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For Immediate Release

Robot-Proof Careers

WINNERS, LOSERS OF THE RISE OF ROBOTS

CHICAGO, May 2, 2017 – Technology and automation could replace millions of jobs in the next decade, with a December estimate from the White House suggesting 3.1 million jobs could be replaced in transportation alone. Robotics spending is expected to hit over \$135 billion by 2019, according to International Data Corporation. What could this mean for the job market?

“Some occupations will inevitably disappear with the onset of new technologies. However, job seekers can arm themselves with the necessary skills and experience to make themselves robot-proof,” said John Challenger, chief executive officer of global outplacement and executive coaching firm Challenger, Gray & Christmas, Inc.

According to PriceWaterhouse Coopers (PwC), thirty-eight percent of jobs in the U.S. are at high risk of being replaced by robots and artificial intelligence over the next 15

years. The United States is not alone. Germany is expected to lose 35 percent of jobs, and 30 percent and 21 percent of jobs could disappear in the United Kingdom and Japan, respectively. The U.S. and U.K. labor markets are both dominated by service jobs, and the same share of workers are roughly employed in key sectors including finance, transportation, education, manufacturing, and food services.

“Routine jobs, such as those found in retail or hospitality, will likely become automated. However, perhaps more surprisingly, the financial, health care, and education industries have operations that can and are already being replaced by technology.

“The functions of some U.S. retail finance workers, for instance, are significantly more routine, and more automatable than jobs in investment banking and international finance – functions that require higher levels of education and expertise,” said Challenger.

Additionally, data collection and processing are ripe for automation. Across all occupations in the U.S. economy, workers spend more than one-third of their time collecting and processing data. These automations could greatly affect industries, such as retail, financial services, and insurance.

Automation is not just occurring in expected places, however. Three-fourths of new start-ups in robotics are focusing on less traditional areas, like personal and professional services, medical technology, consumer products, entertainment, and education. The remaining 25 percent are investing in industrial robotics, according to an analysis of 752 of *The Robot Report's* global database of start-ups.

Although it may seem like the risk of unemployment is soaring due to technology, some occupations will be much more difficult to automate, according to Challenger.

“Any managerial professions or positions that lead other people or processes will likely be safe. Also, creative professions and jobs that require caring for individuals, such as nursing, child-care, and youth education will likely need human workers,” he said.

Though the potential for automation to take jobs exists, other barriers could stem the loss of jobs. While analysts estimate truck driving will probably be the first form of driving in the U.S to be fully automated, as long-range big rigs travel primarily on highways considered the easiest to navigate without human intervention, logistical difficulties could arise, such as shipment or system errors avoidable with a human at the helm. Additionally, autonomous vehicles on roads raises the question of who is liable in an accident.

Moreover, according to the PwC report, economic, legal and regulatory hurdles could prevent automation, even in sectors where it is technologically feasible. The cost of maintenance and repairs could still be just as, or more expensive than the wages of human workers.

"Jobs with automation capabilities won't necessarily be completely taken over by robots, but the roles will likely change. For example, mortgage brokers spend almost 90 percent of their time processing applications, when they could instead be spending more time with potential clients.

"Job seekers would be wise to look into furthering their education or investing in professional certifications to make themselves more marketable. Those with demonstrable leadership abilities, ideas to save the company money, or experiencing designing and implementing policies and processes will stand out above the machines," said Challenger.

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Robot-Proof Careers (for now)

Composers and Artists. The creativity and inspiration behind the minds of composers, musicians, and artists is currently extremely difficult to mimic with a robot or machine.

Nurse Practitioners, Home Health Aides, Elder Care Specialists. Sitting with a patient and managing care is something a human is more skilled at doing than a machine.

Human Resources Executives. HR managers plan, direct, and coordinate the administrative functions of an organization. With a 22 percent potential for automation, these jobs may seem likely to be automated, but the recruiting, interviewing, and hiring of new staff, plus consulting with top executives on strategic planning is hardly imitable by a robot.

Robot Engineer. People who can design, work with, or fix robots will have careers that can be proven to be very lucrative in perpetuity. These are the people who are responsible for creating robots and robotic systems that are able to perform duties that help make jobs safer, easier, and more efficient, particularly in the manufacturing industry.

Child Care Workers, Youth Directors, Early Educators. While some education roles could be replaced by robots, such as some university course instructors or administrative positions, those who teach children and young-adults will likely remain human. Machines are not yet capable of leading classrooms of children or being responsible for child welfare.