**Applied Program: Aerospace Engineering**

"One can never consent to creep when one feels an impulse to soar" I must say that I am genuinely grateful to Helen Keller for articulating what I have long cherished in the innermost recesses of my mind. At the same time I also congratulate myself on having chosen flying as my one-time career, for it has imparted to me both the impulse and the desire to soar in my life.

Ten years ago when I was an undergraduate from the Department of Mechanical Engineering of Tsinghua University, or even 5 years ago when I just entered the China Civil Aviation Flight University, I had the stubborn notion that, for the rest of my life, I would stay on the ground working either as a mechanist engaged in mechanical designing and the technical improvement of materials. It never dawned on me that I would transcend all the matter-of-course outcomes resulting from my five-year undergraduate studies to become a pilot of international flights, for at that time the idea had never occurred to me that a person could fly so freely in the infinite universe of his life.

In 1990, I sailed through the highly competitive National University Entrance Examination to become an undergraduate in Tsinghua University. Out of my instinctive interest, I chose to study in the Department of Mechanical Engineering. My 5-year solid studies at this most prestigious university in China allowed me to establish a profound theoretical groundwork in mechanical engineering and to develop an in-depth understanding of mechanical dynamics and its operation principle. During my graduation internship, I discovered that, because of the airborne sand, the cylinder piston ring of the desert vehicle which did not receive alloy surface treatment frequently incur friction damage and breaking. This not only created great hindrance to the normal operation of desert vehicles but also seriously jeopardized the life and security of personnel doing field work in the desert. Driven by my sense of responsibility, I chose The Surface Alloy Treatment of the Cylinder Piston Ring of Desert Vehicles by Laser, a highly difficult technical subject which constituted part of a research program of the National 9th Five-Year Plan, as the topic of my graduation design. I was responsible for organizing a research team to conduct designing, processing and analyzing involved in the investigation. In order to arrive at the perfect ratio of different substances to be contained in the alloy, I undertook innumerable experiments which were coupled with innumerable failures. Sometimes I would stay in the laboratory for days without knowing the lapse of time. During this difficult but equally exciting period, it was Edison's motto Success Means Standing up Once More After Failure that sustained me. With due efforts, we concluded the research satisfactorily, not only scoring significant technological breakthroughs but also yielding impressive practical profitability.

After graduating as an undergraduate from Tsinghua University in 1995, at the strong recommendation of the University, I took part in a screening test administered by Air China for the recruitment of civil aviation pilots. With my impressive personal performance, I distinguished myself from the a total of 20,000 participants as a qualified candidate and entered China Civil Aviation Flight University in Sichun Province where I studied aviation theories and techniques, aerodynamics, meteorology and other relevant knowledge. In the first year of my studies at this university, I received the honor of Model Student. On account of my prominent performance in my studies and flying practice, together with my strong adaptability, especially with my impressive organizational and communicational capacity, I was dispatched by Air China in July 1997 to the Flight Safety Academy located in Florida of the United States to undergo a one-year specialized training in order to develop myself into an outstanding pilot on international flights.

During my studies at Flight Safety Academy, I was confronted with even greater challenges. I made utmost efforts to perfect my English aptitude within the shortest possible time. I continued to study advanced courses in flight principles, aerodynamics, federal regulations and a series of subjects directly or indirectly related to flying. At the same time, I was subjected to the most rigorous flight training. I did not shrink from any of those challenges. Instead, I surmounted them one by one, supported by the powerful spirit of perseverance and confidence cultivated in me in my early childhood. At the end of this one-year training, I received the Certificate for Flying Commercial Multi-Engineer Aircrafts issued by the Federal Aviation Administration of the United States. Hard as it was, the one-year experience in the United States not only enabled me to acquire the necessary qualifications as a pilot of international flights, but also helped me to develop some initial understanding of the American society. In July 1998, I returned to Air China and formally became its qualified pilot on international flights.

As a pilot, one must be in possession of a strong sense of responsibility and the spirit of teamwork. This requires that a pilot must be meticulous in every detail, able to deal with emergencies, and effective in interpersonal communication. Before each routine flight, I would make detailed flight plans, conduct careful analysis of the conditions of the airfields that we would land on, familiarize myself with the air routes and the weather conditions. I pay special attention to enhance my ability in analyzing and handling emergency situations. On those occasions when the flight is delayed due to irresistible factors, my patient explanations to the passengers tend to make them satisfied and their excited emotions would naturally calm down, facilitating the smooth settlement of the problems. In recognition of my prominent achievements, my company conferred on me the Model Pilot Award. All those gradually cultivated qualities serve as my strong assets for commencing new stages of my career.

Over the past four years, I have traveled to virtually all the major countries of the world and I have accumulated a 3000-hour record of safe flight. After arriving at each destination, I can enjoy a brief vacation of 3 to 4 days in the local city. I would invariably take advantage of such occasions to make extensive visits to the local society, coming into close contacts with local traditions and customs. Those experiences have not only significantly broadened my cultural perspective and enriched my mind, but also developed my ability to accommodate myself to different cultural backgrounds. Exposure to new ideas, a cosmopolitan awareness, and increased receptivity are the greatest benefits that I have been able to derive from those experiences.

My pleasant work experiences make me increasingly interested in my career as a pilot. But at the same time I have also come to develop a strong concern for the existing condition of China's civil aviation industry. Because of its lack of fund and backward technology, plus its belated development, China's civil aviation industry currently lags far behind the developed countries, particularly in the field of aerospace engineering. Once again, motivated by my sense of responsibility to help develop China's civil aviation industry, I am determined to relinquish my present career and apply to study Aerospace Engineering at your distinguished university, to embark on a new stage of life. Technically, I have established a solid foundation for apply for an advanced degree program in aerospace engineering because of my undergraduate training in mechanical engineering. My actual experience as a pilot further contributes to my readiness to combine theoretical knowledge with practical expertise. The most essential point is that, psychologically, my extraordinary sense of responsibility for the safety of passengers has cultivated in me the spirit for pursuing perfection. Such an awareness and spirit will undoubtedly ensure the maximum success in my prospective degree program as in my heretofore career as a pilot.

Admittedly, to relinquish my present career means to give up many advantages: a relatively high salary, a comfortable life, and a respected social status. But I should say that flying constitutes for me not only a form of career and a form of working experience. It has also ignited my passion for the future, for it enabled me to understand the true significance of horizon, that, as a matter of fact, the horizon of life is akin to the horizon of the sky in which I fly in that they both promises infinite possibilities. It made me further realize that an individual's universe is as infinite as his heart is ambitious. In order to pursue a more exciting future of personal development, it is often necessary to transcend the mere past. The present decision that I make is by no means a form of relinquishment, but a form of pursuit, seeking to transcend the status quo and to strive for excellence, to fly to even higher destinies.

I could never understand why "To be or not to be / That is the question" can become such a celebrated soliloquy and why the protagonist Hamlet, the prince of hesitation and indecision, could become such a worshipped hero. For me, who is well equipped with all my previous qualifications and at the same time confident about the future, I would say : To Soar or to Creep / That is no Question!

**Recommendation Letter**

**Dear Sir or Madam:**

Mr. Newman Song was one of the undergraduate students whom I taught and my research assistant in my research programs. My close contact with Mr. Song and my relatively deep understanding of his character and his academic performance qualify me as the most appropriate person to recommend this promising young man who is currently applying for a degree program at your university.

As adviser of Mr. Song's graduation design, I collaborated with him for more than one year. In this process, Mr. Song left a very deep impression on me. He possessed a profound understanding of the nature of mechanical engineering. Moreover, he is rigorous in his scientific mentality and perseverant in his research stamina. He distinguished himself from his fellow students by his exceptional capability in making important findings. All those precious qualities are incorporated in his graduation design.

For his graduation design, Mr. Song concentrated on The Surface Alloy Treatment of the Cylinder Piston Ring of Desert Vehicles by Laser, which was a major challenge for an undergraduate. The project involved a considerable amount of knowledge outside his area of specialization. In order to ensure the successful execution of the project, Mr. Song consulted a large amount of technical literature in those related fields and acquired all the necessary background knowledge for undertaking his research. The project called for substantial fieldwork and experimentation and Mr. Song tried his best to be meticulous in every detail. He was independently responsible for the laser treatment of the product, a crucial step in the entire project, and the subsequent sampling and testing. His personal efforts contributed importantly to the final consummation of the program.

Equally impressive is Mr. Song's innovative spirit. During the research, he came up with quite a few valuable and constructive suggestions. I incorporated almost all of his suggestions into the actual research. The effectiveness of those important advices has been fully demonstrated in practice. Another important factor that contributed to his research success is his readiness to cooperate with others. He is adept at interpersonal communications coordination. Consequently, all the problems that occurred in the process were smoothly and speedily worked out.

On the basis of his heretofore prominent performance, I fully believe that Mr. Song is replete with potentials which will enable him to adapt to his future academic environment at your university. With all the excellent research facilities and invaluable instructions by the renowned professors that your university provide,

**Yours Faithfully**