Statement of Purpose

When my family bought me the first computer 17 years ago, I was deeply attracted to this very original machine that it companied me throughout my childhood, letting my toy guns covered with thick dusts. My real first taste of the unforgettable joyfulness began in a computer class at elementary school. Our teacher installed a video game in all the machines without informing everyone. When other classmates were only able to follow instructions and type in alphabets, I had already searched the MS-DOS system and played the hidden game. This special skill earned me respects from the classmates and great satisfactions, which inspired my passion to computers.

As time passed on, I was enrolled to the best high school in our city. With my ascending interests in mathematics and computer technologies, I joined the Olympiad informatics contest team and for the first time, I had access to the systematic computer programming learning process. During the three years, I earned the prizes for the National Olympiad in Informatics, province (NOIp) contests three times, which enhanced my interests and strengthened my will of choosing this field as my career path. More importantly, I learned from the training that there are thousands of students like us overseas, preparing for another event called ACM/ICPC, especially the United States. From them I was informed that they have much more resources in computer science and a better suitable environment for study and research. This idea helped me made a life-changing decision to study abroad.

I still remember August, 22nd, 2011. It was the first day I landed on Washington DC. I was excited about my new journey at George Mason University. But soon, I realized that because college education systems and methodologies are dramatically different between China and the U.S., students should manage everything independently, meaning that it is important to balance life and study. At first, I had a hard time figuring out the best schedule for course selection and various deadlines for school activities, which gave me a tough time and a poor academic performance. To overcome this hassle and to better adapt to the new learning environment, I designed and developed a software application to automatically generate all possible class-scheduling solutions based on customized user preferences, such as not to take morning classes or condense all the classes into 4 days. To begin with, I created two web crawler programs, one for gathering data related to George Mason University instructors from ratemyprofessors.com, the other for collecting course data from the university website, and yielded useful information by analyzing the DOM trees from the data collected. Then I adopted an evaluation algorithm from previously collected information to calculate the value of a specific timesheet based on the preferences given by the “users”, and run a simple searching algorithm with a few pruning strategies to generate the top schedules. Even though I did not release my work to public for university network security reasons and intellectual property limitations, I adapted theoretical knowledge learned from classes to application to find solutions to my own problem and I enjoyed

the whole process of solving problems. This encounter-solve process walked me through the 2 and a half years in America and as a result it earned me Dean's List 2013 awards.

Upon my graduation at George Mason University, the office of international programs and service sent an invitation to my parents. As much as they are thrilled to visit my campus and the United States, they were unable to speak English and they had to deal with the challenge of flight transitions. With this in mind, I decided to start a new web service that would help people who are traveling worldwide, but not good at English. The web service was designed to provide a platform so that users can post their travel information including itinerary and final destination to other passengers or airport employees who can offer help. This service also helps users to identify passengers to the same destination on a same flight or passengers willing to escort small pets or objects overseas. Just like Airbnb, this application will provide a new channel for people to help each other and potentially increase people's social connection.

So far, I have not been able to make this project a practical application. Due to the nature of this application, we need to store and manipulate large amount of data, such as saving users' behavior history and analyzing statuses of the users so that they can be fed with the most useful information; or dealing with the bandwidth and other system performance problems. These require the ability to create magnificent systems, manage large databases, and there will be more to do. I would dream that one day the USC data science program would help me to finish up my projects. More importantly, USC attracts me due to its great environment where students from different areas of study and cultures can work together easily. I happened to know one of the USC interactive media alumni, Jenova Chen for a long time because he is now a one-of-a-kind game producer in China. While at USC, he teamed up his fellow student Kellee Santiago, who made an inspiring speech on the TEDxUSC event about how video games can be artistic, to start a game design company and made great achievements in that field. I regard this as an excellent gift from USC because it is there, no matter who you are or where you are from, as long as you have great ideas and dreams, you may find that your dream come true.

Regarding my future plan. I would like to become an industry expert to bring people convenience in daily life with data-centric technologies, which requires me to be a leader of a group of talented people to make it happen. I used to be uncertain of how to approach this goal, until I saw the Master of Computer Science program with a focus on data science at Viterbi School of Engineering, USC. After carefully reading every word on the website, I believe that this is where I should go, given what I had done and what my passion is for – programming, algorithm designing, data management, software performance optimization, and leadership. With 8 years of preparation in computer science, I am confident that I will bring abundant resources to university's academic and cultural communications, and devote my contribution to the development of burgeoning technologies.