



This handout provides highlights from the National IT Innovation Center's October 2026 "IT Trends Talk with Community College Alumni" webinar panel. Participating IT technicians were all recent graduates from community colleges - including Columbus State Community College, Collin College, Maricopa Community College, and College of Southern Nevada - and provided a unique perspective bridging the gap between education and industry.

1

How are entry-level IT roles changing? One alum said that entry-level hires still need helpdesk. Students have to know the "critical" fundamentals like A+, Net+, and Security+. Another alum agreed: many students want to go right into working in a SOC. It's not realistic to think you can graduate and then get a six-figure cybersecurity job. New hires start on the helpdesk. Another alum stated that competition is even fiercer now for high-level jobs. He noted that there is a "gap" in cyber and networking skills. While he got hired without those certifications, he's not sure it would be so easy today. Students need certifications.

2

What is AI changing in day-to-day IT work? One alum stated that cyber threats are now coming from all directions. Security teams must gather threat information from every corner of the digital world. When AI is involved, sometimes there is no CVE (Common Vulnerabilities and Exposures) attached to the vulnerabilities. The alum noted that companies build their own AI agents that then interact with other third-party AI agents. When AI systems like this interact, an attacker might trick or manipulate an AI agent using malicious instructions. Because these AI interactions don't fit the pattern of standard software bugs, there is often no official CVE code or clear technical "fix" to flag the danger. This alum also mentioned the value in staying current on OWASP, the Open Worldwide Application Security Project, which provides resources and guidance on worldwide security risks. OWASP often provides a list of the current top threats companies need to know about. Another alum said that his company was "hesitant" about using AI at first, but now they are embracing it. Their initial AI back end pilots went well, so they are expanding. He believes AI will soon be commonplace. Even in his work with SQL databases, he's encouraged to use AI to help with code problems. In fact, the alum went back to school to get more AI schooling. He believes both entry-level workers and industry leaders need to know AI skills. One alum worried about people trying to build AI tools when they don't understand how to do so safely and effectively. As a cyber analyst, she gets alerts when someone at her company uses AI "the wrong way." Often, in fact, they want to build tools that already exist. Right now, there's not a lot of AI education outside of IT teams. Misusing AI carries risk to the company. Another alum talked about how AI is "elevating the standards of knowledge." What had been Level 1 helpdesk issues are now handled by an AI virtual assistant. Concern remains about how to use AI and still protect sensitive PII data. He agrees with others that there are AI and security skills gaps in the workforce.

3

What technical skills do you use most often? One alum listed a number of day-to-day foundation technical skills: IP addressing, subnetting, VLANs, DNS, admin, wireless, APs. She noted that she's often working on troubleshooting problems in Layers 1 through 3. In working with other departments, the alum had to know a lot about network engineering. Sometimes diagrams were needed to explain a point or solution. The alum also stated that there are "lots of gaps" in knowledge about automation and scripting. She went to school to get more Python and PowerShell knowledge. Another alum said "you can't protect what you don't understand" to make the point that technicians have to know the infrastructure and how the tools connect in order to successfully troubleshoot problems. There are so many points of possible failure. Documentation is also a problem. No one likes to document solutions, but if someone leaves and no one else understands how that person solved a problem then the employees left behind will have to start over from scratch.

4

What professional “soft” skills mattered once you entered the workforce? One alum made two points. One, communication is important, especially when you make changes that might affect others. Let them know what you’re doing. And two, it’s okay to be assertive in a meeting when you’re trying to solve a problem. Another alum talked about the value of customer service, especially on the public-facing side of a business. It’s important to project confidence when dealing with customers – they need to believe you can solve their problem. Customer service also includes collaborating internally with coworkers. You need to be willing to pivot and be willing to learn new skills and tools. Another alum noted the value of documentation. When something happens, you’re going to want to see notes from the previous person who faced that problem. Documentation is the difference between solving a problem in 20 minutes or three hours. Linked to this is knowing when to escalate a problem to a supervisor. This alum also mentioned the need to know when to get off the chatbox and pick up the phone. Too many IT technicians don’t want to talk to others. You have to work as a team and sometimes that includes people outside your usual “bubble.”

5

What do you wish you’d learned more about in college? One alum mentioned the importance of “talking to people differently.” This wasn’t as clear when he was in school. Know your audience. You need to know how to adapt how you communicate depending on the team or the project. This includes knowing how to talk to people outside of the job when you’re networking. Another alum talked about how he had to learn a lot of backend data engineering skills on the job. He was pulling data without understanding how it got there. He needed to learn more about things like source systems and transactional databases. He’s been surprised how much he’s needed to know about data engineering – they’re going through a “massive server migration” right now and there’s been a lot of meetings discussing server and data transfers challenges. When it comes to understanding how everything connects, for him, he also wished he’d learned more in college about infrastructure and cybersecurity. It’s easy to spin up an AWS server, but how do you get that onto the network or connected to a VLAN? And how do you then secure systems using standards like North American Electric Reliability Corporation (NERC)? These are helpful even for entry-level roles. Another alum wished they’d learned more about documentation in school. She uses Visio on the job to make diagrams showing every piece of equipment and would have liked to have learned that tool while getting her degree. She’s also noted a gap in documentation. Too often they have to build something from scratch because there’s no documentation. She added that she’s also had to learn how to manage and use ticketing systems on the job – she’s had to take Udemy classes on her own to attain that skill.

6

What advice would you give faculty preparing IT students? One alum reiterated the point about “knowing your audience.” How you communicate with an engineer is different than how you communicate to someone in the C-suite. The level of detail needed in each example is different. What an engineer needs to know to address and resolve a vulnerability will be different than what an executive needs to know about business impact and risk. Students should maybe get more instruction on how to interact and communicate with executives, especially given the speed with which IT is changing. She suggested IT students make presentations to non-technical students from departments like art to force them to find ways to communicate clearly to a non-technical audience. Another alum encouraged the use of hands-on classroom experiences, which includes simple things like terminating a cable. He’s interviewed a lot of candidates who can describe what they’ve learned, but they struggle when put in a role-play scenario to determine how they’d troubleshoot a specific problem. They’re not sure how to answer. He thinks it could help to introduce students to common industry brands and vendors for equipment like Fortinet and Palo Alto to help raise awareness and help them see similarities between different products. Another alum talked about portfolios. A lot of companies are asking job candidates for projects and samples of past work. She wasn’t comfortable sharing videos she made in class, but she knows a lot of students are building websites and sharing code on GitHub. She wished she would have spent more time in school preparing polished examples of her IT schoolwork that she would be willing to show in interviews.

7

Who do you do for professional development? One alum answered that his company provides both tuition reimbursement programs and company-guided training. He’s fortunate to have so many offerings available to employees. Another alum noted that their company reimbursed the cost of certification test if the employee passes. The alum doesn’t like the company’s leaning platforms but acknowledges there’s a lot of free training available. He prefers Udemy, which he gets for free via his local library. Administrators push some IT teams harder than others when it comes to demanding new certifications.

8

What advice would you give current students? One alum suggested that students take the certification for the course while they are in the course. He was so focused on grades and scholarships when he was in school, he didn’t take the certification tests. Then later, when he started pursuing the certifications, he realized he had forgotten a lot of the details had to relearn it. Doing it right after the class would have been more efficient. He also suggested that students build a network, join clubs. All of his networking came from school clubs – he was an officer for three and involved with six. “Meet people and build those connections outside of your courses.”