14) No admission application can meet the needs of every individual. If you think that additional information or material will give us a more thorough impression of you, please respond on separate sheets.

Claude Debussy famously said, "Works of art make rules; rules do not make works of art." Computers compute very differently from how humans think. Applying logic definitions, rules and instructions are written, and the machine performs the task without fail. Similarly, notes and rhythm govern music by providing a framework of rules to follow. Why can't rules make works of art? MIT holds tremendous appeal for its scientific approach of the arts. At MIT, I hope to interweave my love for music and linguistics with my fascination for Computer Science.

My experiences in computer applications began with creating mathematical simulations to solve real world problems. When I was a freshman in high school, my neighbor's roof got destroyed by a hurricane, prompting me to build a wind tunnel to test the aerodynamics of building shapes as a science project. Because the wind tunnel generated a lot of uncertainty, I eventually opted for computer simulations to supplement my experiments. I created a 3D geometry of the building structures in AutoCAD, generated volume mesh using GAMBIT, and imported it into a computational fluid dynamics software ANSYS Fluent to simulate environmental effects. The simulations were extremely accurate, fast, and cost-effective, highlighting the practicality of applying computer science to any discipline.

My interest in computer science stems from my interests in coding and languages. My childhood hobby of using HTML to customize user profiles in Neopets was my first introduction to coding. As I outgrew the virtual reality site, I started blogging with WordPress, building child themes and plugins using HTML, PHP, and CSS. I was later able to take AP Computer Science, which introduced me to the object-oriented programming language Java, and while deconstructing Spanish grammar in AP Spanish, I began to notice similarities between Java and natural languages. Could computer science be integrated into linguistics? I wanted to enhance my understanding, so I began self-studying a textbook called Introduction to the Theory of Computation by Michael Sipser. Context-free grammars outlined the structure of natural languages and the programming languages I knew; studying automata theory and Turing machines decomposed my understanding of what an algorithm was. Computer science is more than coding: it was an application to help me better understand the world.

I didn't realize until months later that Professor Michael Sipser is the Dean of Science at MIT. Like my questions about music that OpenCourseWare largely answered and the edX Biology class taught by Professor Eric Lander that I used to supplement my AP Biology class, MIT and its faculty members had satisfied many of my curiosities before I even got the notion of applying to the school. My experience with building wind tunnel and CFD simulations highlighted the importance of interdisciplinary application. Given my background as a classical pianist, love for languages, and interest in computer science, I hope to examine all three fields from a collaborative, interdepartmental perspective to attain a scientific understanding of of the arts. When I build a stronger bridge between the arts and sciences, I hope to realize that they are one and the same discipline. I trust to find a interdisciplinary education at MIT, and I would be privileged to take part in MIT's stimulating community that will further answer my questions about the world.