

Jobs That May Be Slipping Away - And Those That Are Here To Stay



Is your job safe from computerization? Keep reading to find out...

By [Jennifer Berry](#)

According to a 2013 Oxford study entitled "The Future of Employment: How Susceptible Are Jobs To Computerization," 47 percent of total U.S. unemployment could see job loss or a decrease in employment due to technological advancements. What's a worker to do?

"Job seekers should follow the wisdom of hockey great Wayne Gretzky who said, 'I skate to where the puck will be, not where it is,'" says Steve Langerud, a workplace consultant and managing partner of career guidance organization Steve Langerud & Associates, LLC in Grinnell, Iowa.

The key lies in figuring out which jobs are going away and which jobs are growing - and then preparing to pursue what's poised to thrive.

If you're worried that there's no way to protect yourself from the inevitable loss of your livelihood to automation, there's good news. The Oxford study also found that the more education you have, the less likely it is that your job will be computerized.

With that in mind, we've highlighted six jobs that may be slipping away according to the study, along with six high-growth alternatives to consider pursuing.

Career That's Slipping Away #1 Postal Service Clerks

Likelihood of Computerization: 95 percent

Before email and online postage sites, most people couldn't communicate without these workers. Postal service clerks are the people who sell money orders, stamps, envelopes, and other mailing-related products, along with calculating postage and answering postal questions, according to the U.S. Department of Labor.

Bleak Outlook Factor: As automated bill pay and email use increases, the subsequent decline in first-class mail volume will adversely affect employment, says the Department of Labor. Eric Miranda, a career counselor at CollegeAdmissionsReview.com, agrees.

"The volume of mail going through the postal system has decreased over the years with the increased use of email," says Miranda, "That's not going to change. More people are emailing documents - and mailing letters less."

This may be why employment of postal service clerks is projected to decline 32 percent from 2012 to 2022, representing a loss of 139,000 jobs.*

Career That's Here To Stay #1 **Human Resources Managers**

Likelihood of Computerization: 0.55 percent

The unsung heroes of virtually any company with more than a handful of employees, human resources managers coordinate administrative functions for an organization. They interview and hire staff, consult with top executives, and serve as a link between management and the workers, according to the U.S. Department of Labor.

Brighter Outlook Factor: One thing a computer can't replace is human interaction, and human resources managers' jobs are all about human interaction. "While technology will assist HR managers in doing their jobs, I don't see a total elimination of HR staff happening anytime soon," says Amanda Haddaway, career expert and author of "Destination Real World: Success after Graduation."

"As compliance and employment law have taken center stage, there's still a need for human interpretation and application that a computer just simply isn't capable of yet."

The statistics seem to confirm this. Employment of human resources managers is projected to grow 13 percent from 2012 to 2022, adding 13,600 new jobs.*

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Preparing For This Career: Interested in this field? According to the Department of Labor, you'll usually need a bachelor's degree in human resources or business administration, although an alternative is to complete a bachelor's in a different field and take courses in subjects related to human resources like organizational development, industrial psychology, or labor or industrial relations.

The Department also notes that experienced individuals with backgrounds in areas such as business management, finance, information technology, and education can fill some positions, and that for higher level jobs, a master's degree in labor relations, human resources, or a Master of Business Administration degree are sometimes required.

Career That's Slipping Away #2Motion Picture Projectionists

Likelihood of Computerization: 97 percent

You've sat in a dark room with them many times, even if you've never seen them... Motion picture projectionists are responsible for the setting up and operation of motion picture projection equipment and related sound reproduction equipment, says the U.S. Department of Labor.

Bleak Outlook Factor: At the dawn of the industry, motion pictures were massive reels of film that needed to be hand-loaded into projectors. But with the advancement of technology, more and more movie houses are turning to digital projectors, which don't require the same kind of labor from a projectionist.

"Digital formatting is quickly replacing film, reducing the need for projectionists," says Peter Berner, founder and president of Pilot Workplace Advisors, a specialty human resources development firm. "Even film projection is easily programmed and delivered without the need for human attendants. In addition, more and more people are opting to receive motion picture content on their personal digital equipment, further shrinking the economic viability of the big screen experience."

These advances in viewing technology are expected to continue to hurt this field, which had already dwindled down to a mere 7,630 workers according to May 2013 data. Employment of these workers is expected to decline by 26.5 percent from 2012 to 2022, a loss of 2,100 jobs.*

Career That's Here To Stay #2Network and Computer Systems Administrators

Likelihood of Computerization: 3 percent

Network and computer systems administrators install an organization's computer systems, networks, and other data communication systems, as well as providing organization and support, according to the U.S. Department of Labor.

Brighter Outlook Factor: While we might rely on computers to handle more and more of our job responsibilities, we will need people to oversee those computers. This is where the network and computer systems administrators come into play, according to Patrick O'Rourke, who is responsible for talent acquisition and development at IT Consulting firm SWC Technology Partners, Inc.

"I believe that network and computer systems administrators will continue to be the backbone of IT operations, because the human element of troubleshooting, escalating, and communicating these issues on the fly cannot be fully automated," says O'Rourke, "The need for qualified professionals that draw upon experiences and consider the human element of IT remains a top priority when assessing an organization's overall IT health."

That need for the human element may be one of the reasons that this career is projected to enjoy 42,900 new jobs, representing growth of 12 percent from 2012 to 2022.*

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Preparing For This Career: If you're interested in prepping to pursue this career, consider earning your bachelor's degree in a field related to computer or information science, which is what most employers require for this job, according to the Department.

The Department does say that some employers require only a postsecondary certificate, and a degree in electrical engineering or computer engineering is usually acceptable too.

Career That's Slipping Away #3Embalmers

Likelihood of Computerization: 54 percent

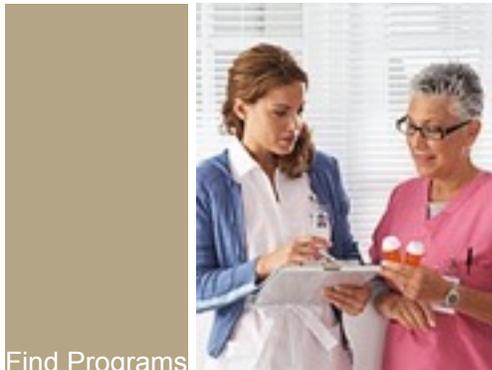
An embalmer is probably the last person you want to meet, and he might end up being just that. Embalmers are the professionals who prepare human remains for burial, making sure to conform with legal requirements, according to the U.S. Department of Labor.

Bleak Outlook Factor: Considering the fact that death is a part of every life, you might not think the need for embalmers would decrease over time. However, both the Oxford study and the Department of Labor numbers suggest decreasing opportunities for this field, and it's only partly due to technological advancements.

It may also be people's preference for cremation that is leading to the anticipated loss of jobs for embalmers. "While technology is not the main cause of a diminishing need for embalmers, societal trends certainly are," says Berner. "More and more people are opting for cremation as an acceptable, if not preferred, form of interment."

Not even an embalmer can make this profession look good. It's already down to 4,390 workers according to May 2013 data, with an anticipated loss of 800 jobs, a 15 percent drop, from 2012 to 2022.*

Career That's Here To Stay #3Registered Nurses



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Likelihood of Computerization: 0.9 percent

Who doesn't feel all warm at the sight of a caring nurse? Registered nurses (RNs) care for patients, consult with doctors, and provide emotional support and advice to patients and to their family members, says the U.S. Department of Labor.

Brighter Outlook Factor: Considering the amount of person-to-person interaction, and the emotional support they offer to both patients and their families, RNs should be around for a long time to come.

"There's no substitute for the power of touch, the ability to listen, and even the capability of sharing real tears (of joy or sorrow)," says Sandra Davis, an RN with MJHS Hospice and Palliative Care,

which cares for pediatric and adult patients in NYC. "Nursing is far more than medical check-ups or taking temperatures and blood work. It's conversation, guidance, interacting with family members and even providing (or helping someone access) social, emotional, spiritual, psychological support. This is particularly important for nurses who provide care in patients' homes."

It seems we need that support more than ever. Registered nurses are projected to add a whopping 526,800 positions, growing 19 percent, from 2012 to 2022.*

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Preparing For This Career: If you're interested in preparing to pursue this career, the three usual education paths are an associate's degree or bachelor's of science degree in nursing, or a diploma from an approved nursing program, the Department of Labor states.

Career That's Slipping Away #4 [Locomotive Engineers](#)

Likelihood of Computerization: 96 percent

Remember playing with toy trains as a kid? These kids never outgrew it. Locomotive engineers drive the locomotives that transport passengers or freight. They interpret the railroad rules and regulations and read electronic and manual train orders and signals. The locomotives these engineers drive may be electric, steam, diesel electric or gas-turbine-electric, according to the U.S. Department of Labor.

Bleak Outlook Factor: While many people have a fascination with trains, the opportunities to work as a locomotive engineer could be fading over the next several decades - partly because of advancements in technology.

"Jobs with repetitive tasks that are done the same way over and over are going away, and that could extend to the job of the locomotive engineer," says David Harder, founder of Inspired Work, Inc., whose mission is to find innovative solutions to career problems. "We will see automation taking over anything that can be replicated in a safe manner."

But, he stresses, "safe" is the key. "Until artificial intelligence reaches the point where it can anticipate crises and respond better than a well-trained human being, I don't see locomotive engineers being completely replaced."

Maybe not completely replaced, but they're disappearing nonetheless. Only 36,860 locomotive engineers remain according to May 2013 data, and the future projection is for a four percent drop in employment of locomotive engineers from 2012 to 2022, which translates into a loss of 1,500 jobs.*

Career That's Here To Stay #4 [Computer Systems Analysts](#)



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Likelihood of Computerization: 0.65 percent

Your company's computer efficiency is probably in the hands of one of these workers. Computer systems analysts study an organization's existing computer systems and procedures and figure out what information systems solutions will help the organization to operate more effectively and efficiently, according to the U.S. Department of Labor.

Brighter Outlook Factor: Computer systems analysts do what a computer can't do - employ human observation and reasoning to improve the way an organization uses technology to meet their goals. "Not many people have the technical skills and interpersonal skills needed for this type of work," says Stuart Mease, director of career advancement and employer relations at the Virginia Tech Pamplin College of Business and author of "The Perfect Job Seeker."

According to Mease, computer systems analysts provide businesses with crucial information on how technology can aid employees to better handle their workload. "These people are critical moving forward," he adds. So critical, in fact, that employment of computer systems analysts is expected to grow 25 percent from 2012 to 2022, adding 127,700 new jobs.*

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Preparing For This Career: To prepare to pursue a career in this field, a bachelor's degree in a computer or information science field is common, although it's not always a requirement, says the Department. Some firms may hire an analyst with a business or liberal arts degree along with skills in information technology or computer programming, the Department says.

In addition, some employers do prefer applicants with a master of business administration with a concentration in information systems, or, for jobs that are more technically complex, a master's degree in computer science may be the more appropriate degree.

Career That's Slipping Away #5 Printing Press Operators

Likelihood of Computerization: 83 percent

Those of us old enough to remember when people actually read more books than computer screens should appreciate the printing press operator. Printing press operators set up and operate all kinds of printing machines, including short-run offset printing presses, digital, gravure, letterpress, flexographic, and lithographic machines, the U.S. Department of Labor explains.

Bleak Outlook Factor: Due to advances in digital technology, more and more of what we read exists online, and that is having an impact on printing press operators. "The advent of digital media has demolished the need for printed material," says Berner. "The struggles of the newspaper industry alone demonstrate the diminishing need for press operators." But jobs are even being lost at successful printing houses, he adds. "Many of the remaining jobs in the print industry are rapidly being eliminated by more sophisticated equipment that is controlled by computerized technology."

The numbers bear out Berner's analysis, with the number of opportunities for printing press operators expected to drop 3.9 percent from 2012 to 2022 - which means a loss of about 7,000 jobs.*

Career That's Here To Stay #5 **Petroleum Engineers**

Likelihood of Computerization: 16 percent

Petroleum engineers are on the front lines of the energy battle. They figure out how to extract oil and gas from deposits below the earth's surface or from older wells, says the U.S. Department of Labor.

Brighter Outlook Factor: As we try to become more environmentally conscious, we still rely heavily on the old ways of harnessing power. "Despite worldwide efforts to utilize alternative energy, fossil fuel demand will continue to rise as supplies become harder to locate and extract," says Berner.

"Technology will certainly play an increasing role in the production of petroleum products, but it will function as a tool of engineers, enhancing their capabilities; not as a substitute for the fundamental engineering expertise needed for success in the industry."

Our continued reliance on fossil fuels may be one of the reasons that it is projected that we can expect employment of petroleum engineers to jump 26 percent from 2012 to 2022, adding 9,800 new jobs.*

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Preparing For This Career: To pursue a career in this field, you must have a bachelor's degree in engineering - preferably in petroleum engineering - to get started, according to the Department of Labor. A bachelor's in chemical engineering or mechanical engineering may be sufficient as well, notes the Department.

Career That's Slipping Away #6 **Watch Repairers**

Likelihood of Computerization: 99 percent

If you've heard the expression "runs like clockwork," you should have an idea what people in this profession are all about. According to the U.S. Department of Labor, watch repairers repair, clean, and adjust mechanisms of all sorts of timing instruments, including watches and clocks.

Bleak Outlook Factor: Watch repair is a time-honored tradition, but as people rely more on devices like computers or mobile phones for the time we might see this profession shrink.

"It's become increasingly common for people to check their phones for the time," says Miranda, although he doesn't expect to see the end of watches any time soon. "People will still buy and wear

watches - but more so now as jewelry. If someone is interested in working in watch repair, they'd be wise to combine that skill with jewelry making or jewelry repair," he suggests.

Time is almost up for this once-thriving profession. Only 100 new jobs in this career are projected from 2012-2022, a growth rate of 2 percent.*

Career That's Here To Stay #6 **Securities, Commodities and Financial Services Sales Agents**

Likelihood of Computerization: 16 percent

These are the big money men. Securities, commodities, and financial services sales agents sell securities to individuals, conduct trades, and advise companies in search of investors, according to the U.S. Department of Labor.

Brighter Outlook Factor: As good as computers are at some things, the financial sector of our economy still relies on people to connect buyers and sellers in financial market. "Having 15 years of financial service experience in both banking and the securities industries, I can confidentially say that financial services sales agents are here to stay," says Anthony Pili, vice-president and director of strategic planning for Greater Hudson Bank.

And while he admits that the industry has transferred some low-value tasks to computers (like opening a bank account), he underlines the importance of having a human being present to handle more complicated transactions. "The decision makers that control the large accounts will always need a relationship with someone that can always be reached, trusted and flexible."

Despite the recent financial meltdown, employment for securities, commodities, and financial services sales agents is expected to grow, with 39,700 new jobs projected, translating to growth of 11 percent from 2012 to 2022.*

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Preparing For This Career: If you're interested in setting out on this career path, the Department of Labor says a bachelor's degree is required for entry-level positions. Studies in business, economics, accounting, or finance are important, particularly for larger firms. The Department also notes that a master's degree in business administration (MBA) is often required for high-level securities industry positions.

* Job growth and projected new job numbers are from the U.S. Department of Labor, Occupational Outlook Handbook, 2014-2015 edition.