The Puzzling Future of the IT Profession

Note from Theresa Rowe, Viewpoints column editor: For some of us, the IT “shiny object” that engaged our attention and provided energy for our first IT classes or jobs may be a distant memory. What inspires the next generation about the future of the IT profession? Jamira Hollis is an early-career professional currently focused on networking. The future of the IT profession depends on engaging Jamira and her colleagues and helping them succeed in the IT world of tomorrow.

To early-career professionals like myself, the future of information technology is a puzzle with infinite possibilities. Our own cell phones have more processing power than our desktop computers did ten years ago. Sink faucets can respond to verbal commands, and cars can drive themselves. Businesses run paperless operations, and people have groceries delivered to their homes. The growth of information technology has truly been exponential, so are there any real limits?

When I began my college career in 2013, information technology was an impressive major or minor for students to pursue. It’s the reason I chose Management Information Systems (MIS) as my major. I was primarily interested in project management, and I could have aimed for a general business degree, but I thought a better option would be to have some additional IT experience. Programs in cybersecurity, database administration, networking, and more have become increasingly popular because of how technology has transformed over the years. These paths help to prepare those who will continue to work in an ever-changing industry.

Information technology has become thoroughly integrated with society. The internet is a large part of how the industry has grown, of course, but how we use the internet has become much more complex as well. At this point, consumers aren’t just using the internet to visit a website. The internet of things (IoT) is now mainstream, for our convenience and for our entertainment; it has substantially changed our lifestyle. Earlier I mentioned a sink that responds to vocal commands; in fact, there are entire smart bathrooms that utilize voice-enabled technology. Information technology is changing all aspects of our lives.

When I was in college, I worked with Boban and Nathan as student network engineers before we all started our full-time careers. So it was interesting to listen to their perspectives today. Boban mentioned how smart bathroom technology...
could change how plumbers work with faucets and similar appliances. Plumbers will have to be trained to diagnose technological issues, a quality perhaps previously not necessary for workers in that field. He also mentioned: “Information technology, to some capacity, will actually become smaller. Helpdesk support, and jobs like that, will become automated.” This was something I hadn’t thought about before, as I tend to focus on how technology will become bigger and better.

IoT has created a new environment for internet connectivity. We use it to connect to resources in the cloud, which accesses servers holding massive amounts of data storage for consumers on a global scale. The internet is now integrated with everyday items like our cars, home devices, and credit cards, yielding even greater potential for careers in information technology. The combination of opportunities from the variety of college programs and the variety of job markets gives people like me a sense of confidence and job stability. There is ample opportunity.

As Nathan noted: “There’s always going to be a technological shift. As things become more automated, people will lose their jobs, but there will be more jobs coming in other areas. The main reason I gravitated toward the IT field was job growth and job security.” When I questioned Nathan about the future of information technology, he continued: “We went from terminal mainframe to host computing, where everything was done on a desktop. Now we’re seeing more of the cloud infrastructure, where corporations have virtualization and employers are pushed to use virtual machines (VMs). As we move toward interconnecting devices, the internet’s going to be shifting more toward a lifestyle or a utility.” This notion of having the internet as a utility got me thinking on the subject of municipal broadband, which is essentially broadband internet access provided by local governments (rather than Internet Service Providers, or ISPs). Our generation could end up paying internet bills just as we know pay our city heat or water bills, in this case with rates based on usage of megabits per second.

The future of information technology also has some significant concerns for those in the field. As noted by Nathan, there will be a change in job opportunities. Although automation will result in layoffs of certain positions, the employees in those situations will have to understand and learn the technology in order to remain marketable in the industry. The process of learning the technology, getting a degree in an IT-related field, or obtaining a technical certification can be costly and takes time to achieve. Older generations may feel less capable of completing that achievement, or they simply may not have the time to establish a new career requiring that kind of commitment.

I tend to brush up on the latest IT developments in a more relaxed manner. Whether subscribing to technology reviewers on YouTube or mobile notifications from news sites, I find using online, just-in-time content to be a simpler way to stay up-to-date. I’m also fortunate enough to work for an organization that not only values change and improvement but actually invests in these values and sends employees to conferences annually to maintain technological proficiency. Sure, those “limitless possibilities” seem intimidating and can be scary for me, but once I increase my knowledge of current topics and understand purposes, I have another opportunity to advance in the IT world.

I am committed to the idea of learning as much as possible for the purpose of not feeling intimidated or out-of-the-loop. And while this is an idea for me, it’s a culture for my organization. The fact that we support thousands of students, staff, and faculty at the university increasingly solidifies the need for our department to obtain a firm understanding of developing technologies. In the years to come, we will need to support students’ countless IoT devices that they want to use on campus. When other departments start to upgrade their offices with whole-room audio systems, we will need to adjust to fulfill those requests. Customer satisfaction is an important part of any organization that provides a service. Not understanding the possible failures along the way of implementing certain changes is probably one of my biggest fears. A large part of my job is to support people and ensure that they can connect with one another, so I must prepare accordingly. Attending conferences, utilizing informational webinars, reading news articles, and watching technology reviews online are all pieces in how I complete the IT future puzzle.

Those working in information technology must not only understand the technology they’re working with but also be aware of how it could transform in the future. As network engineers, my team and I are responsible for keeping our network infrastructure up-to-date. We train for network certifications, we implement hardware refreshes every few years, we learn how certain upgrades affect our customers, and this process continues. I think that one of the biggest lessons I’ve learned is that in this field, you never stop learning. You have to accept that information technology is an endless practice of updates and changes and that you will be responsible for continuing to adapt.

I truly believe that the IT industry has limitless potential. Whenever the highly anticipated replica DeLorean sports car becomes a reality for consumers, there will still be a drive to make it better, more popular, and more convenient—this applies to all future endeavors within the industry. Changes like these will continue to prompt shifts in the job market and the educational preparation needed for those new jobs. Our society has become advanced in our lifestyles, yet we continue to challenge these accomplishments and commit to innovation. The future of the IT profession is an exciting, intimidating, and promising puzzle.

Jamira Hollis is a network engineer at Oakland University.

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