FEATURE

The 7 hottest jobs in IT

These emerging and resurging IT roles may be your best path forward in the years to come

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If you're burning out on your current gig, or feel that your role may be heading toward a dead end, it might be time for a change. To that end, we reached out to recruiters, executives, and tech pros, asking them to weigh in on the best opportunities they see evolving in the year ahead. What they came up with may surprise you, a mix of bleeding-edge tech and standbys that make up the hottest jobs currently hiring in IT.

Some of these high-demand roles come with signing bonuses, stock options, and the ability to work remotely, of course. More eyebrow-raising perks include college debt payoffs and planned sabbaticals.

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And for those who believe you have to move to Silicon Valley to cash in, think again. According to a new report from the technology association CompTIA, the top five states for job growth last year, in order: Utah, North Carolina, Michigan, Washington, and Montana. All five states saw growth of between 4.5 and 6 percent. Happy hunting.

AI and deep learning engineers

As AI speeds how we work with massive amounts of data and converts it into actionable insights, the area is starved for new talent. Corporate and consumer interest are on the rise in areas like automation and autonomous driving, which means engineers with deep learning experience are hard to find.

“Today there is a huge demand for AI and deep learning related work with very limited supply, and the pay is extremely good -- in fact, overpaid sometimes,” says Subbu Rama, CEO of Bitfusion. “So that’s a good area to focus on.”

And if you’re thinking of investing in a shift, rest assured: The demand for engineers with AI, machine learning, and deep learning chops doesn’t look to be slowing anytime soon.

“With the intense focus on predictive analytics, deep learning, machine learning, and artificial intelligence, these positions should remain relevant for years to come,” says Flavio Villanustre, head of HPCC systems at LexisNexis Risk Solutions.

And if you want to set yourself apart, working toward finding solutions using deep learning for domains that don’t start out with massive amounts of data to model from has significant potential.

“To the best of our knowledge, it’s not clear how we can build machine learning models where only limited amount of data is available,” says Mehdi Samadi, CTO of Solvvy. “This is currently limiting the types of intelligent applications that we expect to see in the near future. The solution to this problem is either to find approaches that help us to generate data, or building more robust machine learning models which can learn from limited data. Transfer learning algorithms, learning from the data available in other domains in order to perform well in a new domain,” is a promising area for engineers, says Samadi.

VR/AR

Recruiting firm Randstad recently reported that, despite being one of the most in-demand fields, there were fewer than 5,000 potential candidates for virtual reality jobs as of the end of last year. “You can expect that number to increase as more organizations embrace the virtual reality trend,” according to the report.

Aymen Sayed, chief product officer for CA Technologies, points out that while AR and VR tech made a splash with a range of consumer products shown at this year's CES, more promising opportunities will occur this year in the enterprise for simulation and training, which should mean more roles for AR and VR developers -- both in development and security.

"The integration of the next wave of apps requires immense coordination and security across systems, data centers, and applications," Sayed says. "Companies will begin to realize incredible efficiencies and cost savings by leveraging immersive enterprise apps. In fact, Gartner predicts that by 2020, augmented reality, virtual reality, and mixed reality immersive solutions will be a part of 20 percent of enterprise's digital transformation strategy."

Scott Chasin, former McAfee CTO and now CEO of ProtectWise, touts VR-based cybersecurity as both a better way to identify threats and a means to attract new security analysts using an immersive experience they're familiar with.

"Analysts will become infinitely more effective at responding to incidents and detecting anomalies," says Chasin, whose company is developing a VR-based cybersecurity app. "And enterprises will better be able to bridge the talent gap by tapping into a new generation of analysts for whom sensory-rich, immersive, and virtual environments are second nature."

Security analyst

With all the recent cybersecurity breaches and rise of advanced persistent threats, it should come as no surprise that security analysts are in high demand, marked by high starting salaries, potential for growth, and greater influence in the workplace these days.

"[Security analysts] are expected to stay up to date on the latest intelligence, including hackers' methodologies, in order to anticipate security breaches," states a recent report from CareerCast, which noted security analyst as one of the top two jobs for 2017. "The explosion of cloud-based storage drives the 18 percent growth outlook for information security analysts."

Jeff Friess, practice leader of cybersecurity for Global Executive Solutions Group, says firms are so concerned about cybersecurity breaches -- which may cost companies millions of dollars per incident -- that there are many more open jobs than professionals to fill them.

"In the United States, more than 285,000 cybersecurity positions sat vacant in 2016, and an estimated 2 million positions will be left unfilled by 2020," Friess says. "With the struggle to hire in-house cybersecurity talent, organizations open themselves up to hacking, data breaches, and ransomware attacks."

Security analysts need to be generalists with skills that are broader than deep, he says, with the ability to work in various areas of the company doing the hiring. "They should be able to think strategically and see the big picture regarding information security, and have the necessary interpersonal skills to deal with stakeholders and speak to board members."

Cloud integrator

According to IT association CompTIA, the evolution of IT can be divided into three stages: the mainframe era, the PC/internet era, and now the cloud/mobile era, where new technologies built with the cloud in mind will gain more traction, including machine learning and blockchain.

Companies facing tightening budgets are constantly forced to do more with less, says Friess, and then cut costs all over again. Enter the cloud. And where cost-cutting closes one door, another opens.

"CIOs are eliminating on-prem software and servers," Friess says. "Consequently, developers and implementation specialists who specialize in cloud solutions roles are in high demand for those who are familiar with Microsoft 365, Workday, Salesforce.com, Amazon Web Services, Microsoft Azure, Service Now, Oracle Cloud, and SAP."

Sarah Lahav, CEO of SysAid Technologies, says if she were picking one area to go into, cloud computing is it: "I'd recommend devops -- cloud and scripting is the way to go nowadays … until the next trend."

Alana Hall, corporate recruiter at Conga, says a number of cloud-related roles are the toughest to fill this year, including "cloud architects and developers, cloud infrastructure devops roles, hybrid cloud architects and developers."

Contractors can make $150-250 an hour implementing cloud services, or as much as $175,00 a year, Friess says, which is too much skin in the game for many companies. That opens up opportunities for "system integrators" who both install the cloud service and train up the IT

department on how to use it.

Full-stack engineers

Web users are increasingly demanding more robust, app-like consumer experiences, which has led to strong demand for front- and back-end web developers -- and even more for those who combine those skills as full-stack engineers.

“Technologies like progressive web apps are bringing the web experience closer to native on mobile platforms,” says Gautam Agrawal, senior director of product management at Sencha. “And it won't be long before web is the preferred choice for mobile app development, especially in the enterprise, for all the obvious benefits of cross-platform development.”

Familiarity with open-source platforms is key, says Candace Murphy, IT recruiting manager at Addison Group.

“While .Net and Java will continue their dominance in 2017, larger trends in open source development are growing. We’re seeing uptick in requests for IT professionals with PHP, Python, Node.JS, and HTML/CSS experience. This trend is driven by companies moving away from the traditional platforms that require licensing fees.”

If you’re thinking about picking up web dev skills or making a career change, Agrawal suggests focusing on the ECMAScript 2015 Language spec.

“The JavaScript ecosystem is maturing rapidly,” Agrawal says, “and ES2015 (formerly ES6) is the foundation of its future. While JavaScript is currently hot and the JavaScript frameworks rock, what will differentiate JavaScript developers going forward is their knowledge of ES2015 and associated tools.”

The work can be rewarding in more than one way: Good salaries mix with a nice work/life balance, in part because many of the jobs -- including full-time staff or short-term contract work -- can be done from anywhere.

HR services and staffing firm Randstad estimates openings for full-stack engineers grew more than 100 percent from 2015 to 2016, with salaries ranging from just over six figures to nearly $140,000. Certifications for application development and ScrumMaster may help boost your pay or expand your opportunities, once you have proven your mettle with a full-stack framework.

Data scientist

As AI becomes part of the business toolkit, making decisions quickly based on large amounts of data is increasingly important to firms hiring new developers.

“All developer roles are in high demand, but there is especially high demand for data scientists,” says Jill Witty, vice president of talent at Entelo. “Every company is looking to leverage data and analytics to improve their business and they need individuals who are experts at solving complex data questions.”

As for where to begin, Witty emphasizes math.

“Predictive analytics and machine learning are the future of tech, so I would focus on math, statistics, and behavioral psychology,” she says. “Regarding programming languages and back-end tech I would emphasize R, Python, Java, JavaScript, Julia, Scala, and Hadoop, among others.”

LexisNexis’ Villanustre agrees that data scientists -- along with data analysts and modelers -- are difficult to find and specialization is likely to continue.

“Data science has become more complex, broader and more involved as it’s difficult for a single individual to possess all of the required knowledge,” Villanustre says. “Coders come in many forms, and the path to one’s dream role isn’t always linear. Understand what your ultimate goal is. Whether pursuing a career as a data analyst, a statistical modeler, or a data scientist -- which is a subset of the two -- there will be continuous career opportunities.”

IoT engineer

Randstad reports that job postings for IoT (internet of things) architects spiked more than 40 percent in the last year, and the company predicts that growth is just the start.

“The internet of things is where the world of technology is going,” says Dino Grigorakakis, vice president of recruiting at Randstad. “Working as an IoT engineer has a lot of current and future opportunity, the position is often competitively compensated, and experience with IoT will prepare candidates to move forward within the information technology industry even if they choose to move away from working directly with the internet of things.”

IoT devices are overwhelming companies with data, much of it unstructured, and firms want to find ways to collect and make sense of that information in a timely way.

"The current challenge in data science is for businesses to glean and analyze captured data as fast and accurately as possible, so it can be translated into immediately actionable insights," says Adebayo Onigbanjo, director of marketing, IoT of Chicago-based Zebra Technologies. "However, the importance of leveraging data is not diminishing. Companies need more data to have better visibility into their assets, people, and transactions. Businesses will increasingly take advantage of sensors, beacons, and RFID tags in the enterprise environment, lending them a voice to communicate with [users] and producing data constantly and immediately. Decoding the data collected through IoT-enabled devices and wearables will help companies accelerate their decision-making processes, and make more informed business judgments."

Daniel Chow, CTO at open technology integrator Silicon Mechanics, says those with math skills and development chops are in the driver's seat, with considerably more demand than supply for the emerging IoT market.

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