

Futureproof

9 Rules for Humans in the Age of Automation

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Futureproof 9 Rules for Humans in the Age of Automation **Kevin Roose** Kevin Roose, a technology writer for **The New York Times**, has spent several years studying AI and automation and its effects on the workforce. Rather than argue how technology will save or destroy the world, **Futureproof** discusses our current reality, the changes that have already happened and those coming next, and how we can adapt effectively. He suggests nine rules for success in an increasingly automated world by, "strengthening your uniquely human skills, so you're better equipped to do the things machines can't do" (p. xxvii).

Key Quote

"This is the truth about the AI revolution. There is no looming machine takeover, no army of malevolent robots plotting to rise up and enslave us. It's just people, deciding what kind of society we want" (p. xxvi). — Kevin Roose

Key Concepts

Birth of a Suboptimist. It is prudent to be alert to the problems that can be caused by technology, but, ultimately, people are the ones with the power to determine tech's role. If humans use tech well, it can be a boon to humanity.

The Myth of the Robot-Proof Job. Machines often surprise us in the types of jobs they can replace, though initially, they seem to be doing nothing more than making life more convenient.

The Algorithmic Manager. As machines increasingly "step in" as middle managers, using algorithmic measures for performance, pricing, etc., some workers will have to decide if they want to manipulate the algorithm or submit to its evaluation.

Beware of Boring Bots. The types of machines that end up causing problems for people are not the terrifying types of humanoid and monstrous bots you see in movies, but ones the author calls "boring bots": "bureaucratic bots" (anonymous algorithms used by the government, banks, and healthcare and criminal court systems) and "back-office bots" (software programs that replace human workers).

Be Surprising, Social, and Scarce. Maximize your uniquely human skills, "centering [your] humanity in your work" (p. 78).

Resist Machine Drift. Machines can "shape our preferences" (p. 88). Don't let them.

Demote Your Devices. Be honest with yourself and take steps if your phone has gone from assistant to a "demanding, hard-driving nightmare of a boss" (p. 100).

Leave Handprints. In an age of automation, refuse "to compete on the machines' terms," and become a craftsman who can evaluate. correct. oversee. and improve upon what machines do (p. 121).

Don't Be an Endpoint. Avoid being in a job where you are essentially working **for** a machine. And if you lead a company, be sure you are using machines as assistants to humans rather than using humans as assistants to machines.

Treat Al Like a Chimp Army. Be careful what you put an algorithm in charge of. Use machines for basic skills involving low-risk tasks and include lots of supervision. Without human oversight, dangerous mistakes can be made by machines.

Build Big Nets and Small Webs. Corporations and the government can create large-scale programs to "soften the blow" of employment changes. And humans in communities need to be intentional

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about connecting in person, even if it is to sample or interact with new technology together.

Learn Machine-Age Humanities. Intentionally fostering certain social skills and practices can help humans navigate the new age and maintain an edge over machines.

Arm the Rebels. We have a moral duty to speak up for people – for the value of the human in the age of the machine, even if we are the ones responsible for bringing in the machines.

OUR CURRENT STATE

There are both real concerns and real benefits to the current state of Al. Its future development will ultimately be determined by how we humans choose to use our new technologies. Technology is increasingly capable and impressive, but it is not the machines we need to monitor as much as "the humans who are designing and implementing all of this new technology" (p. 12).

We need to be careful, because, historically, "periods of technological change often improve conditions for elites and capital owners" but "disproportionately affect people in low-income occupations and exacerbate existing racial and gender disparities" (pp. 14-15).

Job loss is a concern. But at the same time, new technologies tend to create new work and people form new industries and careers around the new equipment (p. 20). No job is safe from automation or absolutely doomed. "Most jobs can be done in ways that either make them very easy or very hard to automate" (p. 33).

The most dangerous robots are the most boring ones: "bureaucratic bots" are the "faceless, anonymous algorithms that are used by government agencies, financial institutions, healthcare systems, criminal courts, and parole boards to make important, life-altering decisions" (p. 51). Similarly, a "back-office bot" is "the type of machine that is good enough to replace human workers but isn't good enough to generate new jobs" (p. 56).

NINE RULES TO FUTUREPROOF YOURSELF

Implementing these nine rules can keep you competitive and fulfilled in the age of automation. "Futureproofing is about reclaiming control of our minds and our human agency, not just keeping our jobs" (p. 195).

1. BE SURPRISING, SOCIAL, AND SCARCE

Conventional advice about the growing impact of machines often argues, "if machines were the future, we needed to become more like machines ourselves" (p. 64). In reality, we need to learn that "in a highly automated economy, the most valuable skills and abilities are the ones that could **distinguish** workers from machines" (p. 66). Thus, the best path forward became "to develop the kinds of unique, human skills that machines couldn't replicate" (p. 66). Humans are far better than machines at being surprising, social, and scarce.

Surprising: There is an advantage over machines for those who are "good at handling the unexpected – who are cool in a crisis, who like dealing with messy problems and novel scenarios, and who can move forward even in the absence of a concrete plan" (p. 68).

Social: People "skilled at creating social and emotional experiences will be better positioned for the future," because "when machines can do many of the basic, repetitive functions of our jobs as well or better than we can, what's left for us will be the social and emotional parts" (p. 70).

Scarce: We know that "humans are much better than AI at work that involves unusual combinations of skills, high-stakes situations, or extraordinary talent," especially combining and transferring knowledge into new fields (p. 71).



Be careful what you put an algorithm in charge of. Use machines for basic skills involving low-risk tasks and include lots of supervision. Without human oversight, dangerous mistakes can be made by machines.

2. RESIST MACHINE DRIFT

Many of us don't realize the automation happening within ourselves when we "rely on algorithms to tell us which voices matter, which stories are important, and what deserves our attention" (p. 85). If you allow machines and the people who finance them to own your choices, "Who you are is who the machines think you are, which is also who they want you to be" (p. 91).

Resist machine drift by:

- "Taking an inventory of your own preferences," not what algorithms tell you to like (p. 94).
- Implementing "human hour" every day to spend an hour away from all screens (p. 94).
- Revaluating and setting your "own tempos, a lifestyle with slightly more friction and autonomy can be gratifying" (p. 95).

3. DEMOTE YOUR DEVICES

"Take an honest, searching look at the relationship you have to your devices, and ask yourself the question, **Who's really in charge here?**" (p. 102). Our phones and devices keep us constantly stimulated and "deprive us of the opportunity to be bored, to let our minds wander, to cross-pollinate ideas, and get lost in our imaginations – experiences that are central to our humanity" (p. 113).

Benefits of less device use include better sleep, less anxiety, greater productivity, more energy, more conscious appreciation for technology, higher perceptivity, and time and space to discover new hobbies, which encourage others to do the same.

4. LEAVE HANDPRINTS

Rather than trying to beat machines, try "refusing to compete on the machines' terms and focusing instead on leaving our own, distinctively human mark on the things we're creating" (p. 121). As technology becomes more accessible, human work is valued higher, so "a better indicator of luxury is how little technology is involved in producing the things you consume" (p. 123).

"The more obvious the human effort behind something, the higher its perceived value" (p. 124-125). Strategies to leave handprints include making invisible work visible, putting in the effort that is strictly unnecessary, making it unique, displaying high impact gestures, and focusing on experience over product.

5. DON'T BE AN ENDPOINT

Human endpoints are "people whose jobs mainly consist of taking directions from a machine or serving as a bridge between two or more incompatible machines" (p. 133). "If you find yourself working with, or under the direction of, a smart software system, it's probably a pretty good bet that – whether you're aware of it or not – you are also training the software to ultimately replace you" (p. 135).

"People who have regular, in-person contact with their colleagues have an advantage when it comes to doing the kinds of deeply human work we will need to do in the future" (pp. 138-139). It's harder to display human-focused work when you don't have this contact. In fact, "remote workers are already halfway automated" (p. 140). If you are in an endpoint job, start looking for new work or We know that "humans are much better than AI at work that involves unusual combinations of skills, high-stakes situations, or extraordinary talent," especially combining and transferring knowledge into new fields.

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suggest changes to your position to give yourself more control.

6. TREAT AI LIKE A CHIMP ARMY

"Today most AI is similar to an army of chimps. It's smart but not as smart as humans. It can follow directions if it has been properly trained and supervised, but it can be erratic and destructive if it hasn't" (p. 149). AI can cause serious issues when deployed too soon or with too broad a scope.

"Flawed AI often disproportionately impacts marginalized people, because the data used to train the algorithms is often drawn from historical sources that reflect their own patterns of bias" (p. 151). Company leaders utilizing AI should remember that "human decision-makers, not bots, will bear the consequences of a flawed or premature AI deployment" (p. 156).

7. BUILD BIG NETS AND SMALL WEBS

Looking at cities that have succeeded in times of technological change shows us we need to be prepared on an individual and community level.

"Big nets are the large-scale programs and policies that soften the blow of sudden unemployment shocks" (p. 159).

"Small webs [are] the informal, local networks that support us during times of hardship" (p. 159).

8. LEARN MACHINE-AGE HUMANITIES

Machine-age humanities are "essential skills for the future." They include "practical skills that I think can help everyone – from young kids to adults – maximize their advantages over machines" (p. 167). Examples of these practice skills include the following.

Attention Guarding is "the ability to direct one's own attention" and resist technologies' attempts to divert it (p. 167). Strengthen this ability through meditation, prayer, breathing exercises, outdoor walks, and reading physical books.

Room Reading is "the kind of delicate social maneuvering that requires a high level of emotional intelligence" (p. 169).

Resting "helps prevent burnout and exhaustion, allows us to step back and look at the bigger picture" (p. 171).

Digital Discernment comes from "learning to navigate our way through a hazy, muddled online information ecosystem" (p. 173). "In this upside-down, epistemically confused environment, being able to tell fact from fiction will be a human superpower" (p. 175).

Analog Ethics are "the elementary, preliterate skills of treating other people well, acting ethically, and behaving in prosocial ways" (p. 175).

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Consequentialism, in this case, means "thinking about the downstream consequences of Al and machine learning and understanding the effects these systems are likely to have when they're unleashed into society" (p. 177).

9. ARM THE REBELS

"We have a moral duty to fight for people, rather than simply fighting against machines" (p. 183). "Those who simply oppose technology, without offering a vision of how it could be made better and more equitable, generally lose" (pp. 183-184).

It will be a "fight to shape today's technological landscape" to be human-enabling and not overpowering (p. 186).

Roose, K. (2021). Futureproof: 9 Rules for Humans in the Age of Automation. New York: Random House.



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