

# University Application Questions

## Some Example Answers

### Example 1: Tell us about a passion or strong interest (Past-Present-Future Model)

Sometimes I think that teachers discuss great academics to humble their classes. One such Turing award winner we studied was Ivan Sutherland. Over and over again, he analyzed human-computer interaction, fundamentally altered it, and then, it was rapidly adopted by a widespread audience. His incredible ability to see into people's minds to find exactly what would help them captivates me. Since grade 8, I have been a junior leader in a girl guide unit. Building crazy structures in pursuit of our STEM badges is the highlight of my week. I have seen first-hand how difficult it is to understand the different thought processes in my girls. This has made Sutherland's accomplishments even more humbling to me. Thus, in Waterloo Engineering, I hope to learn the tricks of the trade and learn to create accurate user specifications. Specifically, my work with 10 year olds has inspired me to build technology for children. I would love to learn to accurately analyze what they need to help them to understand the world around them. (860 characters)

### Example 2: What are your goals at Waterloo? (Past-Present-Future Model)

As a small child, if I saw a museum, I whined until I was allowed to visit. In the science museum in Ottawa, I vividly remember standing in front of a facial recognition system and its AI algorithms attempting to gage my emotions. We spent a long time trying all sorts of things to trick the system. In my high-school computer science club, I furthered this interest by building a simple AI with a binary tree. After learning SQL in my co-op placement, I was really interested in the future of database technology so I read "Weapons of Math Destruction" by Cathy O'Neil. She described how self-learning AI algorithms were being developed to help process facial recognition data. When I was younger, I didn't realise that, if not carefully developed, facial recognition AI discriminates against people. My goal at Waterloo is to not only to learn how AI and Big Data work, but to help instill social justice in the software that we build. (774 characters)

### Example 3: Why do you want to go to university? (2<sup>nd</sup> Order Question Example)

My grandfather stopped school in grade 8 to work on the family farm. When he was older, he registered for engineering at university. He solved the problem of missing high school by "simply" teaching it to himself as he attended classes.

My grandfather's greatest insult was that someone "didn't know how little they knew". He firmly believed that seeing the holes in your knowledge was the true measure of wisdom.

I remember the first time I realized his saying applied to myself. My grandmother was discussing a friend researching ancient Chinese silk wall hangings. I couldn't conceive how the history of weaving was so complex that you could get a PhD about it; that was when I realized how little I knew. I have come to see, as my grandfather did, that broadening your horizons through education is critical to understanding the world. While at university, learning from professors who have spent a lifetime studying, I hope to understand much more about how little I know. (165 words, 809 characters)

### **Random (Not great, but an example for Orientation Leaders)**

I was selected from all the grade 11 and 12 students at my school to be a grade 9 orientation leader. During trainings, I learned how powerful my actions and attitude were in shaping a team. On the day of the conference, my group was clearly very nervous and scared. I applied our conversation skills and played the games in a careful order, slowly increasing the silliness and intensity. At the end of the day my group was laughing and everyone had an awesome time. Every time I see them in the halls, they say hi. In the future, I want to learn more about the power of organization in leadership.

### **Does it matter if our knowledge acquisition takes place in subjects? (2<sup>nd</sup> Order Question Example)**

Pretty much everyone of my acquaintance thinks that I studied computer science at university. This is a misapprehension that I could fix, but I generally don't bother. People have such a rigid understanding of knowledge as only existing in subject silos that they can't conceive of someone who studied history but teaches computer science.

However, I have a secret: I couldn't be a computer science teacher if I hadn't taken history. One of the biggest problems in computer and math education is that how difficult it is to explain complex subjects. This is easy for me; writing and communication is at the core of a history degree.

Recently, one of my students came back from university and told me that his engineering principles professor used many of the examples that I taught in high school. The student wondered how this had happened. I smiled - all that had occurred was both a high school teacher and a university PhD had looked through the research and had come to the same conclusions. I wouldn't have been able to keep pace with technology changes without my training in research and critical thinking.

### **Why go into teaching? (2<sup>nd</sup> order Question Example)**

I happen to be a fan of Malcolm Gladwell; I love his Ted talks, his books and his podcasts. Once, while discussing laundry and cold-water Tide detergent, Gladwell paused to say, "there are few greater pleasures in life than discovering that something once considered was uninteresting is actually incredibly interesting." I paused it and wrote it down: that is exactly what I think.

While I can't be certain, it seems to me that the modern technological media landscape has created a group of individuals who have never had this pleasure. My students frequently can't tell me what, if anything, they enjoy in life. Their phone tells them what to watch, or they play video games, or they respond to social media posts – wider interests appear to be a thing of the past.

One of the reasons that I went into teaching was to help my students discover the beauty of "something interesting". I want them to share the joy that I feel in learning new fascinating things. It is a life-altering experience.

**Describe a situation you witnessed, or were involved in, where someone was treated unfairly or discriminated against. (I'm not thrilled with this answer, but I gave it my best)**

In 1990, when I was in grade 8, my dad brought me home a new book from one of my favourite authors. I was incredibly excited; it was science fiction that I couldn't get in my small town. The main character was incredibly engaging; his awful father made him move away to go to school. That's when he fell in love – with another boy at the school. Where I lived, all schools taught fundamentalist Christian values; I was explicitly taught that same-sex marriage was wrong. While I never agreed with my teachers, I hadn't questioned the injustices that the LGBTQ2S+ community faced very closely. Learning about the power of bias on my learning was the first thing I learned from this experience. The second important lesson was how to counter hidden bias: simply by reading another perspective, I had learned the importance of actively standing as an ally for the LGBTQ2S+ community. I also learned that books are a gateway to perspectives that I might not be able to easily access. The power of literature is that it transforms the perspectives of those who read it.