**Statement of Purpose**

Innovative things can always arouse my interest. In 2014, a fad of unmanned aerial vehicle pervaded China. It has opened a new world for both aerial photography enthusiasts and AI fans. When most customers were amazed by the beautiful views taken by DJI Phantom 2, I paid more attention to its core value of automatic pilot composed of a gyro, a camera, an accelerometer, a CPU, and a GPA. The development of modern computer science and engineering, including communication, sensors, and machine learning, has expended the application of UAV to a much wider range. It is not merely a “flying camera” but a “flying robot” that could change goods delivery methods and other aspects of human life in this digital world. I am eager to know more about this smart machine and dig deeper into the inspiring area of computer science.

Systematic studies at Stony Brook University have fully unlocked my potential and enthusiasm in computer science. Actually, I did not choose computer science but mathematics as my freshman major, in which I would like to consolidate my mathematical background and explore my interest. I then confirmed my will to major in Computer Science after I completed the course of cse 114 *introduction to object-oriented programming* in spring 2018, which recalled my passion for programming. Nevertheless, my studies in Mathematics in the freshman year was not a waste, which had trained my mathematical logic and thinking. For instance, my good mastery of geometry, linear algebra and, discrete mathematics will facilitate future studies in machine learning, computer vision, and crypto, etc.

Evidence shows it is a wise decision to transfer my major to computer science, which has showcased my strength in programming. Compared with the theoretical courses of mathematics, I find greater interest in the practical courses to exert my knowledge in problem-solving. For example, I managed to make a web application WireFramer, which was based on React-redux JavaScript. I used many frameworks, such as RND, React-materialize, etc. and the data of this application was stored in Google Firebase. The completion of this project further testified and developed my computational skills. Moreover, my C programming abilities were enhanced when I made a small blockchain which managed a collection of "worker" processes that concurrently engaged in solving computationally intensive problems. I also gained experience in low-level Unix system calls. Over two years of major studies in computer science have equipped me with the fundamental knowledge and practical skills for in-depth studies in computer science.

Curiosity also drove me to seek improvement outside of the classroom. In the summer of 2020, I attended a research project organized by the Chinese Academy of Sciences. This project attracted me for its focus on deep leaning based upon neural network, which fits with my research interest. During the first several lessons, I learnt about the primary technology and network structure. I felt excited when I managed to apply my knowledge about machine learning in Recommender Systems to analyze product features and customer behavior for customer demand prediction. The real-world practice has sharpened my overall capacity and deepened my zeal about computer science. It also reminded me of my insufficiency in professional knowledge and urged me to pursue advanced studies in computer science.

After a careful review of my strength and a long list of master degree programs, I find your MS in Computer Science program suits me well. Your program, which provides a highly adaptive and flexible curriculum involving the fundamentals of computer science as well as professional-level courses, fits with my educational background and academic goals. I hope to receive more practical skills training under the instruction of your world-leading faculty. Additionally, I look forward to the vibrant lad experience in your research center. I believe, through diverse courses and in-person communication with seasoned professors and researchers, I will develop a thorough grasp of computer science.

After I graduate from your program, I have a keen interest in working for a tech-motivated company, such as Google, Apple, as their products have greatly changed our life in a positive way. ~~I would like to join them and start as a programmer~~. I hope to contribute my gaining about advanced computer science from your program and learn from the senior and talented engineers to obtain the cutting-edge technology and hands-on experience about face recognition and automatic pilot, etc. I believe in-depth studies in your distinguished program will accelerate my career toward my career goal of a senior computer engineer.