The current boom in technology has revolutionized healthcare provisions. As medicine moves into this new phase, I believe that future physicians should possess technical skills on top of other traditionally required skills. Intellectual curiosity, teamwork and communication skills, and my background in physics, mathematics, and computational programming are qualities that will supplement the educational experience of my peers with an eye towards this new age.

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 tools such as machine learning. 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 work on developing the online channel monitoring system, which is used 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 members of the monitoring team. I called meetings regularly to determine what information they needed displayed. I was also able to independently develop features that were useful for the team demonstrating that I possess the foresight to preemptively address issues and the creativity to cater towards the needs of roles other than my own.

With these skills, I will provide a unique contribution to the learning experience of my peers that will help shape them into the leading physicians of the future.