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I will be extremely thrilled and gratified to see someone become more effective in his/her work by using my software or technology developed. It's my deep-rooted passion to learn the principles behind software and to further upgrade it. For this reason, I will further my study in the various areas such as software engineering, artificial intelligence, and natural language processing out of my interest and serving for my career goal. After obtaining master's degree, I hope to engage in software development related work, accumulate rich practical experience, and finally start my own business in the Internet industry. I have this plain but hard ideal to make people live better with software.

Substantial resources provided by Nanjing University facilitated me to learn a wide range of knowledge, such as the application of various computer language like java, C, C++ for future programming, online course of Machine Learning, basic concepts of data structure, computer networks and algorithm for future scientific research, and the detailed software development process like demand analysis, architecture design conducive for a deep understanding of software engineering.

I also enjoyed cooperating with peers from diverse backgrounds, either as a team player or a leader. For instance, I worked with two schoolmates to win the best creative award in the NAO robot marathon programming competition, where I found myself adjust well to the high intensity of programming pressure. Moreover, I began to enhance my ability to compete for the role as a leader in a group. After about one year, I found the Citi Cup competition and soon established a team with schoolmates from the business school. I served as a bridge to prompt the communication between our teammates. Except for architectural design and implementations, I also had to grasp basic financial and mathematic knowledge shortly to ensure the accuracy of our development. With mutual efforts, we won the national fourth place and the best creative award in the competition.

Plentiful research tempered my problem-solving ability. Last September, I joined professor Feng Liu's Reinforcement Learning group to study related problems of POMDP and propose suggestions for algorithm development. Our group mainly concerns with how software agents ought to take actions in an environment so as to maximize some notion of cumulative reward. Curious to figure out the problems with the U-Tree algorithm, which gave worse experimental results than others did, I began to make careful analysis of each process of the algorithm and carry out a wealth of experiments, finding that this algorithm failed to make advantage of data due to its use of redundant data and used all-permutations to obtain the optimal result, which greatly increased the algorithm's time and space complexity. Through repeated theoretical assumptions and experimentation computation and by adding heuristic search and data weight to the algorithm, I proposed a new algorithm called ODWU-Tree, which generated better test results. The training efficiency of the ODWU-Tree is 2.55 times faster than that of U-Tree. I found that a rigorous analytical attitude and the courage to take innovative methods would bring enormous success to our future work. We wrote a thesis paper based on this project and the paper had been published successfully. With the previous algorithm improvement experience, I was much quicker at Professor Mingxue Pan's group for software testing and for a novel method for GUI testing. But the challenge lay in the new

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method's requirement of a mixed knowledge of machine learning, image recognition and other related areas. I spent abundant time figuring out these areas and then constantly carried out the programming experiment. Finally, I succeeded in proposing an efficient method for GUI test. Currently I have wrote a thesis paper for this project and submitted to a famous anonymous conference.

Rich project experience won me the opportunity to do summer research in Professor Qiu's SyGuS (Syntax-Guided Synthesis) project team in Purdue University, West Lafayette. This team mainly researches Program Synthesis and this project focuses on exploring new methods to SyGuS problems. During that time, I was primarily responsible for software development and participated in the improvement of the new method, using java language and Z3 SMT solver (z3 is an excellent SMT solver developed by Microsoft), which can check the satisfaction of logical expressions. We unavoidably encountered many problems during the development process, like the incompatible use of Z3 in the process and low efficiency in the implementation of the new method. To solve the incompatibility problem, I rewrote most of Z3's functions and its core algorithms. Besides, I proposed the idea to add multithreading to the method and optimized the algorithm included. After applying the idea, the accuracy of the method was improved by 20% and the whole processing time was reduced by 70%.

Step by step, I secured as a software engineer in SAP labs China. By quick learning and frequent consulting, I managed to adjust myself to the agile schedule in the industrial production cycle, attending the daily Scrum meeting and sharing developing progress in Kanban style. I got to know how developers and testers together ensure the quality of a product and understand the actual process of software development. Besides, I came to be aware of the possible questions in enterprise software development with shorter development cycles and various tasks.

Experience accumulated through both work and academic study enabled me to make rational analysis. Above all, I am embracing an increasing interest in software engineering during my internship at SAP. When building a large system, the complexity of the system is sometimes extremely high, resulting in a very high development cost, and it is difficult to ensure the correctness and usability of the system. I want to know how to deal with the complexity of large systems and the processes that produce them. After a detailed exploration of your MS in Software Engineering program, I am particularly attracted by The Advanced Chip Test Laboratory, which can facilitate me to apply what I have learned to real system development. Besides, the various interesting courses such as Software Engineering Method can also provide me with novel insights into software engineering. All these make this program a desirable one for me to come closer to my career goal.