Probably everybody’s passion for computers originated from playing video games, and I am no exception. I was crazy about a shooting game called “Counter-Strike” when I was in junior school. Apart from improving my skills of playing the game, I began to wonder the secrets behind the great popularity and success of this game. Then, I started to study some source codes of the game and determined to explore more of this magical field to design my own games in the future.

My passion for programming peaked in high school. As an inquisitive teenager, I was constantly seeking more challenges and began to learn Java by myself by reading a book called “Introduction to Java Programming” by Y. Daniel Liang. Later, when I was learning Matrix-Multiplication in further math, most students were struggling with these complex calculations. To simplify our work, I coded an algorithm using a triple-loop and two-dimensional arrays which simulated the matrix. My classmates were so jealous of my simple work and some of them even started to follow me in studying Java.

In addition, during the summer holidays, my little cousin was begging me to play a board game called TicTacToe with her, which I found quite boring. Suddenly an idea struck me: why not make a personalised game for her? Since TicTacToe is a 3X3 board game, I simulated the board with a two-dimensional array marked “cross” and “naught” with “X” and “O”. The core algorithm of my game was to use an update method to check whether or not the game finished after each move. Inspired by the AlphaGo game, I planned to build an A.I program. In order to achieve this, I tried to add a “computer-move-method” to my original code, which immediately prompted the A.I to generate the optimal move after my cousin’s move. In total, I made 3 levels and the highest level could try to obstruct the player and win the game if there was a chance. However, it was inconvenient to play from the command line of the window. As a result, I searched for various materials on a Graphical User Interface (GUI) and found that JavaFX was the ideal tool-kit. I then poured days and nights into studying this powerful GUI. Eventually after numerous edits and tests, a brand new TicTacToe game was created with an attractively designed grid. Furthermore, I added a “REGRET”button, allowing my cousin to repeal her bad move. Essentially, I successfully took advantage of a data structure, which I had learned previously, called the “ArrayList,” which secretly recorded every move into the list like a queue. Finally, I even designed an animation to draw a winning line connecting the tiles. Thus, I had accidentally become a game-developer instead of a naive adolescent game-boy. I encountered countless difficulties in developing this childhood game, but I never quit, and I have conquered all problems by myself through hard work and a relentless pursuit of perfection. For the first time in my life, I experienced a strong sense of accomplishment and my project solidified my confidence in studying Computer Science in my future.

Furthermore, the extra-curricular activities have strengthened my learning skills. In a summer program organized by a top UK University in 2018, I learned Python language. Academically, I also received a Global Silver Award in the British Physics Olympiad, the Gold Award in the Rising Star Chemistry Challenge (top three percent) and a high distinction and credit in Australian’s Chemistry and Math Competitions.

I hope to be immersed in computer science at a higher level, exploring the area that I am interested in and good at and I am now ready to accept more challenges. Computer Science has changed the world significantly, and I am hoping that I will be one of the pioneers.