Jeremy Greer

Prof. Choudhury

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Reflection on Passions/Interests

The passion that I would like to reflect on is problem and puzzle solving. Not necessarily problems of a simply mathematical nature, but problems of all kinds

**What?**

To me, problem solving is an area that encompasses problems of all types with a common underlying theme of creativity required to solve the problems. Basically, problem solving is finding an answer to some question, but there are multiple ways to find the answer to the question. In some areas you are given a set of equations with which to solve a certain problem, and while some intellectual ability is still required to solve such problems, getting to the answer becomes less about figuring out what the answer is, as well as why that answer is correct, and more about simply plugging in numbers to an equation and receiving an answer. While that is problem solving, it is not the type of problem solving I prefer. Instead, I would much rather understand why the answer to something is correct in addition to finding it, so rather than simply use the equation given to me, I would prefer to try and create or derive the equation myself based on my understanding of the concepts. This type of problem solving is my passion, which includes solving riddles, in which solving the problem requires a creative approach towards the problem, as well as a wide understanding of multiple concepts, especially the use of wordplay.

**So What?**

I became passionate about problem solving during my freshman year of high school from my Algebra II Honors class. During that course I grew in my ability to solve problems as well as my desire to solve them. I got to the point that I refused to wait until the following day for my teacher to explain how to solve the problem and instead would spend my time trying to solve the problem myself, no matter how long it took. Problem solving is significant to me because going through the process of finding the answer and understanding the answer is enjoyable to me. Not only that, but problem solving is also integrated into almost every facet of my life. Whether we notice it or not, we use problem solving every day whenever we make any sort of decision, from deciding what to eat, to doing our homework, to interacting with others. This multi-faceted passion is important because whenever we solve problems, we become better at solving other problems. By practicing problem solving, anyone can end up becoming a better problem solver in any area of their life. Luckily, I enjoy problem solving, so practicing it is also enjoyable to me, helping me to improve in it little by little.

**Now What?**

In problem solving, there’s always more to learn and figure out, such as new methods of solving problems we already know how to solve, as well as problems that we haven’t solve yet, of which there are plenty. Learning new problem solving methods may require more than just learning about them however, instead requiring that we discover or create the new methods, methods new to everyone rather than just ourselves. In addition, beyond discovering new methods of solving problems, simply solving problems themselves is an enjoyable endeavor I plan on pursuing, particularly in math and computer science. In programming, everything is problem solving and logic. One always starts out with an idea as to what one wants a program to do, but beyond that everything must be figured out and created on your own. This combination of creation and problem solving is quite enjoyable to me as I have already programmed before, but I look forward to creating more complex programs and solving more difficult problems. There will also be new avenues of problem solving that I have never experience before, such as research, which I look forward to doing in both my undergraduate and graduate careers. In addition, the added ability to experience problem solving in the real-world setting via co-ops is something I look forward to.