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10 IT Jobs That Will Be Done by AI

Artificial intelligence is already taking on some tasks that were previously performed by humans - but that doesn't necessarily mean you will soon be out of job.

7/10/2017
10:00 AM

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https://www.informationweek.com/author-bio.asp?author_id=2362

Profile of Cynthia Harvey

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In conversations about the impact that artificial intelligence (AI) will have on human jobs, the extremes get a lot of attention. On the one hand, blaring headlines warn that a robot will take your job, while on the other, some scoffing experts say AI will never replace human workers.

However, a growing chorus of voices seems to be taking a position closer to the middle. A 2017 PwC survey found that although 46% of people believe that AI will eliminate some jobs, a majority believe that AI will be good for the human race overall. Among those surveyed, 63% believed AI will help solve complex problems that plague modern societies, and 53% said it will help people lead more fulfilling lives.

While AI and robots likely will take over some tedious manual tasks, this may free workers up for other activities or help address critical talent shortages. In some fields, humans and machines may work together collaboratively to accomplish more than they could independently. In addition, the opportunities made possible by machine learning and related technologies could actually create new jobs.

According to researchers at McKinsey, "While automation will eliminate very few occupations entirely in the next decade, it will affect portions of almost all jobs to a greater or lesser degree, depending on the type of work they entail." The firm says that US workers, including those with very high salaries, spend about a third of their time collecting and processing data, a task that could be more handled more efficiently by machines.

Stephen Prentice, vice president and Gartner Fellow, says, "Ultimately, AI and humans will differentiate themselves from each other. AI is most successful in addressing problems that are reasonably well-defined and narrow in scope, whereas

humans excel at defining problems that need to be solved and at solving complex problems. They bring a wide range of knowledge and skill to bear and can work through problems in various ways. They can collaborate with one another, and when situations change significantly, humans can adjust."

When it comes to IT jobs, artificial intelligence is already beginning to have an impact. Today, automation and machine learning tools can handle many tasks previously performed by humans. And Gartner predicts, "AI will eventually replace many routine functions of the IT organization, particularly on the operations side."

Many of the IT jobs likely to be affected by AI are in fields where current demand for talent is high. As machines become better at performing these tasks, it's possible that AI could replace human workers in some of these positions, leading to a poorer outlook for these jobs. However, it's also possible that artificial intelligence could simply make employees more efficient without displacing any human workers.

Which IT jobs will be performed — at least in part — by AI? Here are 10 likely candidates.

Helpdesk specialist

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Several technology companies, including Facebook, Microsoft, IBM andAmazon Web Services, have introduced tools that help organizations build chatbots that can carry

on conversations with customers. Many organizations have begun experimenting with using these chatbots to answer simple customer service or technical support questions. In addition, people seem open to using chatbots. A 2017 HubSpot survey found that while 57% of people said that they preferred getting help from humans, 40% said they didn't care as long as they got their questions answered right away. Many of these chatbots incorporate machine learning technology, meaning that they will get better at answering questions over time.

While they may be able to handle only simple queries today, in the future, chatbots will get better at answering complex questions, reducing the need for human agents to answer customer questions.

However, according to the Bureau of Labor Statistics (BLS), the median computer support specialist earned $52,160 per year in 2016, and the market for these workers is growing faster than average.

Systems administrator

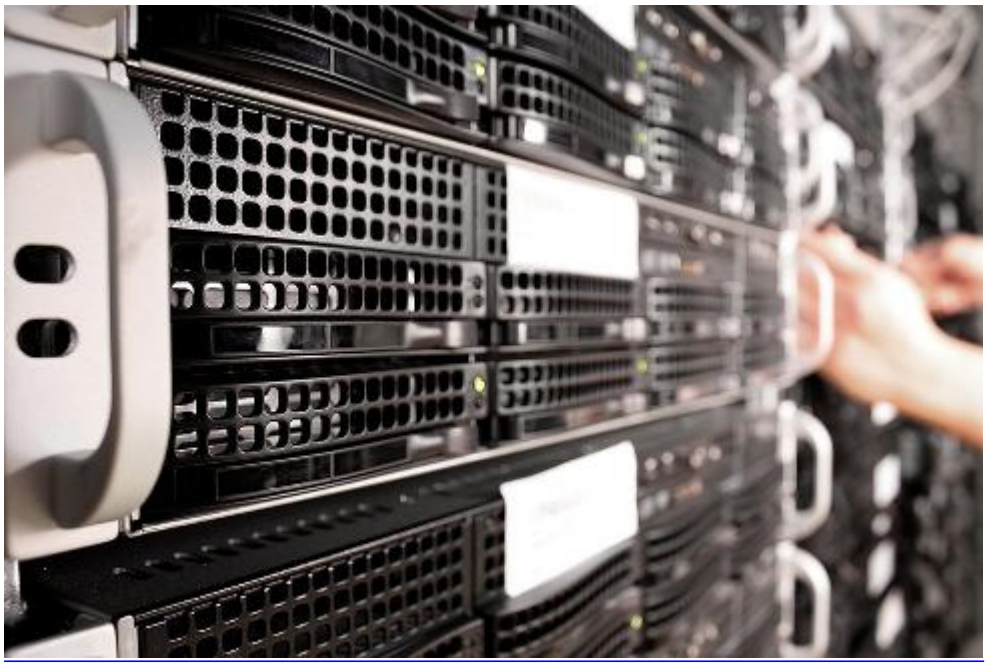

Image: Pixabay

Systems administrators, or sysadmins, are responsible for deploying, configuring, maintaining, monitoring and managing an organizations servers or other computer systems. Propelled by the DevOps trend, people in these professions have become increasingly reliant on automation in recent years to help them handle mundane tasks like server configuration and software updates. In addition, many monitoring tools are beginning to incorporate machine learning and AI capabilities, which can reduce the number of false alerts and, in some cases, warn sysadmins in advance of problems that are likely to occur so that they can take preventive action. This is likely

a position where AI will augment the capabilities of human workers rather than replacing them entirely.

The BLS reports median pay for network and computer systems administrators was $79,700 per year in 2016, and the field is experiencing average growth.

Network administrator

Image: Pixabay

In the same way that systems administrators manage and maintain an organization's servers, network administrators are responsible for keeping an organization's networks online and providing the levels of service that users expect. This includes configuring and updating equipment like routers, switches, gateways, hubs and access points, and in some cases the job also includes responsibility for network security.

Experts say that in order to enable true digital transformation, networks of the future will need AI capabilities in order to keep up with the pace of changes. Already, enterprises are taking steps in this direction with network management automation tools, some of which boast five-year ROI as high as 350%.

In its database, the BLS lumps network administrators in with systems administrators, so this group also has annual earnings around $79,700 with average job growth.

Storage administrator

Image: Pixabay

Storage administrators handle the day-to-day maintenance tasks for storage hardware, including HDDs, SDDs and tape, as well as storage software. They make sure data is getting backed up on schedule, monitor the performance of the hardware, resolve issues and space shortages, optimize the storage for usage patterns, plan for future growth and deploy new hardware and software.

But storage experts point out that many of these manual tasks could be handled by automation and AI tools. And because they can analyze such large volumes of data, machine learning applications may be even better than humans at optimizing storage for I/O patterns, managing the data lifecycle and predicting hardware failures. In the near future, storage administrators may spend most of their time telling storage management software what to do, and then leaving the details of how it gets done up to the AI and automation tools.

The BLS doesn't break out storage administrators as a separate job title.

QA/Testing associate

Image: Pixabay

Before organizations can deploy internal or customer-facing applications, those applications must be thoroughly tested to see how they will perform under real-world conditions. Quality assurance (QA) or testing associates already use tools that automate much of this process. Vendors like Infosysare working on incorporating machine learning into their QA solutions in order to optimize the testing process, better analyze testing logs and diagnose and resolve problems more quickly. In this case, AI and humans will likely work together, with the AI helping the human workers complete tasks work quickly and with a higher degree of proficiency.

The BLS doesn't track salary and job outlook for quality assurance and testing professionals, but the Robert Half Technology 2017 Salary Guide for Technical Professionals says that a QA Associate/Analyst in the United States can expect to earn between $67,000 and $102,750 in 2017, a 2.7% increase over 2016.

Project manager

Image: Pixabay

It may seem counterintuitive to put the complicated area of project management on the list of jobs that could be handled by AI, but Gartner specifically called out project managers as one of the IT job titles at risk of being replaced — at least partially — by AI.

A typical project manager spends a lot of time collecting and inputting data about who has done what. An AI system could easily take over the task of nagging team members to update their status or, even better, collecting that data automatically without the need for human input. In addition, project managers frequently need to estimate how long a project will take and how much it will cost. Machine learning tools may be able to complete this task more accurately by drawing on vast stores of data about similar past projects. In addition, AIs are also very good at allocating resources and setting up schedules.

A few tools with some of these capabilities are already on the market, and in the future, AI will likely further augment the capabilities of project managers, allowing them to handle more projects at once.

The BLS groups project managers in with computer and information systems managers. The group earned around $135,800 in 2016, and jobs in the field are growing 15% per year, which is much faster than average. The Robert Half Salary Guide says that product managers are making between $107,750 and $159,000 in 2017, which is 3.2% more than in 2016.

Data analyst

Image: Pixabay

As the big data trend has swept through American industries, many more people have become involved in data analysis. In fact, demand for highly skilled data scientists is so high that organizations have already begun turning to artificial intelligence in order to allow data analysts with less education to perform some highly advanced analytics.

Many of today's predictive analytics tools incorporate machine learning capabilities, allowing data analysts to process more data more quickly and come up with valuable insights to guide their companies. This is an area where AI isn't replacing workers as much as allowing humans to do more work. In some cases, AI technology is actually increasing demand for workers who can use these tools.

The BLS doesn't track data analysts as a separate job category, but the Robert Half IT Salary Guide says people with the data analyst/report writer job title are earning between $77,500 and $118,750 in 2017, which is 3.8% more than in 2016.

Database administrator

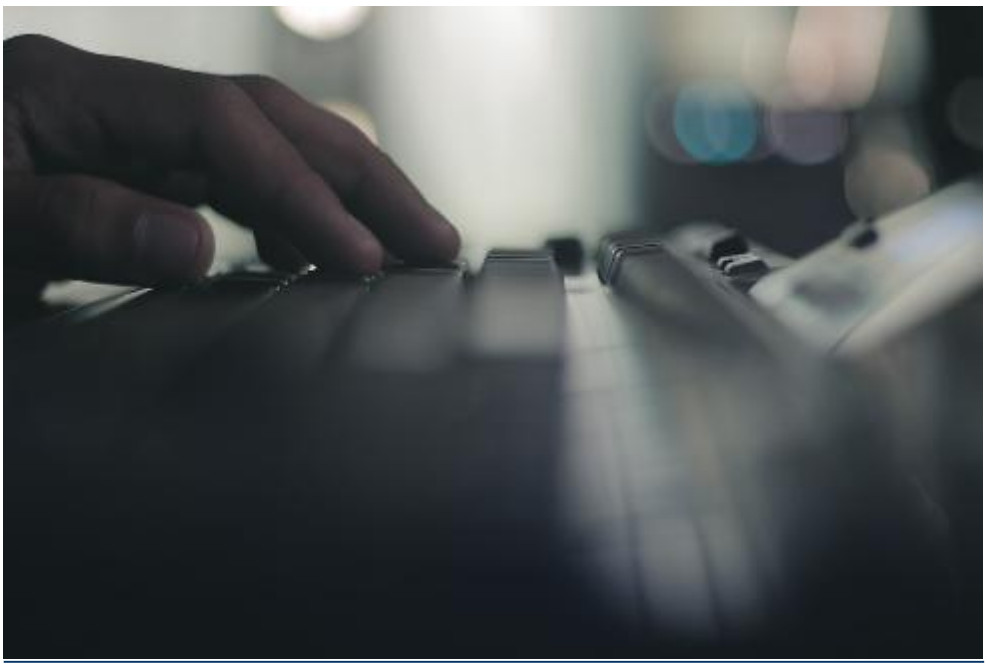

Image: Pixabay

Database administrators, or DBAs, handle tasks like deploying, configuring, optimizing, tuning, monitoring, managing and troubleshooting databases. Some computer scientists have proposed that artificial intelligence could perform some of these jobs, particularly monitoring performance and diagnosing and resolving issues. However, no products with these capabilities seem to be on the market yet.

The artificial intelligence trend is increasing demand on databases, which in turn is putting increasing demands on DBAs. Database management tools with AI capabilities might be able to help human workers get more done, particularly as demand continues to grow.

According to the BLS, median pay for DBAs hovered around $84,950 in 2016, and the job market has a growth rate of 11%, which is faster than average.

Security administrator

Image: Pixabay

With new ransomware and cyberattacks in the news seemingly every day, organizations are looking for any advantage they can get in their fight against hackers and other attackers. Many next-generation security information and event management (SIEM) and user and entity behavior analytics (UEBA) solutions include machine learning capabilities. This technology allows organizations to establish a baseline of normal activity for their networks and systems and then detect anomalous activity that might have gone unnoticed by other security tools like firewalls and antimalware solutions.

Given the current rise in attacks, it seems unlikely that demand for IT security personnel will decline anytime soon, even with the rise of AI. Instead, AI will likely augment the capabilities of the human staff, enabling them to do their jobs better.

The BLS says that security analysts earned median pay of $92,600 last year, and with 18% growth, the job title is growing much faster than average.

Software developer

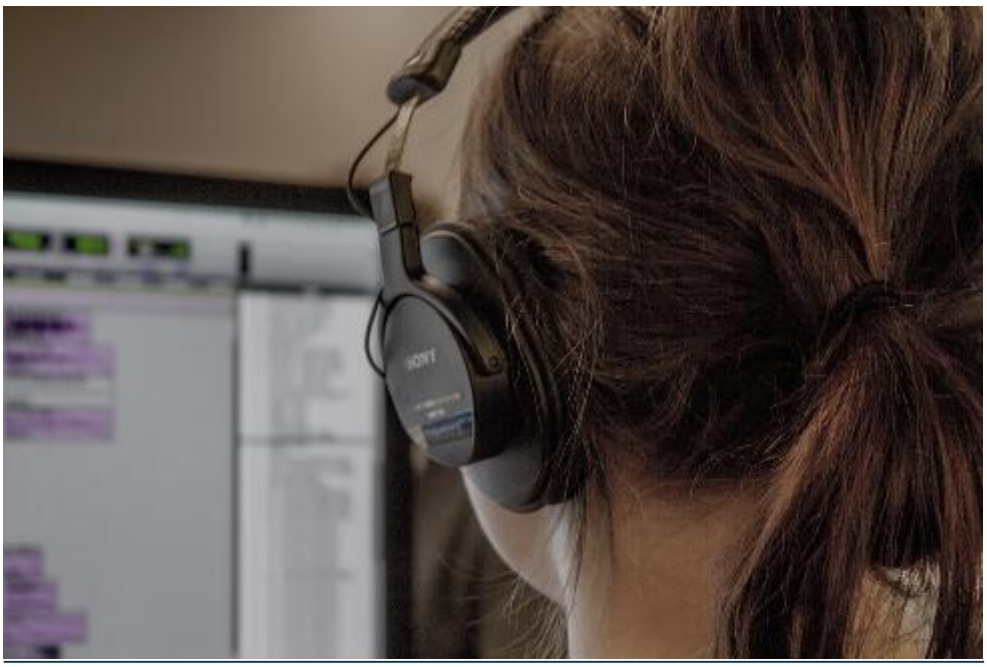

Image: Pixabay

Demand for software developers has been extremely high for several years, sending salaries into the stratosphere. As a solution, some vendors have begun offering low-code or no-code tools that allow average business users to create simple applications. Researchers at Microsoft and the University of Cambridge have also experimented with AI that is learning to write code itself. Like many human programmers, the AI examines existing applications to find help in creating solutions that might work.

This AI is far from being able to write an entire program from scratch on its own, but these sorts of capabilities could soon put software development within the capabilities of more human workers. And that could help relieve some of the talent shortages in the field.

BLS data shows that software developers were paid around $102,280 in 2016, and the job growth rate is 17%, which is much faster than average.