



ROBERT EWING/ASU

PhD student Ty Tang in a gyroscope lab at Arizona State University in Tempe.

## WHAT I LEARNT FROM A STINT IN INDUSTRY

Two years of work before graduate school gave me confidence and technical skills, and made me certain that research was the right choice. **By Ty Tang**

**“**If you want to go to graduate school, don't go to work first. You'll get addicted to the money and you won't be able to go back.”

I listened to these words of advice carefully. I had spent the past several months asking people about their experiences of graduate school. The overwhelming majority of advice related to money. “It's not worth the increase in salary”, “you'll be so poor”, “you'll envy your friends with jobs”. But, I wondered,

what about the love for research and learning?

Like many other students, I was confronted with a predicament: at a turbulent stage of my life, with uncertainty around every corner, I was torn between applying to graduate schools or for full-time jobs. Like many students, I was terrified of committing to one or the other, so I applied to both. And with some luck and persistence, I was offered opportunities for both, putting me back to square one.

One day, as my decision deadlines

approached, I had a realization: if I started to work and became ‘addicted to the money’, then graduate school probably wasn't the right decision to start with. Why waste up to six years of my life on a career path I was uncertain about if, in the end, money was worth more to me than my passion for science? It wasn't exactly the intent behind the advice, but it nonetheless allowed me to proceed with some clarity. After finishing my last undergraduate term of a



Ty Tang (second from right) made great friends at Epic Systems in Verona, Wisconsin.

bioengineering degree at the University of Illinois at Chicago, I embarked on a journey to work as an interface engineer at Epic Systems, a health-care software company in Verona, Wisconsin.

### Defy expectations

Being an interface engineer at Epic Systems required new skills: project management, writing code, working with customers and troubleshooting problems. I also had to adjust to a lack of autonomy, because what I did at work depended on the customers' and the company's needs. In more cynical moments, I imagined that I might gradually begin to hate my job, be miserable for a while and regret ever choosing industry over academia.

I was surprised by how wrong I was. I had the good fortune to make great friends, be surrounded by smart and driven people and was finally able to buy groceries without financial stress. But the most incredible thing for me was that I actually enjoyed my job. Like everything, it had its ups and downs, but I was surprised by how engaging non-academic full-time employment could be. I applied the same discipline and creative problem-solving I had developed as an undergraduate researcher and taught myself new skills as I grew professionally. I made contributions that felt meaningful, and I enjoyed working with my peers and customers. I looked forward to the

challenges and opportunities, and, overall, I felt happy. Working there made me realize some important things.

Graduate school is often overly romanticized. I'm as guilty of this as anyone, but now I understand that not all research is fun and stimulating, and that not all work is tedious and soulless.

**“For me, taking a detour from research wasn't a waste of time – not by a long shot.”**

The people around you matter. Sometimes, even more than where you are. I found that being surrounded by smart, kind and passionate people makes everything easier. I learnt to cherish my personal relationships and the importance of prioritizing them over work.

Money can buy you a lot of happiness. Some might argue that happiness as a result of buying things is fleeting and shallow, but, for me, the value of removing financial burdens – of going out to eat without feeling guilty and being able to travel and have new experiences – can't be overstated. It's not that you can be happy only if you have money, but it certainly helps.

Money isn't everything. Everyone knows this, but sometimes it's hard to accept. When people look on social media and see their

friends or colleagues going on extravagant holidays, it's easy to think that if you could just win the lottery, you'd never have to worry about anything ever again. But, of course, it's not that simple. There are things other than money that matter to us.

For me, what money couldn't buy was passion. Even though I was happy, I couldn't help but feel that something was missing, and that I wanted to do more. It wasn't long before I started looking into graduate programmes again. Having heard me talk passionately about my research experiences, my boss wasn't at all surprised to hear my decision.

### Time to return

After 18 months at Epic, I started going for interviews at graduate schools, and a few months later, I accepted an offer from Arizona State University in Tempe to study cognitive science. Armed with my experience in project management and technical writing, I felt much more confident and prepared for the challenges that awaited me in graduate school than I had before. I also couldn't wait to apply the technical skills I'd picked up, and use my determination and ambition in another arena.

For me, taking a detour from research wasn't a waste of time – not by a long shot. Not only did I meet incredible people and improve my working habits, but I'm now certain that I am where I want to be.

When I was asking for advice about graduate school, I wish I'd been told that going to graduate school is not a decision you should rush: it's a huge commitment and can be financially stressful. If you're not sure whether you want to be a scientist, it's okay to take some time to do something else. You might end up realizing that graduate school wasn't the right decision for you, and that's absolutely fine.

I also wish someone had told me not to get tunnel vision too early in my career. I recommend you explore your options. Try things you think you might like, but also try things you might not like. Your experiences will give you perspectives and skills that can give you an edge over your competition.

No matter what you do, there are many opportunities to learn and to contribute to the world. Even if you don't work in research, the skills you develop as a student and a scientist will allow you to make positive changes. In the end, what you have to decide for yourself is where you want to make those changes and what really matters to you.

Taking a break before graduate school didn't weaken my resolve, it strengthened it, and I don't think I would have been able to achieve what I have without that experience.

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