CISO MAG

beyond cybersecurity

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IS EDUCATION THE KEY TO CLOSING THE CYBERSECURITY SKILLS GAP?

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EDITOR'S NOTE

The skill gap in cybersecurity has seen quite a lot of press coverage lately. The entire information security industry seems to be aware of the dearth of talented professionals and is preparing for the impending great depression of 2021, where the world will witness a shortage of 3.5 million information professionals. Our Cover Story dives deeper into the subject and discusses the inception of CERTs, how education and certifications have so far helped relieve this shortfall, and what must happen in the future to head off disaster. We also discuss grooming the next generation to understand and be interested in security as a career option.

Moving to our Buzz section, we discuss how artificial intelligence is both creating a new skill shortage for CISOs and might be a mechanism that will be able to fulfill the security skills the market cannot. We also differentiate between jobs AI can replace and jobs AI can't.

For this issue, we have interviewed Mark Houpt, CISO of DataBank. He talks about the essentials of a sound cloud migration strategy, and ways of reducing the attack surface of data center and cloud computing. In our Insight section, we discuss Equifax being hit with the maximum UK fine and how General Data Protection Regulation is changing the way organizations approach cybersecurity.

Tell us what you think of this issue. If you have any suggestions, comments, or queries, please reach us at editorial@cisomag.com.

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BUZZ

The State of Cybersecurity: AI Creates New Skills Shortage for CISOs

Jose Varghese
EVP & HEAD – MDR SERVICES, Paladion Networks

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The cybersecurity skills shortage has long been a problem for CISOs, and a recent report by the Enterprise Strategy Group (ESG) found this skills shortage is growing. The report found that IT groups once again say that cybersecurity is the area with the largest and most problematic skills shortage. Even worse, the percentage of IT groups experiencing shortages has grown year-over-year. As CSO Online outlined, the percentage of groups facing this skills shortage has more than doubled in the last five years:

Percentage of Respondents Claiming a Problematic Cybersecurity Skills Shortage

- **2014:** 23%
- **2015:** 25%
- **2016:** 46%
- **2017:** 45%
- **2018:** 51%

In a separate report, ESG found that 18 percent of organizations believe their existing cybersecurity team can't keep up with mounting threats, 22 percent believe their security team is not large enough to protect their organization, and—unsurprisingly—over half of these organizations reported suffering a breach within the prior two years: breaches whose success was contributed to by their organization's skills shortage. The volume of breaches caused by understaffed security teams is likely to only increase in coming years, as the cybersecurity skills gap will continue to grow to two million unfilled jobs by the end of next year, with the cost of cybercrime projected to reach $6 trillion by 2021.

Much has been written about this skills shortage, but one big point has been missed. Most organizations have been trying to solve their cybersecurity problems entirely by hiring new staff, often to perform work that can be completed by machines. If these organizations embraced machine-driven automation, analytics, and AI—which are able to deliver faster detection and response than any human-only team—they would substantially reduce the need to hire cybersecurity staff in large volumes, and reduce much of the security skills gap we're seeing—all while increasing the efficiency and effectiveness of their security services.

Some CISOs are waking to this and beginning to look at AI as a mechanism that will be able to fulfill the security skills the market cannot. And yet, while AI will fill many of the jobs currently left unfilled, there are certain subtle elements of the skills gap that will still exist. In fact, while AI solves certain elements of the skills gap, its deployment may create new areas of skills shortage.

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COVER STORY

IS EDUCATION THE KEY TO CLOSING THE CYBERSECURITY SKILLS GAP?

Augustin Kurian