Growing up, I have been fascinated by the intricate workings of the human body and the various advancements that can be done in healthcare through the endless possibilities of technology. My curiosity started from discovering the very existence of prosthetic organs and limbs, leading me into deeper research and obsession towards the applications of technology in healthcare. This includes the various methods of bioprinting, gene-editing, and many more intriguing areas of exploration. The desire to make a meaningful impact on the world, specifically in healthcare through the integration of engineering principles and medical sciences, drew me towards biomedical engineering.

In search of a deeper understanding towards how biomedical engineers applies their principles in the healthcare industry, I stumbled upon a research article written by Shakir *et al.*, which explained how prosthetic lungs are made as a solution for those with chronic respiratory diseases who were difficult to cure without lung transplants. Through this research paper, I gained a deeper understanding on how these prosthetic lungs can be made through two different methods, biologically and synthetically. It drives me to research more regarding the various methods for the creation of prosthetic organs, including the various benefits and drawbacks of each method available.

Throughout my high school years, I actively sought opportunities to expand my knowledge and skills in preparation for my chosen path. I enrolled in advanced mathematics and science online courses to develop a strong foundation in quantitative reasoning and analytical thinking. I also keep up-to-date on the latest biomedical advancements through related articles and the various research papers, giving me a deeper insight on what is happening lately in the field. These experiences not only honed my problem-solving abilities but also taught me the importance of collaboration, adaptability, and perseverance when faced with complex engineering problems.

Furthermore, to advance my analytical skills, I joined several international math competitions, namely American Math Olympiad (AMO) and SASMO. Through these competitions, I sharpened my critical thinking and advanced my problem-solving skills towards problems that I was not used to. Moreover, joining the competitions have advanced my perseverance by encouraging me to keep on going despite the hardships and difficulties I faced during the competitions.

Outside of school, I engaged in extracurricular activities that further fueled my passion for biomedical engineering. I interned at a local biotechnology firm, shadowing biomedical engineers and witnessing their impactful work firsthand. This experience solidified my belief in the transformative power of engineering in healthcare.

What truly sets biomedical engineering apart for me is its potential to address global health challenges and disparities. Through my involvement in community service initiatives, I have witnessed the unequal distribution of healthcare resources and the immense barriers faced by underprivileged communities. I am committed to leveraging my skills as a biomedical engineer to create affordable and accessible healthcare solutions that can bridge this gap and empower individuals to live healthier lives, regardless of their socioeconomic background.

As I embark on this journey, I am aware that biomedical engineering is a constantly evolving field, with new challenges and discoveries emerging each day. I am prepared to embrace this dynamic nature and commit myself to lifelong learning and professional development. I aspire to contribute to the field through research, design, and implementation of groundbreaking medical technologies, striving to make a lasting impact on human health.

In conclusion, my unwavering passion for biomedical engineering, fueled by my fascination with human biology as well as technology and my desire to create positive change, drives my pursuit of a major in this field. I am determined to utilize my knowledge, skills, and compassion to revolutionize healthcare and improve the lives of individuals around the world.

Dear Laura,

This is an impressive first draft for your essay! You’ve got the content and structure down, and your essay is quite engaging from start to finish. I only have a few minor comments for you, as below.

First, don’t be scared to expand more about your pursuit of this major. This is arguably one of the most important parts of your essay, where you need to showcase your competence and initiative in seeking knowledge regarding the field of biomedical engineering. For example – as I’ve mentioned in the comment above, you could explain more of what specifically went down (and what you’ve learned) during your internship. You can even shorten your section on your future plans (your last three paragraphs), if you need more character space.

Second, in your future plans, I suggest adding a bit on how your intended major can help equip you in achieving your plans. What makes this specific university special? This isn’t strictly necessary – but it will help showcase that you’ve done your research on your university.

Otherwise, you’ve done great work so far. Keep it up!

Best regards,

Arianne

ALL-in Essay Editor