My interest in Computer Science stems from my family's influence. When I was a child, my father always led me to his office, which had many disassembled terminals. He told me that there are languages for humans to talk to machines and this was the beginning of my connection with computers. In the process of writing my math essay, I learned that using a linear regression model is just ten lines of code in Python using SKlearn. However, the algorithm and the mathematical operation behind it, such as the gradient descent and kernel tricks, are very complex. I have researched about Hilbert space just for curiosity, used for higher dimensional mapping. And I am also researching how it is possible to detect AI-generated text for my extended essay, it took me a lot of effort to overcome the challenge of understanding the algorithm and the matrix operations.

I also take pleasure in applying my knowledge in the communities around me. As part of my school's MUN committee for four years, I have attended many conferences and helped organise my school's conference, SPIMUN. To keep it up to date, I implemented a website with multiple version updates depending on feedback from the SPIMUN team and delegates from other schools. It includes five languages and two web frameworks with separate frontend and backend to provide an online platform to meet the conference needs, such as uploading the clauses, adding amendments to them, passing notes among delegates, etc.

I also did an internship at a Chinese technology company in the summer of 2023. Where we had to develop the front-end endpoint for the terminal that would be used for patient registration. Although I had no Java experience before, I was impressed that I had read the code in one week. Once I could read the code, I was able to complete an endpoint testing task. Until the end of the project, I learnt how to communicate efficiently about a problem and explain my idea logically to others.

In order to further my knowledge of Computer Science, in the summer of 2024, I went to a summer school in Oxford. I had the university-style classes that I had dreamed about. During the course, he explained the algorithm of gradient descent in an intuitive way by hand drawing a paraboloid, which is what I am looking forward to comprehend. This class definitely helped me understand the concept I will be developing for my math essay. And I will take the valuable insight I gained with me into my future endeavours. This difference between high school and university is exactly what I've been seeking, as university allows me to pursue the knowledge I desire.

In the hope of instilling this passion for computer science, I started a coding club in my school for students from IGCSE and IB. The aim is to practice solving algorithmic problems and improving our coding skills. In the club, students form groups of three to solve problems within a week and discuss them in the next session. I helped many students with programming while organising the club, and dived into algorithms, which improved my coding skills. All these ideas for the coding club come from my dream event, ICPC, which I hope to participate in during my university life.

I also take part in other activities in my free time. I regularly attend amateur tennis tournaments at the club where I train and love to compete with good opponents who put me under pressure, as I believe that this is the best way to improve myself. I'm also a guitarist, having studied it for four years, and am part of the orchestra of my local conservatory. I am proud to say that I have been able to pursue these activities, as well as my academic commitments, and hope to continue to do so in the future.

At university, besides my aim to continue to develop my knowledge in computing, I also hope to contribute with my eagerness to partake in new projects that pose a challenge that I would help to overcome.

The University of Hong Kong (HKU) is the perfect place for me to develop my passion for Computer Science because it offers both strong academic learning and practical experience. The university’s research in artificial intelligence, data science, and cybersecurity connects well with my interests, especially in understanding algorithms and detecting AI-generated text. HKU also works closely with technology companies in the Greater Bay Area, giving students great opportunities to apply their knowledge to real-world problems. I am excited about the chance to work on projects, learn from experienced professors, and be part of a diverse student community. With my interest in both learning and hands-on coding, I believe HKU will help me grow and take on new challenges.