**Please briefly elaborate on one of your extracurricular activities or work experiences. (150 -> 185)**

Since I was in elementary school, I had always been drawn to computer science. I envisioned software engineers as creative problem-solvers crafting elegant algorithms to tackle important issues. So, in the Spring of my Junior year, I applied to be a Summer intern at Innowatts, a data science company seeking to use machine learning to improve energy efficiency.

I spent my entire first day cleaning up a dataset and reformatting it. For the next few days, I rewrote the scripts for their server. This was not the kind of thrilling work I expected to be doing. At first I thought I was assigned to these tasks because I was an intern. However, as I observed my coworkers it became apparent that most people were doing the same type of work. Finally, at the end of my first week, I witnessed a demo product that incorporated all the code I had written. In that moment I realized that, although my data science job was not as exciting as I had hoped, I was still able to make a meaningful difference, which in turn made it worthwhile.

**With the understanding that the choice of academic school you indicated is not binding, explain why you are applying to that particular school of study. (150 -> 169)**

I love the game of chess. The rules are quite basic, yet they give rise to endless possibilities for outcomes after each move. Furthermore, because there is no chance involved, you are the master of your own fate. Math and computer science have these same properties. Both subjects have a framework in which logic is key, and once one learns it they are capable of anything from proving a promising conjecture to building an app to make your life easier. I would like to apply to the Brown School of Engineering to study computational mathematics.

I am interested in research about the optimization of algorithms, especially with regards to data science, because of its current potential given the emergence of machine learning as well as the difficulty of the problem. While it is often challenging to find improvements in data science algorithms, even minor ones have the potential to make a huge impact, as they speed up computation times for actions that occur on each element of vast datasets.

**How did you first learn about Rice University, and what motivated you to apply? (250 -> 252)**

Because I grew up in Houston, I can’t remember a time in which I wasn’t familiar with Rice. I have always thought of it as a university with superb academics and a great community.

The most important motivation for my application to Rice is the research opportunities present. Rice’s partnerships with NASA, MD Anderson, and other institutions, its plethora of research groups, and its dedication to undergraduate research would allow me to study whatever I find intellectually curious. Specifically, I am interested in working at the Rice Engineering Laboratory for Advanced Computational Science (which studies algorithm scaling), the Computer-Aided Programming lab (which studies the automation of programming) and the Jermaine lab (which studies data science). All three of these labs would enable me to pursue the study of subjects I enjoy. Having interned at a Rice lab (the Kavraki lab), I witnessed firsthand the level of engagement that professors and graduate students have with undergraduates. These interactions that are extremely conducive to learning greatly excite me about Rice.

Another important aspect of Rice for me is the unique residential college system. Having a group of people with whom I can associate from the moment I step on campus seems liberating.

Finally, Rice’s support for its students studying abroad is appealing. I would love to pick up a new language or just see more of the world while in college, so I want to study abroad for at least a semester, and having the support of my university in doing so is invaluable.