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Bard College at SIMON'S ROCK

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The Perspective of an Alumnus

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My educational journey has been influenced by my profound appreciation for the value of a liberal arts education, particularly during my time at Bard Academy and Bard College at Simon's Rock. Although I eventually pursued a more specialized career path, the foundation of my success was undeniably laid during those formative years, starting at 13. At Simon's Rock, I was not only taught to embrace the importance of questioning societal norms but also to challenge everything, especially within the realm of STEM (Science, Technology, Engineering, and Mathematics). One significant aspect of my educational experience at Simon's Rock was the diversity of thought and approach to problem-solving that I encountered

Before joining Bard Academy, I attended a public school in New York City, where the emphasis was on assimilation and achieving success through formulaic methods: study specific formulas, excel in exams, and secure admission to a prestigious college. Simon's Rock faculty and students do not follow traditional pathways. Though life has taken us to different paths, I will always be grateful for my interactions with my peers. I would sit in the dining hall listening to all sorts of discourse, from quantum entanglement to the new policies that were being discussed in the political race. At the time, I was a bit intimidated due to the nature of the discourse and my old habits of just assimilating and listening, but they created a safe space for me to open up, and join the conversation. I was grateful for my peers who were able to translate and explain the jargon that would be used in these conversations. I have learned that the more I discussed ideas with them the more I was learning on the spot and the more ideas or thoughts I was able to retain. This helped me build my confidence to question, and to lead conversations, which fostered curiosity and learning.

In my educational journey, I have been fortunate to have learned from educators who have not only imparted knowledge but have also ignited a lifelong passion for STEM. These mentors have played a pivotal role in shaping my academic and professional trajectory, and their guidance continues to influence my approach to learning and my commitment to fostering inclusivity in the world of STEM.

Professor Rebecca Fiske, though she did not teach me science or math, was someone who supported my crazy ideas and gave me the opportunity to play it out. She would challenge all of my thoughts and would push me to keep an open mind when I came to formulate my own thoughts around issues/problems. She

helped me develop frameworks that helped guide me to formulate how to see issues in different ways.

My first math professor, Professor Eric Hayden, introduced the world of proofs to me at the young age of 13. We would go over theories in class and he would teach me to question math. I would sit outside of class for hours writing down formulas on a blackboard, trying to prove simple theorems in ways that I could not comprehend before. This helped me create a stronger foundation in mathematics.

Professor Harold M. Hastings was my research advisor and he taught me about the world of computational mathematics and systematic modeling. We did work on simulations and explored different theories regarding modeling *C. elegans*. Though I did not have experience in research, he would give me resources to keep learning so I would be able to participate in discourse with other scientists in our team. He would challenge me to keep my mind open and to present my ideas to others even if I was not confident. He always encouraged me to speak up because my ideas were just as important as everyone else's and, even if I did not understand something, it would help all of us explore paths we wouldn't have before. Later on, I presented this research at a conference for the American Physics Society.

The early college environment at Bard Academy and Bard College at Simon's Rock was instrumental in nurturing my curiosity and refining my interest in STEM. This unique academic setting provided me with the freedom to explore a myriad of topics and ideas, laying the groundwork for my future academic pursuits. This environment also encouraged me to challenge societal norms, fostering a mindset that persists in my approach to problem-solving.

I have always seen myself in a leadership position where I can change the trajectory of science and engineering, whilst guiding creative and curious minds to the edge of research. As I met more people outside of Simon's Rock, I realized how differently they thought in terms of problem-solving and how they saw issues. I would be able to paint the bigger picture, so I would include an extensive number of variables to consider when it came to problem-solving, whilst they would explore the more specialized routes. Both perspectives are so important when it comes to engineering, but I always saw things a bit differently.

As I transitioned to other institutions and industries, I carried with me the invaluable lessons and values instilled by my mentors and early college experience. I have worked in a multitude of industries and I am planning to continue my academic journey in graduate education, where I am planning to change the world… well maybe even take over the world.

My current research interests converge at the intersection of engineering and business, with a specific focus on the aerospace industry. This dynamic field, which encompasses everything from orbital launch vehicles to satellites, offers a captivating canvas for me to channel my passion for system engineering and system design. My aim is to contribute to the optimization of space-based missions, making them more efficient, reliable, and accessible. In this pursuit, I see the potential not only to advance our understanding of space but also to enhance the technological foundation upon which future space endeavors will be built.

Even through my specialization, I am committed to being a catalyst for change, breaking down barriers, and making academia and research more accessible. My aim is to create inclusive learning environments where intellectual curiosity and diversity are celebrated, and where everyone is encouraged to question the status quo and share their findings with the world, the same environment I was able to thrive in when I was younger years old.

RIFAH TASNIM, an Engineer and Researcher, focuses on advancing space design systems and space policy. She started her journey at Bard Academy at Simon's Rock in 2016 and graduated from Bard College at Simons Rock in 2019. Following this, she pursued her Bachelor of Science in Mechanical Engineering at NYU and recently completed her Master of Science in Management Science and Engineering from Columbia Business School and Columbia Engineering. Throughout her academic career, Rifah has engaged in a variety of projects, spanning from designing system models for effective communication during forest fires to developing machine learning algorithms aimed at enhancing client understanding of their customers. She aims to integrate her diverse experiences across different industries to innovate designs that benefit people.

