

Statement of Purpose

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A good friend of mine mentioned to me recently that he had been admitted to a Master program in Material Science and Engineering. My friend kindly furnished me with the name of the institute. I later discovered it is an Institute located in the United Arab Emirates. I must admit I was a trifle puzzled. All that came to mind for me was what I had learned in high school geology. UAE is a nation with OPEC membership, rich in petroleum production in the Arabian Peninsular. I then checked out *Masdar Institute of Science and Technology* on the Internet. I must say your program in **Computing and Information Science (CIS)** did intrigue me greatly.

My thoughts were rather fixed on the staying power of new schools which arise quickly based on what appears to be large infusions of money. Thus I did a full scale investigation of your CIS program, from introductions on institute home page to recent publishings of my intended advisors. The more I looked at them, the more my inner self told me to make the application because you have done a fabulous job in creating a world-respected institution in relatively short time span.

Academic Background. I majored in Information Security in *Northwestern Polytechnical University*. In the key courses, both academically and professionally for a network-expert-to-be, I attained a grade of 95 for Next Generation Wireless Network and 98 for Principles of Modern Communication. As well I ranked second with a mark of 87 in TCP/IP Protocols. These are specifically where my interests lie. For each of the three courses above, a term paper is required. In all of them I won the award for the best one submitted. Respectively, they are about 4G Mobile Network and Its Future Market Prediction in Xi'an; Design and Analysis of AWGN (Additive White Gaussian Noise) in Certain Channels; Analysis of NAT (Network Address Translate) Techniques in P2P Software (mostly Emule and Bit-Torrent). These remain for me milestones guiding my progress step by step from collecting information to composing essays. This type of intense training was absolutely necessary for me as I pursued my goal of becoming a researcher with expert programming techniques.

My letter of recommendations will affirm this assertion. In the near future I will join the DNA (Data and Network Analysis) group under the esteemed tutelage of Dr. Wei Lee Woon. In this assembly of talented post-grads we will crack the unique challenges and problems of sustainability and alternative energy with data management, data analysis and computational capabilities.

Academic Vision. I joined Network Security and System Engineering Laboratories and became an undergraduate research assistant after my 2nd academic year. This demonstrates clearly what objectives and achievements as a Masters level student will bring to your Institute. In the lab we cooperated together for a two year cycle.

With world-class peers as classmates in Masdar, I will attain a strong theoretical foundation for future research. The second year would appear very critical if I am to produce highly competitive papers. So I will design, implement and evaluate a project-based thesis in teams and individually to meet those desired outcomes. Two years may seem optimistic, however, I am confident if I put all my training and talents into producing the expected results it would be sufficient. For that reason I must have a clear professional objective drawn up well ahead.

Professional Objective. I will further my education at your institute so that I may complete my Ph.D. in **Interdisciplinary Doctoral Degree Program**. After finishing the program I wish to return to China and join the faculty of one of China's core universities. I will do this so that I may be permitted to educate students of my country in

solving sustainable energy problems with the help of the most modern information science and technology which I will have procured at your school. Why?

I believe teaching is an integral part of doing research. A discovery is far from complete unless a cogent method is obtained to present the results to others. Even more importantly is organizing language in listening and speaking. While I was in my final year at High School and with the approval of several English teachers I shared my skills with first year high school students in their classes. The outcome was very encouraging for me.

In college I was a leader in the volunteer team as mentioned in my C.V. There I shouldered the task of general ideas and specific applications of certain fields of computer science to students from other majors, accurately and effectively. I did this job so well that I was appointed leader for two years running. In selecting topics and preparing PowerPoints I do not take short cuts. The length of time preparation is directly proportional to the success of the product. It seems easy to show a graph of ISO/OSI model to a CS major student and explain it, but there is so much work to simplify it and be able to make comparisons to daily matters so that these ideas may be acceptable even impressive to those non-cs-major. I have taken the design and implementation of library book management software in order to accomplish my objective—get concepts through.

Why Masdar? Quite frankly I have seen so many Chinese who want to get rich. How can they achieve this lofty goal? My conclusion would be to start or join a startup. That's been a reliable way of becoming affluent for many years. I see *Masdar Institute of Science and Technology* a startup in the academic field. For students pursuing a postgraduate degree, your out-up is morale-oriented and research-driven. In this sense, Masdar provides an fabulous environment both physically and mentally. Real-world issues of sustainability are taken seriously. More importantly, unlike my classmates who choose to further their education in the United States your education system allows the students to focus their full attention on the courses.

Your collaboration with MIT, top research institute for science and engineering specialists and putative experts, is a compelling addition to my reasoning in sending my application. In carrying out research in this manner with such a prestigious university, I sense that projects done at Masdar Institute will be at the forefront of the next wave of information technologies required to address global sustainability challenges.

Conclusion. I am looking forward to continuing my research career as a MSc student, and Ph.D. at Masdar, Abu Dhabi, UAE. In addition to interacting with peer members in CIS department will give me an invaluable opportunity to broaden my horizons, and work in many research areas that I cannot anticipate at the moment. Given my background I believe I will be an asset to your university as a graduate student and a credit to your school as a Graduate. Thank you.