

# Chapter 1

## Introduction

Just so you're clear: it was not my idea to give a talk to Microsoft Research. I had learned embarrassingly little about computer science in my 18 years of life, and the last thing I wanted to do is to have that exposed in front of a bunch of genius PhDs in MSR. But my manager thought it'd be a great "opportunity," and so there I was, blabbing on about my summer project.

I finished up my talk at lightning speed. As I was dealing with a somewhat severe case of stage fright, I considered my haste a good thing. And then the questions started. Did I consider doing X? Yes, I told them, I did, and this is what happened. Why not implement it with Y? You could, but that would cause problem Z.

I almost hesitated to admit it to myself afterwards, but things went fine. Just fine.

That whole summer I had been convinced that Microsoft would discover that I knew practically nothing and cut me loose. I had only gotten my internship offer through some brilliant streak of luck, I reasoned, and didn't really deserve it. Not like my fellow interns did anyway. They had done three times as much college as me, completed three times as many projects, and basically knew three times as much as me.

Four years later, with a job at Google about to start, I reflected on my incredible luck. I landed a Microsoft internship at an incredibly young age, and that turned into three consecutive internships. Then I got an Apple internship, even though Apple never even recruited at my university. And then I happened to get hooked up with just the right people who referred me to the up-and-coming Google. I must be the luckiest person alive.

Or am I?

Maybe, while Lady Luck was certainly in my favor, I had somehow, accidentally, done everything just right. I completed several large projects in high school, offering me considerably more experience than my peers. I got an entry-level job as a web designer, which developed my professional and technical credibility. I created a résumé that, while atrocious in many respects, demonstrated my passion for technology and showcased my limited experience. And finally, I built a network of more senior professionals, managed relationships with mentors, and leveraged these connections to land one dream job after another.

And that, my dear readers, is how you get a job at the world's greatest tech companies.

## **Life at Infinite Loop and Microsoft Way**

Even their addresses are suggestive of company stereotypes. Microsoft, at One Microsoft Way, screams big and mammoth. Google's 1600 Amphitheatre Parkway address is understated, like its user interfaces. Apple, of course, takes the bold "think different" step with One Infinite Loop—a play on words that could come back to bite a less beloved company.

## **Youthful**

Despite the little eccentricities of each company, these companies are much more alike than they are different. Software companies are

youthful—at heart, if not in actuality. They scorn the stuffy suits-and-ties atmosphere of their predecessors and elect to wear just jeans and a T-shirt. In fact, this casual attitude is so potent that it's pervaded even the social scenes of tech hubs; only a small handful of restaurants in Seattle and San Francisco would request anything beyond jeans, and a woman in a suit gets more stares than a girl with a purple mohawk.

### **Perks**

Desperate to attract and retain the best and the brightest, tech firms shower their employees with perks. Microsoft offers free drinks, a heavily discounted gym membership, and an all-expenses-paid health care plan. Google matched and then one-upped Microsoft on almost all of these. Free sodas? Try free breakfast, lunch, and dinner. Free gym membership? Use the on-site gym and pool. Deluxe health care plan? We'll give you a good one, and throw in an on-site doctor. Nerds everywhere can only hope that the “next Google,” whatever it is, will engage in its own perk war.

Of course, cynics argue that these benefits are really just a way to trick employees into staying at the office longer. You can fulfill almost any regular appointment, from a haircut to dry cleaning, without leaving campus. But the fact that you *can* doesn't mean you have to. No one will think worse of you because you declined to get your dental work done from the on-site dentist parked in the van out back.

### **Work/Life Balance**

The severe shortage of engineers in the United States forces companies to take good care of their employees. They would lose too many qualified candidates otherwise.

Workers are encouraged to find a reasonable work/life balance, and work comparatively short hours compared to people from other industries.

The exception, as in most jobs, is during crunch times. Software releases will be stressful in any team.

### **Moving Up: Individual Contributors**

Although other industries push high-performing employees into management roles, technology companies tend to be more open to the “individual contributor” role. After all, great engineers do not necessarily make the best managers.

An employee, particularly in engineering, can continue to get promotions and increased technical responsibilities, without becoming a people manager. Eventually, this employee can grow into an architect or a distinguished engineer, earning one of the most respected positions within the company. It’s perhaps not as glamorous as being a VP, but for some people, this is just right.

### **The Differences**

Cultural differences between companies can often be traced back to the company’s roots.

*Amazon*, many would argue, is more of a retail company than a software company. It faced extremely hard times during the dot-com crash, and continues to battle profit margins that are levels of magnitude lower than that of a “core” software company. It is consequently extremely frugal, and refrains from providing the lavish perks that others software companies might. Additionally, some employees have suggested that the company does not value technical innovation for its own sake, and instead looks for an immediate and causal link to profits. But, do not let that deter you too much; indeed, *Amazon* is leading in multiple industries (retail, cloud computing, etc.) largely because of its technical innovation. The company moves at a rapid pace and pending deadlines often mean late nights.

*Apple* is just as secretive inside as it is outside. When your innovation lies so heavily in your look and feel and your market share depends on beautifully orchestrated hype, it’s no wonder. The company can’t

afford to let its secrets slip. Employees are die-hard fans, just as one would expect, but rarely know what coworkers from other teams are working on. In my time at the company, I sensed a feared-but-revered attitude toward Steve Jobs; he called the shots, and no one would argue.

*Microsoft* has dabbled (and reasonably successfully) with search and the web, but a large chunk of its earnings come from Windows and Office. Live patches to these products are expensive, so the company tends to operate on longer, multiyear release schedules. This means moving slower, taking fewer risks, and making sure to get everything right the first time (even if it's never totally right). The bright side is that the company tends to have a good work/life balance, as ship dates are relatively infrequent. Many former employees say that though they loved the company, its mammoth size could stifle innovation and risk-taking. However, individual team cultures are all over the map, and some may be more innovative than others.

*Google* is the nerdiest of the nerdy. Founded by two former Stanford PhDs, the company is still, many claim, preferential to engineers over other positions. The company moves quickly, shipping products weekly, and can value technical innovation even to a fault. As a web-based company, it can afford to take some risks on products; after all, "shipping" a new application to the web is so much easier than boxing up and mailing software. Google values its flat hierarchy, but there's a downside as well. Your manager may have too many people under her to fuss about the progress of your career, and moving up can be a challenge.

## **Big vs. Little: Is a Start-up Right for You?**

Go to almost any business school and you'll find that there are about three times as many people who claim to be "interested" in start-ups than actually pursuing this career path. Why? Because start-ups are sexy.

Newspapers splash stories about start-ups that made it big, or crashed and burned, and we always think, *we can do that* or *we can do better*. Start-ups are a high-stakes game, and you're gambling with your time as well as your money.

For the right person with the right opportunity, however, a start-up environment can be fantastic.

## The Good

Many say that for true “start-up people,” this high-risk career is just in their nature. They get that entrepreneurial itch, either in college or at some big company, and know they need to be somewhere much, much smaller. And their new career path offers a ton of value to them in return:

- **Diversity of skills.** Whereas big companies have designated marketing and finance people, start-ups never have enough people to fill every role. And the smaller the company, the more hats you have to wear. Unless you are truly narrowly focused on just one field (in which case you should avoid start-ups), this can be a great thing. You'll get to develop a more diverse skill set, which will help you in your future job search.
- **Leadership opportunities.** When—or if—your start-up grows, you'll be in a great place to lead your own team. Many people join a company and find that within months they're expected to manage several new hires. You'd have to be at a bigger company for years to get such an opportunity.
- **Control and influence.** Each time a bit of my work shipped at a big company, I was able to point to it and say, “I did that.” And while that made me happy, a little part of me also knew that, really, someone else would have come along and done something very similar if I hadn't been there. At a start-up, however, you are not only shaping the company in how you perform your immediate responsibilities, but you're also

offering feedback on all aspects of the business. Think the newsletter should have some content about related tools and plug-ins? It's your job to speak up, and everyone will listen. You always know the decision makers in any department.

- **Rapid results.** You won't have to wait years to see your work out in the real world; it'll happen within months. That holds true for any decisions you make as well. For better or worse, the outcome is visible within months, enabling you to learn from your mistakes (and successes) much faster.
- **High reward.** Hey, we don't take on all this risk for nothing. Start-ups can make you very, very rich if you get very lucky. Of course, it could just as well do absolutely nothing for you financially—and usually that's the case.

Me? I'm a start-up person. I love everything about it. I love that I get to do 10 things at once. And if I have no idea how to do it, then I get to learn. I see my impact immediately and I know that, for better or worse, I shaped the company's future.

## The Bad

Start-up burnout is a very real thing. Sure, you may be passionate about your new social-location-group-buying-thingy-dot-com, but things change and passions die. The following stresses tend to wear on people the most.

- **Long hours.** With the amount of money and careers depending on a start-up's success, long hours are critical. Those who do the bare minimum don't last long, and start-ups do not have the fear of firing underperformers that bigger companies do.
- **Unclear job description.** You were hired in to be a tester, and now you're helping look for office space. Well, tough. Someone's got to do it. Start-ups don't have the time and money to hire a specialist for each and every task, so employees are

expected to chip in on projects that are outside of their roles. That may mean you spend less time doing what you love and more time doing what the company wants you to do.

- **Low pay.** With very few exceptions, start-ups tend to pay below-industry salary and compensate for the difference with stock options. If the company fails (which it usually does), your stock options are worth nothing.
- **Limited credibility.** The earliest employees of Google and Facebook have lots of credibility, but let's face it—what are the odds? You may join a start-up, only to have it fail after a few years. And all of a sudden you're back on the job market with some no-name company on your résumé that wasn't good enough to survive. Doesn't sound so appealing, does it?
- **Less mentorship.** Big companies have invested time and money in understanding how to train new employees; start-ups lack both of those things. They probably won't invest in growing you into a great leader in three years because they'll be lucky if they make it that long. Big companies can teach you a structured way of solving problems, under the guidance of more experienced professionals, while those at start-ups are learning on the go. And if your coworkers have never spent time at a big company, they may have never been taught how “real” companies do things.

Notice anything missing in that list? I never listed the lack of perks. The reality is that as much as people are drawn to companies like Google and Microsoft for their flashy benefits, even ex-employees tend not to miss them much once they're gone. Having to scrimp and save due to your meager salary may frustrate you, but a lack of free food tends not to be an issue.

## The Ugly

In Ryan's first four years after leaving Amazon for the start-up scene, he'd worked for four different companies. He left one company

because of a personality mismatch between him and the CEO. Words were exchanged. It wasn't pretty. The next start-up folded. The third one started to veer in the wrong direction, and he decided to get out before it was too late. Lucky number four is a company he started himself.

Ryan's story is fairly typical of start-up employees. With fewer than 40 percent of tech start-ups making it past four years, rapid job switching is just a fact of life. People joining start-ups should be mentally prepared for this constant change.

The silver lining here is that because your coworkers will have worked at so many places, you'll also be tapped into a broad network of people. It doesn't take long to build the connections to wiggle your way in front of any start-up recruiter.

## **The Job Title: What Do You Want to Be When You Grow Up?**

As a kid, everyone used to ask me, "What do you want to be when you grow up?" Some kids change their answer every few weeks, but not me. I knew I wanted to be a veterinarian because then I could play with puppies all day. I was fairly certain that was, in fact, their entire job. After an unfortunate incident involving my dog and a neighbor's car, I learned that vets also sometimes killed dogs—or, to use their delightful euphemism, "put them to sleep." I decided that, although I would clearly get to play with puppies the rest of the time, it didn't quite make up for the whole dog-murder aspect. So, there I was, yet another 10-year-old with an undecided career path.

At age 14, I decided to enroll in a programming class. ("Decided" is my own personal euphemism for an argument with my mother that went something like "but programming is stupid," followed by her saying "too bad.") Four years later, this was my ticket into Microsoft, and eventually into Apple and Google.

Few, especially outside of engineering roles, have this sort of focus; that's OK. Talk to people, research positions, and start figuring

out what's important to you. Ask yourself the following questions to start understanding what career path makes sense.

### What Do You Need?

Our society contradicts itself every day. On one hand, we are told over and over again, “money doesn't buy happiness,” and we have the disastrous lives of celebrities to drill this into us. On the other hand, we're also told that we really do need that new jacket. Let go of what you think should matter, and be honest with yourself. How much do the following matter to you?

- **Money.** Money may not buy happiness, but it does buy your kid's college tuition. And a house in a nice neighborhood. Or maybe just a nice bottle of wine after a hard week. Does that matter to you? Be careful with looking too heavily at money. While you can be fairly confident that your teaching dream will never bring in the big bucks, you can't be as certain about many other career paths. Passionate, driven people can earn a good living in unexpected ways.
- **Recognition and respect.** Many people who shun the spotlight still desperately crave the admiration of their fellow people. How much do you care about what others think of you? Would you be OK with people giving just a courtesy smile when you say your profession?
- **Work / Life balance.** There is nothing wrong with wanting a nice, stable, 9-to-5 (or in the tech world, 10-to-6) job. You want to be able to enjoy a nice day out on the boat during the summer, and that's fine. Remember, no one went to their grave thinking, “Gee, I wish I had spent more time at the office instead of with my family.”

If you find your answers learning away from a job for some reason, ask yourself why. Is there something you need from the job that you wouldn't get?

## How Do You Enjoy Working?

I've always thought that, had I lived before computers were invented, I would have majored in architecture. The structure of the work seems similar to what I ended up doing: computer science. I could lead. I would create something. And, while I would have supporting teammates, I'm not glued to someone's side to complete a project. How do you enjoy working?

- **Teamwork vs. independent work.** Everyone loves to say, "Teamwork is the best!" but deep down, you see the problems. Coworkers letting you down or just getting in the way. Needing a consensus just to make a decision. Managing everyone's emotions and expectations. Is this really something you enjoy?
- **Creating vs. maintaining.** While software development is creating a new product, testing is maintaining it. There are no tangible results of your work; it's more like pulling up the plug in a sink while the water's still running. It'll just keep coming and coming. How important is it to feel that you built something? Remember that even "maintenance" jobs (like being a surgeon) can have huge impacts on the world.
- **Leading vs. joining.** Leading is great, but it's the joiners who get their hands dirty. Do you want to lead, with all the joys and responsibilities that come from that? Or would you rather relax a bit more and join someone else to accomplish a task?

## What Are You Good At?

Even if you don't know what field you want to go into, you probably have an instinct as to what your skill set is. Which of the following are your strengths?

- **Numbers.** Numbers come more easily to some than to others. Are you the kind of person who can understand real-world word problems and whip up a spreadsheet to demonstrate?

- **Writing and communication.** Don't worry about prose and poetry; it's rarely relevant to the professional world. It's more important to be able to communicate effectively, both in speaking and in writing.
- **Creativity.** Creativity stretches beyond artistic skills; it's also about how you solve problems. When faced with an issue of releasing a software product in China, can you brainstorm other revenue streams to dodge the nearly 100 percent piracy rate?
- **People skills.** Being good with people is more than just being likable (though that's certainly part of it). It's also about reading people, knowing how to encourage them, and knowing when you might be pushing them too hard. Those who are especially good with people may find themselves well suited for management positions.

Most people's college majors have little to do with their eventual career path, so don't feel constrained by your major. Your skill set is so much more than your raw factual knowledge. Analyze your success and failures. Think through actual projects or jobs where you've been particularly happy or unhappy. What was it that made the difference? The answers to these questions will help point you in the right direction.

## **And You're on Your Way . . .**

On my last day at Google, I packed up my final belongings in a single box and was reminded of everything that's great about tech companies.

*The Pranks.* My teammates had decorated every inch of my desk with pink tissue paper. Even the bottle caps, which we used to pelt each other with, were individually wrapped. Rather than leaving a gap in the tissue paper for my monitor screen, they had taped up a

printout of my Facebook page—only they had replaced my smiling face with a Photoshopped picture of me in a princess dress. With wings. They must have spent hours doing this, but no one would have batted an eye. This sort of prank is normal for the cultures of most tech companies.

*The Fun.* No one batted an eye, either, at having a few cocktails to celebrate my last day. I lined up a drink shaker, a few flavors of Absolut, and mixers that were borrowed from the company fridge. I began taking orders. Just because it was my last day didn't mean that I was not going to contribute some good, honest work.

*The Impact.* I spent my final day (pre-cocktails, of course) preparing a document about my work to facilitate someone else taking over my responsibilities. I explained the current progress, challenges, and the relationship with our external partners. I knew that I had contributed tangible value to the team, and to the company. One day, our I'd-tell-you-but-I'd-have-to-kill-you product would launch, and I couldn't wait for that day to come.

*The Network.* People stopped by regularly to wish me well and ask me what I was off to next. The truth is, other than a vacation to Costa Rica, I didn't know. I wanted to set aside some time to travel, something that I didn't get the chance to do after college, and then I would look for opportunities at start-ups. They said to keep in touch, and they meant it. A few suggested that they, too, were considering leaving and wanted me to let them know what I was up to. Hint, hint?

As much I enjoyed my experience at Google, and at Microsoft and Apple, I knew that I'd never return to a big company. They had helped grow me as an engineer and as a businessperson, and had given me the credibility to work almost anywhere, but I knew that I belonged at a smaller company. I bade them all farewell, and went on my way.

Never failing to have the last word, though, my teammates left me with a final remainder of my days with them. They snuck an

annoyatron—a tiny device that emits beeps at random for the sole purpose of driving someone crazy—into my car. I drove for months unsure of what the beeps meant and if my car was on the verge of breaking down. Finally, I found the gadget affixed to the underside of my seat, and recognized it immediately. I had started the Battle of the Annoyatrons months earlier, and they had ended with a simple act on my final day. Touché, team, touché.

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