothers understand their schoolwork and build strong academic foundations.

This was a balancing act, but I had to do this to make sure that my education would not be an added economic burden on my family. I always wanted to finish my degree without bearing any debt. I also originally intended on fulfilling the Bowdoin 3-2 engineering program where a student receives a Bachelor's degree from Bowdoin and a Bachelor's in Engineering from Dartmouth. I completed most of the prerequisites for this curriculum, but I decided to switch courses and study abroad for a year, which ended up being a pivotal moment both in my academic and personal maturation.

I started my year abroad in Stockholm where I studied Machine Learning, my first time leaving the US since I immigrated. This program included academic field trips to explore robotics and music projects conducted by graduate students in London and Gothenburg. In Stockholm, I was especially interested in the program, as it housed Spotify, and I got to interact with people working on projects ranging from Spotify Wrapped to algorithms behind playlists. That same year, I visited the University of Puerto Rico in Mayaguez, where I studied Engineering Mechanics Statics and Ordinary Differential Equations in Spanish. The opportunity led me to rediscover my roots, my language, but simultaneously reiterated to me the fact that mathematics is a universal language across cultures and boundaries. This past year has been one of tremendous growth during which diverging academic and personal experiences molded my growth.

Having the space and time to focus entirely on my studies, without financial worries, allowed me to immerse myself fully in my academic pursuits. I had worked during my first two years of

college to save money and earned several grants while abroad, which provided some financial stability needed to concentrate on my education. I am interested in pursuing Mechanical Engineering, a passion that began during my engineering mechanics statics class at the University of Mayaguez. This experience was transformative as it was the first time in college where I didn't work, cooked for myself, and spent a lot of time getting to know the area and its locals.

Earning my bachelor's degree would be a turning point in my life. I realize reaching this point is not where my education ends but rather an essential next step in deepening my understanding and better equipping me to contribute meaningfully to both academia and industry. I have been searching for research opportunities through various conferences such as the NSBP/NSHP Conference, SACNAS NDiSTEM, and Grace Hopper Conference. This exposure expanded my view of options in possible careers and gave further reinforcement of belonging within academia. Graduate school offers the most compelling opportunity to dive deeply into my research area of interest and to have like-minded cohorts and support systems along the way in contrast with what my past financial hardships could accommodate or render feasible. In the NSBP/NSHP conference, I got to meet many Physics Faculty including Dr. Humberlto Terrones who encouraged me to look into RPI.

My ultimate goal is to inspire my younger brothers to pursue their dreams, be the role model I never had growing up, and contribute to the advancement of knowledge and technology. Whether it is in industry, laboratory, or academia, I am committed to making an impact with the skills and experiences I will get there. RPI is known for its challenging and comprehensive engineering curriculum. I believe that I'll gain a strong foundation in fundamental engineering principles that I haven't taken yet and have the opportunity to interact with people in areas like biomedical, aerospace, electrical, and computer engineering.