**Short Answer Questions**

1. Please discuss your past academic and professional experiences and accomplishments that will help you succeed in the MFin program. Include achievements in finance, math, statistics, and computer science, as applicable. (200 words)

**Ans:**

I am proud of the challenging portfolio management project of managing risks for ten companies by mimicking real-world trading in financial derivatives. Instructed by pricing techniques and companies’ financial reports, I used strategies like hedging, speculating and arbitraging to mitigate solvency risk. My portfolio consistently outperformed the benchmark and got me first place in the cohort of 43 students. Furthermore, I designed diversified portfolios containing options and futures on a real-time trading platform called RPM. It gives me a profit of $42 million out of $200 million within one month. In addition, I collaborated with other group members to research altering heterogeneity by machine learning in Python. The positive project results manifested my research capabilities and placed my problem-solving skills to the test. Abreast of my superior performance in projects and research, I got “A” grades in courses on machine learning and financial principles, including in-depth exploration of topics like Monte Carlo, Bootstrapping and Stratification. During my internship with Munich Re, I created the first fully automated stress test for the company. This consisted of using industry-specific testing templates in R and VBA for data scraping. The innovative program greatly improved work efficiency and has been implemented by Munich Re throughout the world.

2. Tell us about your short-term and long-term professional goals. How will our MFin degree help you achieve these goals? (200 words)

**Ans:**

My short-term goal is to be a quantitative analyst, providing mathematical or statistical solutions to financial and risk management. My long-term goal is to establish my own quantitative “for-profit” hedge fund, expanding its operations overseas and investing in the North American markets, as they present significant growth opportunities. I will utilize my previous working experience in the hedge fund to that effect.

At MIT, I am eager to research the positive and negative aspects of big data and financial technology to identify and measure the magnitude of emerging problems and develop new technologies to address them. This detailed exploration will enhance my understanding of machine-learning models for consumer credit risk management and applications of secure multi-party computation to financial regulation.

The Advanced Analytics and Data Science courses and Analytics Certificate are especially exciting as they will allow me to understand shallow models and train deep neural networks in an economic context. I also want to further improve my technical skills around asset pricing and the ensemble method, which are critical to forming accurately priced derivatives. Overall, I believe that MFin will further sharpen my analytical skills to create advanced and intuitive approaches to simplify data processing such as alternative datasets to automate trading decisions and executions that I created at Muchich Re.

3. What personal qualities will enable you to contribute to the advancement of our mission? (200 words)

**The mission of the MIT Sloan School of Management is to develop principled, innovative leaders who improve the world and generate ideas that advance management practice.**

**Ans:**

I believe success as a leader requires one to have a passion for taking the initiative, thinking outside the box, and persevering in adversity.

In my sophomore year, I started a non-profit association called  UTCVA (University of Toronto Chinese Volunteer Association) with the ambition of advocating equal access to education for students living in rural areas of China.

To meet the fundraising goals, I came up with innovative fund-raising events such as Food Festival and Charity Run by collaborating with local stores and achieving a better product price. With the support of the “sponsors”, we are able to gain more revenue, enlarge our impact and bring in valuable fundraisers. My communication and innovation skills have significantly improved and my commitment to improving the world through innovation will allow me to contribute actively to MIT’s mission.

In the summertime, I collaborated with the Chinese government to provide volunteer tutoring opportunities for UofT students and bring donations to the talented local students. I had a great time teaching young students and gave appreciation to the education I received.

Moreover, my friends always say I’m a sporting girl who never loses.  But when I first diving, I failed to hold breath for appropriate time because breathing technique is perplexing for me no matter how many I tried. I almost gave up because I have aquaphobia. However, to challenge myself, I signed up for more breathwork classes and practiced the technique constantly. Finally, I got the free diver certificate from PADI and opened a new world under the sea.

**Result** (who - target population, where - location, what - being more impactful and attract more fundraisers); your take-away: soft-skills (leadership, communication, organizational skill, etc), technical skills (). The association attracted more people to volunteer as a tutor in less developed areas in China.

Perseverance: context - sporty girl who never fails sports; story: first time diving was a failure; the causes of the failure (breathing technique is perplexing for me no matter how many I tried); I amost gave up but I didn’t (why? - ) I signed up for breathwork classes, practiced the technique constantly and finally deep dived successfully.

These traits have always been integral to my personal and professional pursuits, including my experience with starting a non-profit, campus-based group called UTCVA (University of Toronto Chinese Volunteer Association). I hosted many events such as the Food Festival and Charity Run to raise money with the goal of donating the profits to some of the less developed areas of rural China and supporting the education system by volunteering to teach in the summertime. It also provides local volunteer opportunities for UofT students to participate in community activities, *My commitment to improving the world through innovation will allow me to contribute actively to MIT’s mission.*

Furthermore, my extensive involvement in diving has enabled me to develop perseverance and increased focus when facing challenges. My first loss in diving was devastating, and I considered giving up the sport, as my goal had been to maintain a perfect record. Ultimately, increasing training intensity, breath classes and the strong support from my trainer allowed me to dive deep successfully and earn the certificate of open water diver from PADI.

**Optional Questions**

How has the world you come from shaped who you are today? For example, your family, culture, community, all help to shape aspects of your identity. Please use this opportunity if you would like to share more about your background. (250 words)

**Ans:**

The traditional Chinese proverb "Men's job centers around the outdoors, women's labor centers around the house" in traditional Chinese society implies that men should be the breadwinner and women should focus on the housework. Nevertheless, in such a culture, my mother developed into a successful businesswoman, starting her own company and continuing to innovate and expand to new business prospects in the medical device industry. My parents didn't teach me much about being an independent woman before I left for my studies overseas, but my mother instilled in me the value of independence by osmosis. In my opinion, an independent woman is not only financially independent but also not be swayed by the ideas of others.

My mother started to work in the financial area for several years. After gaining some experience, she made the decision to leave her previous position and launch her own business. Because it was too risky, many of her friends and family did not back her decision, but my father supported her without hesitation. My mum made the decision to launch her own business after assessing all the risks.

The lack of entrepreneurial experience contributed to the company's lackluster profitability. But my mother persisted, and with my father's financial assistance and emotional support, the business began to grow. Nowadays, my mum owns a couple companies and her business ranging from 7 provinces in China. The necessity of having a free mind has been reinforced for me by my mother's experience. She was able to launch her business today because she persisted in doing so against everyone else's advice.

**Video Question 1**

Introduce yourself to your future classmates. Here's your chance to put a face with a name, let your personality shine through, be conversational, and be yourself. We can't wait to meet you!

Videos should adhere to the following guidelines:

·   No more than 1 minute (60 seconds) in length

·   Single take (no editing)

·   Speaking directly to the camera

·   Do not include background music or subtitles

Note: While we ask you to introduce yourself to your future classmates in this video, the video will not be shared beyond the admissions committee and is for use in the application process only.

Hello everyone, my name is Sherry. I’m graduating from the University of Toronto, majoring in Actuarial Science and Statistical Science. I’m currently working at Munich Re corporate reserving team, focusing on IFRS 17 and cashflow analysis. I’m interested in applying machine learning in the finance field, and that’s why I’m here. After graduating from MIT, I would like to work as a quantitative analyst in hedge fund or private equity. In the long term, I would like to return to China and establish my own quantitative “for-profit” hedge fund, expanding its operations overseas and investing in the North American markets, as they present significant growth opportunities. Why MIT Sloan.

Some fun facts about me – I’m a dog person and I like diving around the world. Whether it’s winter or summer, whether it’s lack or sea, I would like to explore the world under the water.