There are two questions I want to address in this letter: why software engineering, and why Google. I will proceed in that order.

Software is the most applicable and useful realization of something mathematicians, philosophers, and theoretical physicists have known for ages: ideas have lives of their own. When one has an idea of a three-sided figure, it comes with baggage, such as having its angles sum to 180 degrees, that was not a purposeful part of the idea. It is a fun puzzle to take ideas, and find all of the baggage they carry. Code is little more than a collection of simple ideas such as conditional logic and iterated processes. As Randall Munroe put it, code involves arranging lights on a screen in a particular pattern, in hopes that the lights will rearrange themselves into a desired pattern[[1]](#footnote-0)--the ideas are taking on a life of their own. But unlike in these more academic pursuits, software engineering involves not merely finding the baggage ideas carry, but structuring the ideas so that their baggage solves real problems and noticeable and immediately makes the world a better place. The ideas are not watched; they are harnessed.

I want to software engineer because I like taming ideas, and tricking them into solving the problems I want solved. This is also why I have a strong fondness for algorithms and performed especially well in that class. As useful and important as specific languages are, to me, they are just the tools we use in our work with ideas. The meat of software engineering comes from the creative process of figuring out how to set up ideas in the right way; translating them into code is secondary. That is not to say I find proficiency at language unimportant--just as a great story requires fantastic command of a natural language to properly convey, so does a great process require fantastic command of a programming language to execute. The appeal of software engineering is using elegant tools such as Java and Python, to send ideas from my head to electron, and use that to solve problems.

Google is a company built on using ideas to do amazing things, and seems to appreciate software, not just for its own sake, but because it is the intermediary that allows our ideas to affect the real world. Further, Google is well known for having brilliant employees, and I want to be surrounded by such people so I can continue to learn and improve my craft. In addition, the people at Google are known for their levels of quirk. I appreciate a culture where discussing board games, Doctor Who, and cosplaying does not get me a look like I have five heads, and where I can find pursuits I had not previously heard of because my colleagues enjoy talking about their obscure interests. That is, I want to software engineer at Google because of its strong belief in the power of using ideas to change the world, and because I want to be surrounded by brilliant, quirky people from whom I can constantly learn.

Sincerely,

Dan Shiff

1. http://xkcd.com/722/ [↑](#footnote-ref-0)