



THE BOTS ARE ~~COMING~~ HERE

Is Your Workforce Ready?

AI and machine learning. RPA, cobots and autonomous vehicles.

Technology is disrupting entire industries and causing tectonic shifts in how work gets done. With McKinsey & Co. predicting that 45 percent of today's jobs will be automated out of existence within 20 years, what will your future workforce look like – and how should you prepare?

In this eBook, you will learn:

- Exactly what AI, machine learning and cobots are
- How they are impacting the workforce today
- How they will impact the workforce tomorrow
- What to do to prepare for the rise of the bots

AI and Machine Learning 101

Thanks to the rise of smartwatches, home assistants and other technologies, we've begun using the terms artificial intelligence (AI) and machine learning interchangeably.

Though these two terms are intrinsically linked to one another, they are not exactly the same.

In the "old days" computers had to be programmed to take an action. If you asked a computer to do something it was not programmed to do, you'd get an error. AI and machine learning aim to make it possible for computers to "learn" new behaviors without having to be reprogrammed.

Artificial Intelligence: A division of computer science dedicated to building machines capable of intelligent behaviors.

Machine Learning: The science of getting computers to take an action without being programmed.

It helps to think of it this way: The method for building AI is machine learning.

The Rise of...Cobots

When most people think of robots in the workplace, they think of the machines working manufacturing lines, independent of humans. In fact, for many years, robots had to be separated from humans in order to keep people safe.

We are in a new era. The era of the “cobot,” a collaborate robot that is meant to work in proximity to, and usually in conjunction with, a human. In fact, cobots got their start on those manufacturing lines. In the late 1990s they emerged in automobile manufacturing: Humans provided the power to make the machine move, and the robot handled precision placement of the parts.

Today, cobots are “trained” by humans who physically steer the robot in the right direction in order to take action, and the robot “learns” the steps required to complete the action on its own.

This collaborative model of human-machine interaction is the framework that is shaping the impact of AI and machine learning on the modern workplace.

Examples of AI and Machine Learning in Everyday Life

We use machine learning and AI in our everyday lives now. Here are just a few of the ways you are probably using this technology today:

- Email spam and malware filtering
- Personalized recommendations in online shopping
- “People you may know” features on social media
- Search engine results refinement
- Traffic predictions and route refinement on Google Maps and Waze
- Amazon Alexa, Siri, Google Assistant, Microsoft Cortana
- Airplane autopilot modes
- Autonomous automobiles

AI and Machine Learning in the Workplace

While AI and machine learning can provide fun and exciting enhancements to our everyday activities, these technologies are also being deployed in myriad ways in the professional workforce. These are just a few of the applications:

- **Accounting:** Predictive analysis helps accountants match payments to invoices.
- **Sales:** Machine learning can identify probable orders, the likelihood a pending deal will close, and calculate forecasts with much higher accuracy.
- **Human Resources:** AI streamlines routine tasks in the hiring process like matching resumes to requirements and using predictive analysis to identify the candidates with the most potential.
- **Purchasing:** Machine learning can proactively alert purchasing teams about potential issues in shipping and logistics, helping them time orders more precisely.
- **Legal:** Pretrial and procedural discovery documents that previously took months to be studied by human eyes can be scanned, cataloged, flagged and more in a matter of seconds.

In these examples, AI and machine learning are enhancing the way humans do their jobs, making them more accurate and efficient.

The Bots ARE Here...

Technology is enhancing the way we approach work, and is making us much faster and more accurate on the job. While robots are not poised to take over every job, the fact is, some human jobs have already been eliminated by technology – and countless more will be over the next 20 years.

This is just basic economics. Companies will adopt the fastest, cheapest way to safely deliver quality products and services. In fact, a recent Forrester report found 7 percent of jobs will be replaced by AI or robots by 2025.

So, which industries will be most impacted?

- **Transportation:** There are autonomous cars on the road already. Uber, Ford, Tesla and other companies are in a full-court press to automate our vehicles. Taxi drivers, rideshare drivers, truck drivers, bus drivers, food delivery people and more will find fewer opportunities over the years.
- **Fulfillment:** Robots will likely take over much of the picking-and-packing done by humans in fulfillment centers today.
- **Customer Service:** Look for more automated checkout lines and fewer human checkers in stores, and bots will be customer's main interaction online and on the phone, until an issue gets escalated up the ladder.
- **Manufacturing:** As robots continue to get smarter, they will require fewer human co-workers on the manufacturing line.

...But Don't Panic

While it is important to understand where technology is heading, it is also important not to lose sight of the reality of the rise of machines.

There are several good reasons why robots will not take over all human jobs:

- **Someone has to maintain them:** Machines need to be built. Machines often break. They need parts, upgrades, updates and more. They need to be taken out of service, and even replaced. For the foreseeable future (and beyond), this will require humans.
- **Machine “hands” lack dexterity:** Scientists are far away from replacing the complexity of the human hand. Today’s robots are actually quite clumsy and are only given limited responsibility. It takes human babies years to fully master what they can do with their hands, and machines are even less capable than toddlers of making complex tactile decisions and responses.
- **Context:** Human conversations and judgments require a deep understanding of the context of a situation. Robots are still very limited in their ability to glean the nuances of human conversation and interaction.
- **Reason:** Not all problems can be solved with logic and mathematics. Most problems still require good, old-fashioned human reasoning – and they always will.

Preparing for the Future

The truth is, machines are taking over tasks much more quickly than they are taking over human roles in the workforce. They are really used to speed up mundane, repetitive and low-level processes. Humans are still required for higher-level tasks, especially those that require reasoning, context and understanding.

In order to prepare for the future, low-skilled workers need to focus on upskilling and readying themselves for the emerging workforce.

Employers can also prepare by redefining roles that are being impacted by technology, reassigning tasks as necessary and helping talented people develop in new ways.

Are You Prepared for the Workforce of Tomorrow?

If your organization is starting to adopt new AI and machine learning technology, it will be important to develop a long-term strategic staffing plan that includes:

- Training and development
- Role realignment
- Future skill assessments to prepare for long-term needs
- Long-term strategic planning to staff up or down as needed

If you are ready to prepare for the workforce of tomorrow, partner with a staffing expert that can ensure access to the right talent at just the right time.