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Carnegie Mellon University writing supplement

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Most students choose their intended major or area of study based on a passion or inspiration that's developed over time – what passion or inspiration led you to choose this area of study? (300 word maximum)

Throughout my journey in robotics, one of the most noteworthy moments was during the 2022 FIRST Robotics Competition. In this contest, my team and I were tasked with creating a robot capable of collecting and shooting large balls into a small, 9-foot-high hoop. Through iterative engineering, clever programming, and meticulous fine-tuning, our robot not only functioned but exceeded our own abilities! Witnessing our creation outperform its creators revealed the captivating potential of engineering. And even though numerous other high school teams undertook the same quest, the obstacles we each encountered were exclusively ours to overcome. Our team worked within our unique constraints of tools, resources, or group dynamics. Thus, it wasn't just about shooting balls into a hoop; it was about uncovering unknown possibilities and crafting solutions for unique challenges - an aspect that beckons me to expand the capabilities of myself, my peers, and our unique circumstances.

Today, my ambitions reach far beyond winning robotics tournaments. I yearn to develop revolutionary robots, tools, software, and concepts capable of bettering the world. To accomplish this, I recognize the need to propel myself forward by polishing my skills, broadening my knowledge, and amassing invaluable experience. In this endeavor, Carnegie Mellon's integrated master's-bachelor's (IMB) in Mechanical Engineering and an additional major in Robotics (BSR) are in sync with the mindsets I perceive in the spirit of engineering. I wish to enroll in these programs because they resonate with my values of being not just a learning platform, but an opportunity to immerse myself in a culture that prides itself on pushing boundaries. The hands-on approach at CMU, brimming with prototyping, research, problem-solving applications, and the atmosphere of a change-maker's mindset, will empower me to devise solutions that once again surpass our boundaries, thereby teaching me to tackle the world's unique, unsolved issues.

Many students pursue college for a specific degree, career opportunity or personal goal. Whichever it may be, learning will be critical to achieve your ultimate goal. As you think ahead to the process of learning during your college years, how will you define a successful college experience? (300 word maximum)

In 10th grade, after repeatedly being asked the "Where do you want to go to college?" question, I decided to simply search 'best robotics college' and try to remember the top few results for my next reply. However, during my half-hearted quest, Carnegie Mellon University suddenly stood out to me. It wasn't just CMU's number-one ranking or the fact that it houses America's first robotics department that caught my interest; rather, it was the captivating headline displayed on the website: "We specialize in cross-campus collaboration."

This line resonated with me because interdisciplinary learning is my forte; many of my proudest accomplishments stem from leveraging diverse blends of abilities. For instance, my Pedal Power community project— a stationary bicycle that charges one's electronic devices through their own pedaling —required the fusion of scientific concepts, engineering skills, artistic design, computer modeling, persuasive communication, and relationship-building that brought the project to fruition. This project, famous in my school for encouraging exercise, demonstrating off-grid power solutions, and raising awareness of electricity wastage, epitomizes my belief in tackling substantial challenges through a synthesis of interdisciplinary skill sets.

Envisioning my college experience, I aspire to keep confronting more significant challenges by leveraging innovative ideas through a multi-faceted approach. It is in this context that Carnegie Mellon's culture provides the ideal environment for my pursuit of tackling big challenges using big ideas. CMU's focus on real-world impacts and cross-disciplinary innovation aligns perfectly with my aspiration to focus on impactful endeavors capable of transforming the world. After all, the world's wide-ranging, unsolved problems will require integrative solutions that can only be achieved with a philosophy like Carnegie Mellon's. As a Tartan, my college experience would involve relentlessly applying my education to address community needs, using a wide-ranging skill set to push myself towards societal innovation.

Consider your application as a whole. What do you personally want to emphasize about your application for the admission committee's consideration? Highlight something that's important to you or something you haven't had a chance to share. Tell us, don't show us (no websites please). (300 word maximum)

When I applied to compete against CEOs, industry professionals, and corporations for a spot to present a 60-minute industry talk at one of the largest international engineering conferences, I knew my chances as an 11th-grader were slim. That's why I was stunned when my proposal to present on 'How to Advance the Future of Engineering Education' at Autodesk University was accepted. Despite the event's high standards, crafting and delivering the speech was one of my most rewarding experiences because it aligned with my inner mission: inspiring and enabling others.

My speech called for changes in education, greater business-community involvement, and preparation for upcoming industry revolutions. I told jokes that sparked laughter and shared personal anecdotes that put the audience in my shoes, establishing a strong connection that inspired others.

This philosophy of reaching beyond my boundaries to connect with others also extends to my role as captain of the DiscoBots Robotics Teams. When starting, I managed a few teams across three schools. However, alongside the engaging design processes and fierce competitions, I conducted outreach to identify schools without robotics resources and incorporate their students into our

team. Within just 1.5 years, our team has integrated four additional schools, giving ~6,500 students access to the robotics education that shaped me, and expanding DiscoBots into 7 local, public schools. This scale of cooperation, though challenging, feels natural due to my ‘open-door’ mindset. Reflecting on these experiences, I see the Autodesk University presentation, robotics outreach, and similar endeavors coming naturally because they align with my desire to galvanize others. From this, I view Carnegie Mellon’s large, diverse, and unique culture as the next stepping stone in my journey to change lives. Learning in this global, interdisciplinary, and impact-driven environment will help me excel academically, advance research, and inspire others in the Tartan community.