White Collar Automation

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Abstract— A skilled employee may be the one that performs skilled, managerial, or body work. White-collar work could also be performed in a workplace or different body setting. White-collar includes business management, human resources, customer support, market research, finance, civil engineering, operations research, marketing, information technology, networking, attorneys, medical professional, public relation, talent professionals, architects, graphics design, stockbrokers, accounting, auditor, actuary, customs professional, immigration officer, research and development and contracting. It’s a famed undeniable fact that blue-collar jobs square measure at the brink of being non-existent due to riotous technology.

The corollary to the present theory is that robots wouldn’t be ready to surpass intellectual power of a white-collar worker. Well, that is not the case anymore. If not currently then later, automation is certain to take over skilled jobs.

I. INTRODUCTION

Robotic process automation (or RPA) is an emerging form of business process automation technology based on the notion of software robots or artificial intelligence (AI) workers.[1]

The corollary to the present theory is that robots wouldn’t be ready to surpass intellectual power of a white-collar worker. Well, that is not the case anymore. If not currently then later, automation is certain to take over skilled jobs.

So, robotics, AI and forthcoming riotous technologies square measure currently difficult skilled professions that antecedently appeared air-tight. And this theory is called ‘white collar automation’ The results are specific and measurable. Order an excessive amount of and therefore the shopping for entity winds up with excess inventory that must be marked down or written off as obsolete. Order deficient and stockouts become a problem inflicting loss of revenue.

II. HISTORICAL EVOLUTION

By way of illustration of how far the technology has developed since its early form in screen scraping, it is useful to consider the example cited in one academic study. Users of one platform at Xchanging - a UK-based global company which provides business processing, technology and procurement services across the globe-anthropomorphized their robot into a co-worker named "Poppy" and even invited "her" to the Christmas party. [3][4]

As the aforementioned Bloomberg article indicates, in many instances, algorithms performed significantly better than humans in terms of the quality of orders.

Any such elimination of jobs comes with casualty. It is not far-fetched to imagine that the channel groups assigned to Amazon from the seller organizations have to be compelled to feel the impact. I feel compassionate the human at the opposite finish of the dealing attempting to barter with an algorithm!

Algorithms drive objective, data-driven choices given an outlined set of goals and rules that go along with meeting those goals, as opposed to humans who have to deal with emotional factors. Going back to the shopping for example, it is not uncommon for the retail team buyers to wait until the end of the quarter and order in bulk from vendors just so they get steep discounts and pocket huge commissions.

III. WHITE-COLLAR AUTOMATION

Vendors partake in the game as they have to meet their quarterly volume targets. This causes end-of-the-quarter sports implement patterns, that light-emitting diode the chief operating officer of an organization that produces diapers to raise why babies were piss a lot of towards the tip of the quarter! Algorithms do not need to be concerned about their pocketbooks or others’ perceptions of them. Nor should algorithms sit through endless conferences to attain choices which will be dead on arrival. Under the right conditions, they can be superefficient.

To understand the feasibility and the impact of potential jobs loss through the automated machine learning, we need to look no further than what industrial robots did to production line workers. In the not thus distant past, lower cost offshoring was a major force in eliminating several white-collar jobs in Western societies.
The work that got outsourced was, for the foremost half, towards the low to middle finish of the talent’s spectrum.

Algorithms level the playing field though. They do not discriminate supported geographic location, age, gender, race, or military rating.

Clearly, a trend is emerging where AI is increasingly competing with humans in a wide range of cognitive tasks. According to The Economist (2014), since the 1950s, huge investments in capital equipment has caused the sharp decline of American share of employment in manufacturing from 30 per cent to less than 10 per cent. However, during the same period, jobs in services soared, from less than 50 per cent of employment to almost 70 per cent. It is therefore inevitable that firms would start to apply the same experimentation and reorganization to service industries. HR practitioners need to anticipate the impact of AI on their workplaces. HR departments may themselves be undergoing change as AI takes over some of the functions performed by people previously such as HR systems reporting or assistance with recruitment and selection. AI could also help to serve the line manager as their “first port of call” HR advisor and provide them with real time HR information that would make these line managers more effective. HR practitioners need to be up with the play with AI developments to be able to advise management of the possible changes to workforce in terms of nature of work, predict both the likely roles that employees will play and the optimal mix between human and machines in at the workplace. In essence, they must attempt to predict the jobs of the future as AI stealthily usurps white-collar jobs.

Automation is already all around us. Cities are seeing front-end automated restaurants like Eatsa gaining popularity, while in factories automation has already arguably been a part of life for years (if not decades) in the form of heavy industrial and agricultural robots.

Analyzing the automation landscape, we found that 10 million service and warehouse jobs are at high risk of displacement within the next 5 – 10 years in the US alone. This includes jobs like cooks and servers, cleaners and janitors, as well as warehouse workers.

Meanwhile, nearly 5 million retail workers are at a medium risk of automation within 10 years. To put these numbers into perspective, estimates are that over a few years the Great Recession of 2007 – 2010 destroyed 8.7 million jobs in the US.

A. Effects

The scalability of modern solutions based on architectures such as these owes much to the advent of virtualization technology, without which the scalability of large deployments would be limited by available capacity to manage physical hardware and by the associated costs. The implementation of RPA in business enterprises has shown dramatic cost savings when compared to traditional non-RPA solutions. [5]

Automation is coming after jobs, from fast food workers to accountants. We analyzed which jobs are most — and least — at risk, given factors including tasks involved, the current commercial deployment of technology, patent activity, regulations, and more.

WHERE IS THIS DATA COMING FROM?
The shift from traditional manufacturing to computer-enabled industry took nearly a century. But the shift from personal computing to billions of smartphones, massive networks, and the IoT has taken just a couple of decades. And the next phase of technological evolution is already underway: advanced neural networks that learn, adapt, and respond to situations.

The hosting of RPA services also aligns with the metaphor of a software robot, with each robotic instance having its own virtual workstation, much like a human worker. The robot uses keyboard and mouse controls to take actions and execute automations.

There are however several risks with RPA. Criticism include risks of stifling innovation and creating a more complex maintenance environment of existing software that now needs to consider the use of graphical user interfaces in a way they weren’t intended to be used. [6]

Conversely however, some analysts proffer that RPA represents a threat to the business process outsourcing (BPO) industry. [7]

B. Advances in AI

With AI and automation advancing at a breakneck pace, society’s capacity to respond is being stretched to the limit. 10 million US jobs at high risk of disruption. Automation is already all around us. Cities are seeing front-end automated restaurants like Eatsa gaining popularity, while in factories automation has already arguably been a part of life for years (if not decades) in the form of heavy industrial and agricultural robots.
Walmart has patents for autonomous robots that attach themselves to shopping carts in order to move them around stores, along with drone delivery systems.

IV. CONCLUSION

Robotics are penetrating deep into large businesses including retail, consumer, and medical applications. At financial institutions, AI is transforming how investment decisions are made. “It means some functions will change significantly in nature… And it might mean that positions will no longer be there in the future. All-in-all, over the coming five years, around 7,000 functions might be impacted by these effects…” Ralph Hamers, CEO of ING.

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