

The 6 hottest new jobs in IT

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IT job seekers have real reason to hope. No fewer than 10,000 IT jobs were added to payrolls in May alone, according to the Bureau of Labor statistics, reflecting a steady month-over-month increase since January. And in a June survey by the IT jobs site Dice.com, 65 percent of hiring managers and recruiters said they will hire more tech professionals in the second half of 2011 than in the previous six months.

But which jobs have the greatest growth potential -- and stand the best chance of withstanding outsourcing or another economic downturn?

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To find those hottest of hot jobs, we've scoured listings on IT hiring sites like Dice and Modis and talked with IT execs about the skills they're looking for in the year to come. Our sources point to a cluster of new job titles created to make IT more agile, more social -- and more tightly intertwined with business.

Our results are not scientific. The six job titles you see here have actually been listed, but we didn't choose them based on frequency of appearance or random sample polling.

Instead, we picked them because we think they²answer the real needs of businesses that want to prepare for the future. In short, we expect they will pay well, have staying power, and truly influence the organization either now or in the future. When's the last time you heard that about a job in IT?

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Hot IT job No. 1: Business architect

The notion that IT is separate from business has faded into antiquity. Upper management recognizes that technology is not just integral to success, but actually drives the way companies pursue their business goals. To help merge technology and business processes, a new breed of enterprise architect -- known as the business architect -- is emerging.

"Business architecture is about making sure the whole business holds together," says Forrester Research analyst Alex Cullen, who researches IT strategy and organizational planning. "It's a role built around business planning, pointing out opportunities to utilize IT more effectively" in sales, customer service, and other key areas.

Unlike the traditional enterprise architect, whose role is to organize technology to meet business goals, the business architect is a member of the business organization, reporting to the CEO and fashioning high-level company strategy with technology in mind. The successful business architect has a deeper knowledge of the company's business model and workflow than the average enterprise architect. Think MBA with an IT focus.

"Business managers want to choose the technology that best meets their needs and to have the freedom to walk away from that technology to move on to the next thing," says Cullen. In a world where execs will one day have the power to provision cloud-based resources for a new business initiative by clicking through a couple of configuration screens, the need for enterprise architects who are glorified implementers will wane. The job of the business architect is to arm managers with the knowledge they need to choose wisely.

In some organizations, enterprise architects with the right experience and disposition may simply take on the business architect role, whether or not they change titles. Nonetheless, says Cullen, "If you want to know about a hot role for 2012, it's definitely business architect."

Hot IT job No. 2: Data scientist

Big data ^[3] -- that is, the glut of unstructured or semi-structured information generated by Web clickstreams, system logs, and other event-driven activities -- represents a huge opportunity. Buried in that mountain of data may be invaluable nuggets about customer behavior, security risks, potential system failures, and more. But when you're talking terabytes that double in volume every 18 months, where do you start? That's where the data scientist comes in.

On the business side, data scientists can open up new opportunities by uncovering hidden patterns in unstructured data, such as customer behavior or market cycles. On the dev side, a data scientist can use deep data trends to optimize websites for better customer retention. Within the IT department, a skilled data scientist can spot potential storage cluster failures early or track down security threats through forensic analysis.

"There's now an intellectual consensus in business that the only way to run an enterprise is to use analytics with data scientists to find opportunities," says Norman Nie, CEO of Revolution Analytics, which produces the first commercial application to bring the R data analysis programming language ^[4] into the business world. Because of the immense opportunity for strategic insight buried in all that data, says Nie, "corporations now have an unlimited demand

for people with background in quantitative analysis."

The R programming language is just one tool in the data scientist's toolbox. Others range from business analytics software from established providers like SAS Institute to IBM's new InfoSphere platform to analytics technology acquired in [EMC's recent acquisitions of Greenplum](#) ^[5] and [Isilon Systems](#) ^[6]. Just last May, EMC Greenplum hosted the first ever Data Scientist Summit.

According to Nie, data science jobs will require workers with a spectrum of skills, from entry-level data cleaners to the high-level statisticians, yielding a range of opportunities for newcomers to the field. As the business world gets increasingly social, the demand for people to plumb the depths of all that social networking clickstream data will only increase. The cliché going around is that "data is the new oil." A career in refining that raw material sounds like a good bet.

Hot IT job No. 3: Social media architect

Social Web tools and services are now entering business at every level, from back-office IT communications to top-floor business collaboration, partner-connected workflow, and public-facing customer support. As the complexity of social business grows, companies need specialists to make it all work.

Social media no longer means just Facebook and Twitter. IBM, Jive, and Yammer are now the companies to watch, offering social tools for public and private clouds that redefine the role of social media for business. This creates a demand for IT pros with the specialized knowledge to build secure communities within a business network and between businesses and customers.

"In 2010, we saw the growth of a new middleware layer to protect intellectual property while opening things up with social tools," says IDC analyst Michael Fauscette, who researches social business trends. "You're starting to see that kind of thing because companies want the benefits of the social Web without the risks of putting their business in the hands of [Facebook and Twitter]."

In the enterprise, says Fauscette, social tools need to work together securely while offering transparency to the business. The clickstream data and other user intelligence that these tools produce need to be accessible and searchable inside the business, yet impenetrable from outside the business.

In large companies, a given company's social infrastructure tends to include multiple social platforms. Designing an infrastructure in which all these apps can work together will require IT pros focused explicitly on social business.

Because social business is still in its infancy, the range of emerging job titles varies widely, but at least they've matured beyond the generalized, marketing-centered monikers like "social media strategist" and "social media manager" that first appeared. In our conversations with analysts, leaders at IT job sites, and socially driven companies, we've seen an array of more specialized titles, ranging from director of social business technology to director of enterprise collaboration strategy to, most commonly, social media architect.

What these titles have in common is an emphasis on the technology itself, as distinct from the

purely strategic business concentration common to social media titles of the past. These are roles that report under the CIO's org chart and bring practical IT expertise to bear on tangible business functions. Regardless of the precise title, says IDC's Fauscette, "There will be more demand over the next 18 to 24 months or so, as more systems are deployed."

Hot IT job No. 4: Mobile technology expert

"Mobile [7] is the biggest factor changing IT right now," says Stewart Tan, vice president of information risk management and security at Accretive Solutions. "Building mobile apps [8], architecting mobile strategies, and securing those devices" are the top concerns facing the enterprise today.

Based on the listings showing up on IT employment sites, Tan's words sound almost like an understatement. One of the most common new titles we've run across on IT job sites sounds more like a general cry for help than an actual job listing. In response to the flood of new mobile devices, companies are desperately seeking "mobile technology experts" to bring order to the chaos.

If you have serious IT experience deploying and managing fleets of BlackBerry, Android, and iOS devices [9], there's ample work ahead. The listings we've reviewed consistently seek people evaluate mobile platforms for enterprise use, research and draft device specifications, and support users and developers within the enterprise.

Hot IT job No. 5: Enterprise mobile developer

While mobile application development [10] has been a fast-growing tech arena for years, IT job sites are seeing a rise in listings for creators of enterprise mobile apps. "Companies are looking for ways to make sense of mobile data, develop apps, and ensure security compliance," says Alice Hill, managing director of IT job site Dice.com.

In some organizations, the programming skills required depend on what's native to the platform: Objective-C for the iPhone, or Java for Android or BlackBerry. But thanks to HTML5 [11], there's also a movement toward mobile Web development [8] that crosses mobile platforms. If you're not already schooled in Objective-C or Java, acquiring deep HTML5 expertise has the dual benefit of a shorter learning curve and greater versatility, though you may still need to learn the quirks of individual mobile platforms.

What distinguishes enterprise dev positions from general mobile dev jobs is their focus on compliance and security, according to Stewart Tan of Accretive Solutions, an executive search firm and consultancy. "Building mobile apps, architecting mobile strategies, and securing those devices" are the top concerns facing the enterprise today.

Hill points to the overflowing demand for mobile app developers on Dice.com, noting that postings for Android developers have now surpassed those for iPhone developers. Nonetheless, listings for BlackBerry developers still abound, reflecting RIM's tenacious ability to hang on to enterprise customers.

Hot IT job No. 6: Cloud architect

Ask IT managers whether they're "in the cloud," and they'll tell you they always have been. To them, "cloud" is just a trendy way of saying "data center." [12] But with business executives and investors now tuned into the cloud concept, demand is growing for IT pros who can lead the charge to deliver on the increased efficiency and agility promised by the private cloud [12].

"There's so much positive momentum toward cloud integration," says Ron Gula, CEO of Tenable Network Security. "People who can really identify the architecture from a simplicity point of view are going to be in demand."

In our searches of tech job listings, we turned up dozens of calls for cloud architects, with the majority originating from enterprise IT organizations. Most of these listings call for familiar skills and certs associated with networking, virtualization, and SAN design. Without question, the more advanced your understanding of virtualization networking and management, the better your chances. The ability to explain how your private cloud will increase visibility into IT costs is a big plus.

In addition to establishing and managing a private cloud infrastructure, Gula says cloud architects will increasingly need to be experts in choosing public cloud services [13]. "When you get into the nuances of SLAs, you become less of an IT person and more of a lawyer," says Gula. The ultimate goal is the hybrid cloud [14], where cloud architects and business management decide which cloud services make the most sense to run internally and which should be farmed out on a pay-per-use basis.

Gula says any business depending on outside companies for significant chunks of cloud infrastructure needs a cloud expert capable of taking on the odious challenge of deciphering the terms of a license agreement to assess the veracity of any service provider's guarantee. These skills will prove critical in risk management, which, according to both Hill of Dice.com and Ripaldi of Modis, is another rapidly growing IT field.

More changes to IT jobs on the horizon

Naturally, these six emerging roles represent just a sampling of what IT pros can expect to see in the coming months. One big trend to watch for is the increasing specificity of IT job functions.

"What we're seeing with these emerging job positions is a splintering of monolithic tech functions into more granular definitions. Enterprise skills used to be all-encompassing, just like an MD was once enough in the medical world. Today tech roles are being sliced more finely," says Dice.com's Hill. "We see it happening already in even relatively new areas like mobile. For tech professionals, it's clear that in order to be recognized for your skills, a solid base is a good start, but specificity is key."

So if you have a broad background and are looking to make a change, a resume tailored to the job you want to pursue -- plus a little supplemental training and experience if you can swing it -- can pay off. Another piece of advice: Get cracking now. Surges in IT hiring like this one don't happen that often.

This story, "The 6 hottest new jobs in IT" [15], was originally published at InfoWorld.com [16].

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