



# Computer Science Personal Statement

My three major interests and passions are Computer Science, Maths and Music, and I believe that there is a creative fusion between all these disciplines. I engage wholeheartedly in these areas both in my school courses and out of school, and hope that I will be able to continue doing so on my chosen course and in the extra-curricular opportunities at university.

Computer Science has quite naturally come to be my chosen field. At the age of 7, I took to playing the piano, which planted the first seeds of my interest in defined logical patterns and structure. My introduction to computing was via the logic of spreadsheets, but I then progressed to using BASIC for several applications outside lessons, including programming my own version of 'Logo' and an analogue clock. A major recent achievement of mine has been designing a database-driven website for my school's Maths department, including multi-format homework question publication and report generation.

This is extensively used by the department, and other departments have approached me to provide them with similar websites. This project was nominated and then short-listed for the final ten of the New Statesman's "New Media (Educational)" award.

I look forward to studying Artificial Intelligence, and have made my own minor foray into this area by designing and developing a computer-powered Connect 4 player using a complex 'minimax' procedure. I also investigated 'recurring function execution' to simulate the 'fill' function of a paint package, an algorithm of which was used to develop a 'random maze' generator. Such mathematical-based logic led to an increased appetite especially for researching the use of computing with mathematics - I extensively investigated 'perfect numbers', determining the 8th perfect number (2305843008139952128).

I involve myself in the full life of the school and am pleased to have ways of passing on my enthusiasms to others. I have been appointed a Maths Prefect, which involves running a weekly Maths club, and also helping younger students in 'work recovery' sessions. I was also elected onto the School Council for 4 years in my previous school.

My passion for music has further developed in secondary school and led to eager participation in school musical productions for four years as the main pianist (which led to my employment as accompanist for a professional opera singer and singing teacher). I have achieved grade 8 at piano, and have thoroughly enjoyed performing regularly at a variety of venues such as weddings, retirement homes, at charity events, for the visually impaired, and most of all, the opportunity to conduct an orchestra at Fairfield Hall performing my own composition. I am looking forward to playing the 3rd Movement of Tchaikovsky's 1st Piano Concerto with the school orchestra this December, exhibiting my love for classical music, especially given that my favourite works are those of Debussy and Tchaikovsky.

I was delighted recently when I was given the opportunity to combine my musical pursuits and computer interests by my employment for a commercial software company writing music. I have much appreciated being able to develop my above interests alongside enjoyment of hobbies such as Table-tennis, chess, and reading of a broad spectrum of books.