

Personal Statement

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The field of artificial intelligence is the most awe-inspiring to me, among other areas in Computer Science. By developing machines, we update our understanding of human nature as well. Such development is not merely about using some powerful machine learning algorithms to gain insights from human society. Rather, gazing wistfully at the past, present, and future of artificial intelligence, we are trying to see ourselves and understand our very existence.

People are ever obsessed with artificial intelligence. The award-winning movie *the Matrix* describes A.I. as diabolic machine overlords that, upon overthrowing the rulership of humankind, turn us into their fuel. Another famous film, *Ex Machina*, depicts a robot that assumes the appearance of a breathtaking beauty capable of emulating human emotions so accurately, that the main character has no choice but falling in love with her. She resorts to taking advantage of his love, to escape. A critically-acclaimed video game, *Detroit: Become Human*, represents A.I. as perfect beings endowed with infinite intelligence and eternal youth, who now demand freedom that must come along with intelligence and free will.

However, if we scrutinize the stories from above, we can see that they are not about machines. They are about our own emotions and raising the ever-abstruse questions such as the future of humankind, the validity of our own perceptions, and the passion and desire we crave and fear. *The Matrix* is our fear of the power of machines, of the possibility that the wonder of A.I. may one day be our demise. *Ex Machina* is the fatal attraction resulted from empathy, a human emotion, which becomes the downfall of the protagonist. *Detroit* probes the definitions of freedom and free will. Since those questions can be traced back to the beginning of civilization, it is not surprising to find that the preoccupation with human-made automata is not a new concept. In Greek mythology, Talos is a god made of bronze, but he is capable of everything a living being is capable of. Hephaestus, the god of forgery and husband of Aphrodite, has humanlike automata to assist his smithcraft.

The passion for A.I. is our passion for self-discovery. Our passion for self-discovery is the yearning of truth. The pursuit of truth, as known as science, is a journey that many great minds partake. Such journey results in the advancement of our civilization: Astrologers sought to chart out the movement of stars, and their works became the inspiration for great physicists such as Galileo, whose works became the foundation of what we have today. We are now exploring Mars. Alchemists attempted to create an elixir to overcome mortality, the greatest enemy of humankind, and the most advanced modern medical science can be traced back to their works. Science has improved the way people live and changed the way people think. It is the torch that shed lights during the darkest hours, giving people hope and joy.

The altar of science has lost many great people, such as Marie Curie, Elbert Einstein, Claude Shannon, Stephen Hawking... When bidding farewell to the world, they put down the baton of science, which they received from their predecessors. It is my honor and privilege to receive the baton from them. I swear on my life to partake in the pursuit of truth, to use my knowledge for the general good of humanity, along with my fellow scientists.

“My eyes are filled with passionate tears, for I love this land with every fiber of my being.” This is a quote from a Chinese poet, Ai Qing, who expressed his passion towards the nation he deeply adored. It is also my love message to science, my fascination, preoccupation, and obsession. I love science, for it is the pursuit of truth, the journey of self-discovery, even though it is something we may never fully understand, according to Cantor's continuum hypothesis. I love science, for the wonders it has bequeathed upon my fellow human beings whom I love wholeheartedly and whom I will not hesitate to die for when the time comes. Everything we have is based on the work of previous truth-seekers; it is only reasonable if we do the same thing for the future generations.

I believe in myself that I can contribute my portion to the pursuit of truth, for I love the field of artificial intelligence, computer science, and science in general. I shall end my personal statement with a tale from Roman mythology. Pygmalion is a sculptor with tremendous skill, and one day he carves out of stone a beautiful maiden. She is inanimate, a statue, but he sees his own fantasy, hope, and fear in her lifeless eyes. He discovers himself, so he falls in love. He implores Venus to grant his wish that he shall marry a lady as beautiful as his work. When he returns home, he kisses the statue's lips and feels the softness. His wish is granted, and they live happily ever after. To me, the story describes our passion for A.I. They are created from our image, for neural networks are based on how neurons work in our brain. From the tale comes the term "Pygmalion Effect," meaning that greater devotion and expectation lead to better performance.