Pioneer application form

4.1

IGCSE Computer Science first semester mid-term exam: A\*

IGCSE Computer Science first semester final exam: A\*

IGCSE Computer Science second semester final exam: A\*

IB Computer Science SL first semester mid-term exam: 7

USACO promoted to Silver level

I began to self-study programming from the second year of junior high school by reading some C++ introductory books. At that time, I was totally fascinated by the magical results produced by lines of codes. Therefore, I kept the habit of coding every week from that time. I am quite familiar with C++ while learning Python and Java in school. Also, I use modeling software such as MATLAB to assist my study in mathematics sometimes.

Interest is the best teacher and I am always keen on Computer Science. Being hardly sociable, the computer is actually a very good friend of me. I have three years of coding experience and I enjoy the process of coding, because it requires perfect concentration when typing those various characters. This unique experience calms me down and makes me more logical and critical. The sense of fulfillment has been the major motivation that helps me progress; consequently, I often write programs that benefit my class or family. Once I developed a random seat-swapping program and received upvote from classmates. The future is the era of technology. I am looking forward to be a programmer myself to develop cutting-edge technologies and utilize them to benefit the whole society.

4.2 mathematics

IGCSE Mathematics first semester mid-term exam: A\*

IGCSE Mathematics first semester final exam: A\*

IGCSE Mathematics second semester final exam: A\*

IB Mathematics HL first semester mid-term exam: 7

AIMO2019 Certificate of Distinction

Chinese High School Mathematics League for Grade 8: First Price

I have been interested in mathematics since my childhood. I often read math books and find problems to solve by myself. When I was in middle school, I began reading high school textbooks by myself, and now I have finished all the compulsory and selective ones. I not only achieve excellent grades but also retain the spirit of exploration. Whenever I learn a new theorem or formula, I will try to deduce it by myself. Sometimes I can deduce the existing formula, which makes me very proud.

Learning mathematics makes me a more logical and rational person. I always observe the world around me and try to find answers to many questions, whether practical or theoretical. Consequently, mathematics as a fundamental tool is significantly required. Mathematics enables me to have a deeper understanding of the world and analyze problems from multiple perspectives. Not only various applications of math in real life are intriguing, but elegant proofs and theorems to complicated problems also draw my interest, for instance, Euler’s formula, e^(iπ)+1=0, combining five fundamental numbers in a single equation. Mathematics is a basic subject, which must be widely valued. I hope I can learn more math knowledge in the future and even invent and create branches of math by myself like a mathematician, inducing formulas and theorems for younger generations.

4.3

IGCSE Physics first semester mid-term exam: A\*

IGCSE Physics first semester final exam: A\*

IGCSE Physics second semester final exam: A\*

IB Physics HL first semester mid-term exam: 7

I have been immersed in physics since the beginning of middle school when there is an experiment about measuring the velocity of a toy car. I learned many issues to consider including friction with the ground and uncertainties in measurement. Physics is just so intriguing so I spontaneously reflected on many questions in physics class. Due to the lack of knowledge, many questions at that time could not be answered by both myself and my teachers until now in high school. In order not to introduce a lot of complicated knowledge, textbooks in middle school simplified many vital details. Later in high school, however, I learned a more rigorous and scientific physics. I am satisfied by the sense of achievement from deducing my own formulas and building a small tool or even a robot. I hope that I am capable of learning deeper theories in physics, receiving the wisdom of our ancestors.

科学技术与社会

科学和技术带来社会进步。我希望自己成为科学家，研发新技术来改变社会，让社会发展更好。在新时代，影响人们最重要的一个方面就是科技，拥有很好就业机会，受人重视。

第一，学习社会学是在学习一种思考方式，分析问题的方法。

在生活中我会更善于观察他人的情感，增加自己的情商，让自己有更多朋友，得以在社会上立足。在社会中我们需要考虑多方面利益，不那么自私，而是充分考虑到集体和身边人，这样才能有更好的社会进步。

第二，社会学是一门帮助我们解释周围的事情的学问。

解释这个社会的种种现象，预测人们的决策；只有充分了解这个社会，我们才能更好进步。我向往将来更广阔的天地。

In 21st century, one of the most significant aspects affecting people is science and technology. Science and technology bring about social progress. I hope to become a scientist and develop new technologies to improve our society, such as Improving living standards and contributing to rising life expectancies of the general public. Also, scientists are highly demanded by enterprises, and I may have relatively more wages.

Sociology is a subject involves ways of thinking and analyzing problems. In my life, I will be better at perceiving other people's needs and wants or emotions. Therefore, I can make more friends and have a stable foothold in the society. In society, we shouldn’t be selfish; instead, we need to consider various interests of people around us and the community as a whole. Only by fully understanding this society can we make better progress.

My school introduces the pioneer program to us students as an opportunity to do research with top rated university professors. There is no way for me to miss this precious opportunity.

Both my mathematics teacher and computer science teacher have given high evaluation of my ability in discovering new knowledges. I often have interactions with them by solving their challenging problems using multiple methods. Consequently, I want to get in touch with university courses right now to constantly challenge myself and achieve success. I perform well in school works but those seems simple for me. I am desperately in need of a good learning environment with knowledge and information beyond the textbook, and some opponents so that we are able to learn from each other to make progress.

Even if the program is rigorous, I won't be discouraged. I have some spare time to study for I can often finish my school work rather quickly. However, the effect of my own exploration is not as well expected as that of being led by an experienced professor. I am a reflective person, so it is very comforting that my potential questions can be answered in time. I often wished to find a senior student or a teacher who could solve my puzzles at any time, but I never had the chance. Now the opportunity has come.

I am not afraid of difficult requirements and arrangements. I can always find a way to balance between IB requirements and pioneer program, because I allocate my time efficiently. Once I have to prepare for a mathematical modeling competition, a TOEFL test and a computer science competition, but I amazingly survived and got satisfactory results. When someone comes to urge me to study, I will be more efficient. Advantages of high pressure learning certainly outweighs disadvantages for me, because I can concentrate more on my study and have a firm will. Otherwise, I may play video games carelessly, which is not advisable. Faster reaction and more sensitive awareness of problems are expected outcomes; additionally, I will be more skilled in implementing methods in tutorials.

One of my senior students participated in the pioneer project, and he spoke highly of it. Thousands of online books and materials in pioneer can't be found anywhere else. He enjoys the professor's recommendation letter and invaluable research experience. In short, I really want to make progress and gain unique experience in pioneer program.