The current boom in technology has revolutionized healthcare provisions. As medicine moves into this new phase, medical students should possess unconventional skills in conjunction with traditional skills in order to take advantage of the opportunities to provide improved healthcare.

Research continuously improves our knowledge of treating illness and my intellectual curiosity will assist me in both keeping up to date with the literature and contributing to it throughout my career. Research opportunities in several fields of medicine are expanding commensurately with the rapid developments in modern technology. Advances in processors and cheaper data storage boost the quantity of information available for analysis in clinical research as well as open doors for the fields of bioinformatics, imaging, and personalized medicine through the use of machine learning algorithms. These trends will benefit from a new generation of researchers and physicians whom possess the technical skills to analyze the data, create innovative algorithms, and interpret the results. My technical training through particle physics research and background in mathematics allows me to explore this growing frontier in medicine and provide a means for my peers to learn about it.

Collaboration amongst physicians and different professions is crucial in delivering quality healthcare. Therefore, teamwork and communication skills are essential for future physicians who will depend upon each other to achieve a complex goal. My summer internship at CERN developing a monitoring system, which is in use at all times during particle collisions at the Large Hadron Collider, demonstrates that I possess these skills. As the contact for the system, it was my responsibility to communicate with a team of eight members. I called meetings regularly to determine what information they needed to be displayed. I was also able to independently develop useful system features, which demonstrated my ability to preemptively address issues and to creatively cater towards the needs of roles other than my own.

My intellectual curiosity, background in physics, mathematics, and computational programming, and teamwork and communication skills are qualities that will supplement the educational experience of my peers with an eye towards the next generation of medical advances.