PERSONAL STATEMENT

For USC Viterbi School of Engineering, M.S. in Computer Science
Applicant Name: Qian WANG

My path of intellectual inquiry has been lit up by the moments upon which I found myself amazed by the delicate intricacies of computing and programming. I strove hard for each of these moments, and I enjoyed each of them. Recognizing this field as systematic, powerful, and exceedingly fun, I am now wholeheartedly committed to further the study via the M.S. in Computer Science (Scientists and Engineers) at your esteemed Viterbi School of Engineering.

Pursuing my interest in this field has enabled me to develop analytical and reasoning skills. By taking the B.E. program in Communication Engineering at the University of Electronic Science and Technology of China (UESTC), I have consolidated a combined expertise in communication technology, digital and internet communication networks, the Internet of Things (IoT), mathematics, and algorithms analysis and design. Throughout the undergraduate years, I have secured an outstanding GPA (3.98/4.00) that places me at the 97th percentile, and I made extra efforts introducing myself to key subfields of computing including principles of programming, software engineering, algorithms analysis, artificial intelligence, etc., whilst developing sound proficiency in a variety of programming languages including C, Java, Python, and SQL.

Proactive in my approach to building on my technique expertise, I also undertook system development projects. For instance, in summer 2017, I participated in a group project on the design of a remote meter reading system that allows for real-time power data acquisition, transmission, and visualization. In order to ensure ideal efficiency and accuracy, we innovatively came up with an application-layer interaction protocol, based on which we used GPRS module for communication between the server and the concentrator. We also employed the LoRa module for concentrator-sensor communication based on a distinct message format, so as to enable wider signal coverage and more rapid deployment. My role then involves creating the communication protocol, implementing code in C, driving the GPRS and the LoRa modules using STM32, and constantly modifying and debugging so as to fulfill the desired functions. As the project proceeded, I also enhanced generic professional skills in making strategic plans, taking initiative to propose ideas, coping with contingencies, and communicating effectively with supervisors and team members.

Projects like this have exposed me comprehensively to the limitless potentials of computer science in solving not only engineering problems, but also problems in more general situations. Therefore, I have been seeking more hands-on experiences not only to sharpen my technical aptitude but also to develop my way of thinking as a programmer. One example is my ongoing undertaking on the creation of QRecorder, a mobile app tailored to the need of students who are in preparation for the speaking section of the TOEFL Internet-based Test. Being a test-taker myself, I would love to have an audio recording app with a countdown timer that simulates the actual test situation, and with concise file management that allows me to separately store

particular types of speaking tasks based on my own needs – in fact, these requirements are confirmed by my subsequent survey which indicated that no such app is currently available on app market and that given the increasing demand for studying in English-speaking countries, its market potential is huge. I then opted for Android Studio as the development environment, and familiarized myself with the essentials pertaining to the user interface and controls, data storage, graphics, styling, and so on. I have now reached the stage of Java code implementation, and it is promising that after being tested and optimized, QRecorder will soon become available on Android Market as well as iOS App Store.

Besides academic endeavors, I delivered outstanding performance in various extra-curriculum activities ranging from volleyball matches to social services. Being a volleyball player propels me to cope with stress and pain, to create a united, invigorating spirit in a team, and to grow into a resilient person who always strives for triumph. The volunteering experiences, on the other hand, have cultivated meaningful interactions between me and other participants at a level of fundamental human values – self-determination, mutual trust, and a readiness for service. Altogether, these experiences allow me to know how great it is to take on a leading role in contributing to the wellbeing of a larger community.

Determined to pursue an M.S. in Computer Science at Viterbi, I believe my competitive and innovative spirit align me well with the program's balanced approach to both theoretical and applied facets of computing and information technology. Through this exciting program, I particularly anticipate to explore the cutting-edge issues and technologies in Software Engineering. Area of my academic interests also covers the enormous potential of Machine Learning, and my previous Tetris project also instills me keen interest in Game Development. With my cross-disciplinary background, I anticipate to thrive and contribute positively to the USC academic community.

Looking forward, I aim to enhance and to execute my technical aptitude so as to become a competent software developer at Google or other leading enterprises in this field. My long-term goal was to start my own business where I can drive both scientific and industrial innovation in the design, development, and management of high-performance software applications, and to generate powerful information in solving real-life problems. I believe that Viterbi's excellence in computer science and your extensive industrial contacts will assist me in achieving this career aspiration.

Intellectual inquisitiveness, a strong sense of responsibility, and willingness to share, support, and embrace challenges – these are the characteristic I bring with me as I embark on further education, and perhaps a lifelong career, in computer science. It is my sincere belief that the vibrant Viterbi community will facilitate me, both intellectually and empirically, in pursuing my aspiration, as to thrive and contribute to this burgeoning, competitive field; and the diversity of experiences I possess, in turn, promise that I can add value to the dynamic USC culture.