For me, chemical engineering is about understanding chemical and physical processes well enough to shape materials into useful forms swiftly, safely, and efficiently. Since my childhood I have been interested in the laws of our universe, and growing up, have been able to understand them in a more and more nuanced form. Using this knowledge for the betterment of humanity by creating fascinating materials seems to be not only an alluring and rewarding occupation, but also a moral obligation. For most, a more efficient industrial process may seem trivial or boring compared to a new scientific discovery, but it might promise a better life for billions of people. The mass production of penicillin in the 1940s was a pinnacle of chemical engineering, and it has since saved millions of lives. Feeling the desire and duty to help create something of this magnitude, I decided to apply to a chemical engineering course.

Two books I read have had a profound impact on my view on the discipline. Why chemical reactions happen by J. Keeler and P. Wothers helped me discover the connection between physical laws and chemical phenomena. I finally understood the deeper meaning behind certain laws and principles of chemistry I used instinctively, but—as I found out—did not understand thoroughly before. Le Chatelier's Principle, for example, can be deduced from the changes in reaction rates after a disturbance in conditions. Reaction mechanisms can also be rationalized by understanding interactions between molecular and atomic orbitals. After reading Chemical Engineering: An Introduction by M. M. Denn, I had to reconsider my former definition of the field, and also became familiar with the calculations I will have to do one day. I now know how broad a chemical engineer's education needs to be in order to work effectively, but in exchange how many different fields he can be employed in because of the acquired thinking skills. A conference about intelligent plastics I have attended in the MTA (Hungarian Academy of Sciences) has also broadened my horizons about this discipline. I learned about plastics which change their shape or colour reacting to changes in their surroundings, and even ones which can repair themselves. I was fascinated by the level of precision needed to produce these materials.

I study in the natural sciences class of—according to national school rankings—the best secondary school in my country. Apart from specialising in chemistry and maths from Grade 11, I also sought other ways to satisfy my thirst for knowledge. I have taken part in after-school and online math courses, and have been attending physics lectures by my dormitory prefect since Grade 9. These lectures have played an important role in my current interest in physics. I was also invited to a one-week chemistry camp for talented students, where I attended lectures, solved exercises, and gained some perspective on working in academia. My deep interest in these subjects has made me seek challenges at various competitions, too. In Grade 10, I finished national xth in Mikola Sandor National Physics Competition, and national xth in Irinyi Janos National Chemistry Competition. In Grade 11 I am especially proud of my national xst place in the Physics OKTV (National Secondary School Academic Competition), because it showed me that even if I do not study a subject at an advanced level at school, I can still triumph by sheer determination. I also made it to the semi-finals of the English OKTV. I currently hold a C1 level English certificate, so I am confident I have the necessary language skills to study in a UK university.

I am a very determined individual who seeks to achieve his full potential, and is eager to learn. Mastering chemical engineering is a long and arduous task, but in my opinion, it is the first step towards creating a better world to live in.