

Gemini Chat

✦ Show thinking ▼

Okay, here's my story and my plan, as I see it right now.

I'm a first-year international student at the University of Toronto, originally from China. I'm diving into a Statistics major, and I've also tacked on minors in both Math and Computer Science. My big goal? To become a data scientist, and then hopefully, down the line, a machine learning engineer or an AI engineer.

My family background is a bit of a driving force here. My parents both came from what you'd call low-end rural backgrounds. They were smart and hardworking, though, and got into university to study business degrees – marketing, things like that. This was back in the early 2000s, a wild time in China. The country had just joined the WTO, economic growth was through the roof, and there was this insatiable demand for talent in international commerce. So, their degree choices were perfectly reasonable, even savvy, for that era. They really managed to climb from that low-end start into the middle class, taking full advantage of that boom and the 20-year window of social mobility that came with reforms in the education system.

My mom worked as a sales representative for a while, then quit to raise us kids. Later on, she started her own small international trading business to help support the family. My father, he pushed further academically, getting a PhD in a commerce/economics-related field, and now he's an Assistant Professor at a university.

But here's the thing I've realized, looking at their path: while those business degrees were valuable then, they're inherently limited by a lack of deep STEM expertise. They don't necessarily generate value in a truly sustainable way in today's world. And this is a big reason why I feel this pressure, this potential for a downward slip in our family's socioeconomic status. My parents built significant wealth, and more importantly, they had the cultural capital and awareness that got me into a top-tier institution like UofT. However, there isn't necessarily a lot of *literal* capital, or the kind of social capital that can keep generating wealth long-term. To make things worse, with all the current geopolitical tensions, the outlook for my mom's small independent international business looks extremely grim.

This inevitable lack of foresight in their choices—completely understandable for their time—means we're under pressure. I feel this urgency to build my own economic independence, to secure my future. It's not just about ambition; it's about long-term security.

Academically, it's funny – I was never particularly a STEM whiz in high school back in China. But the Chinese K-12 math curriculum is so advanced that when I came to Canada for 12th grade, I actually had a significant advantage. That's what helped me get accepted into the BSc program at UofT.

My ultimate goal, the one that drives a lot of these decisions, is to live as long and as healthy a life as possible. And to do that, I know I'll need all the resources I can muster – financial stability is a huge part of that. So, the career plan is to start as a data analyst, perhaps in a bank, the tech industry, or even a more marketing-oriented role to get my foot in the door. Then, I want to pivot to a full-fledged data scientist, and eventually, specialize as a machine learning or AI engineer.

I've done a *ton* of research on this. I've been all over Reddit – *r/torontojobs*, *r/ImmigrationCanada*, *r/AskTO* – and Chinese forums like 一亩三分地 (1point3acres), plus 小红书 (Little Red Book), trying to figure out the landscape. What I've learned is a bit sobering. A major in Applied Math or Statistics, despite sounding more practical than Pure Math, is often still considered too theoretical for the job market here, especially when compared to degrees like Engineering or Computer Science. With just an undergraduate degree, I'm likely looking at a job like a front desk clerk at a bank, earning around \$55,000 CAD a year, which in Toronto is basically just a minimum livable wage.

So, if my goal is to build a truly independent life in Canada, a graduate degree isn't just an option; it's a necessity. And it has to be one of the good ones. From what I can tell, the programs that could really jump-start my career, putting me in a base salary range of \$60,000-\$80,000, are things like:

- Master of Science in Applied Computing (MScAC) at UofT
- Master of Mathematical Finance (MMF) at UofT
- Master of Data Science and Artificial Intelligence (MDSAI) at the University of Waterloo
- Master of Financial Insurance (MFI) at UofT

These are the more statistics-oriented programs that seem to have strong outcomes. The next tier, which would still provide a much better safety net than just a bachelor's, includes:

- MMath in Statistics at Waterloo
- MSc in Biostatistics at UofT
- The online Master of Science in Computer Science from Georgia Tech (though I'd prefer an in-person Canadian degree for immigration purposes).

The kicker is that all these programs are incredibly competitive, with acceptance rates often less than 10%.

Despite these hurdles, I really want to stay in Canada. I value the social justice here, the social security systems. When I look at China, I have serious concerns. There's talk of the 退休金 (pension fund) running out, and frankly, the geopolitical situation makes me uneasy about the possibility of war in the next couple of decades. I don't want to be there if that happens. In China, the 下限低太多 (the lower limit is far too low), there's a real lack of robust safety nets, and the overall culture is less oriented towards health and wellness, which, as I said, is a huge priority for me.

So, that's where I stand. It's a challenging path, but I'm determined to make it work.