



Clear-Sighted Career Online Learning Series

Finding Meaningful Work in an Automated World

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1. Automation Defined
 2. Automation Anxiety: Roots & Results
 3. Reality Check
 4. Strategies for Meaningful Work
 5. Resources
-

Meet Our Expert



**Associate Director & Concurrent Assistant Teaching
Professor**

What is Automation? Robots? Artificial Intelligence?

Automation is the use of technology to perform a task or process, either partly or wholly independent of human oversight and intervention.

Some of the phenomena driving our current automation boom are big data analytics, the internet of things (IoT) and technologies related to artificial intelligence (AI), such as natural language processing (NLP) and machine learning (ML).

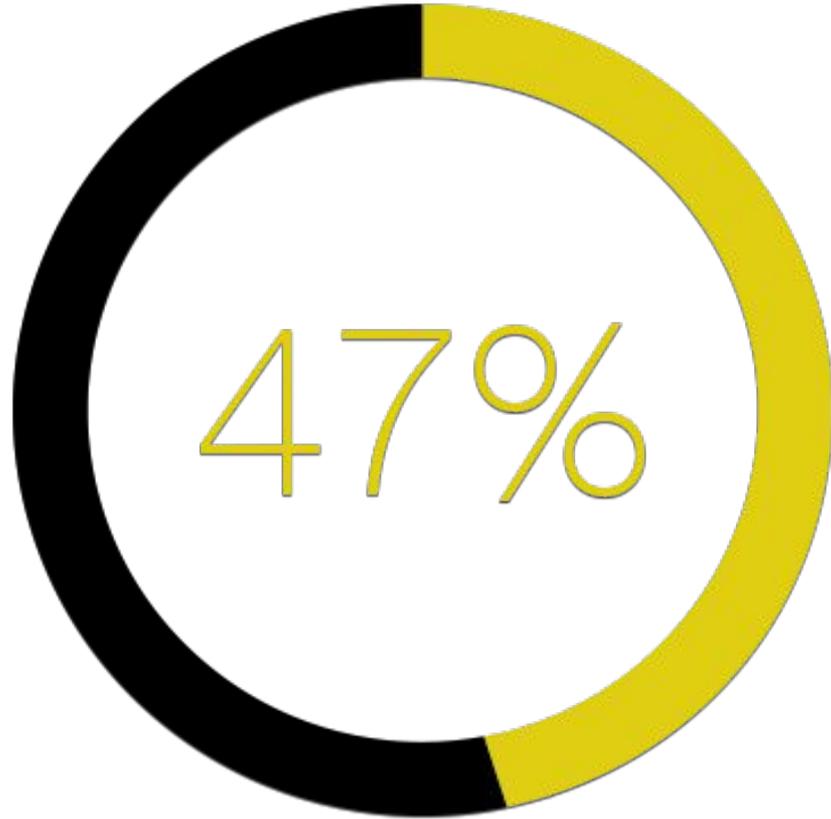
Especially when combined with robotics, these technologies can form complete autonomous systems — such as autonomous vehicles, for example.

Automation Anxiety



**What fuels your anxiety
about the future of work?**

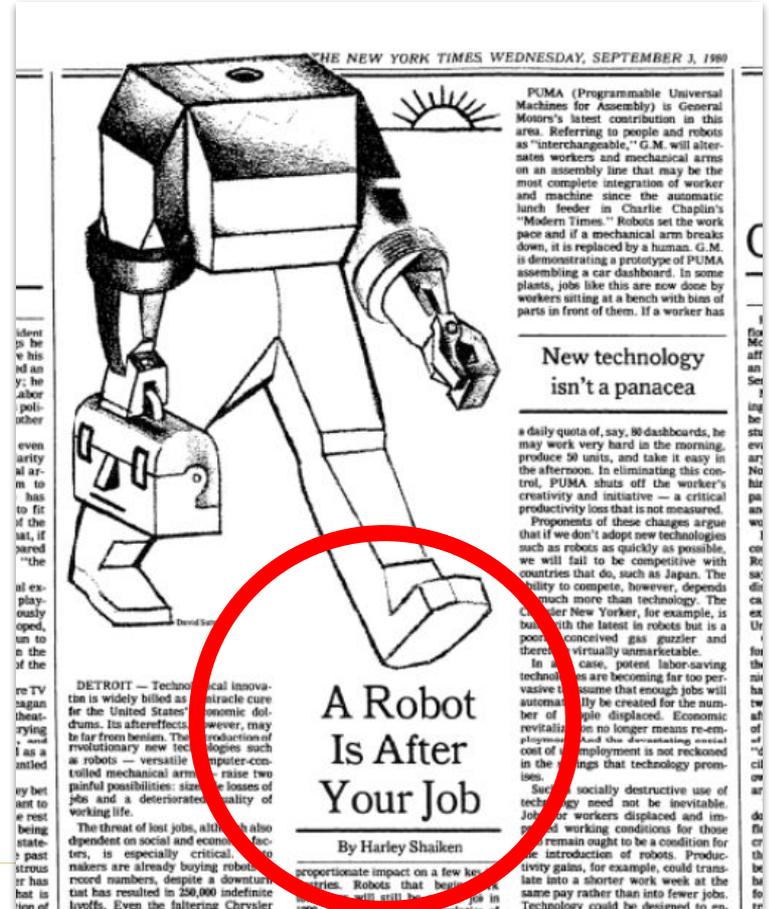
REALITY CHECK



A study by the University of Oxford predicts that 47% of U.S. jobs are at risk of being replaced by robots and artificial intelligence over the next 15-20 years.

Automation Anxiety

We've been here before.



THE NEW YORK TIMES WEDNESDAY, SEPTEMBER 3, 1980

PUMA (Programmable Universal Machines for Assembly) is General Motors' latest contribution in this area. Referring to people and robots as "interchangeable," G.M. will alter-
nate workers and mechanical arms on an assembly line that may be the most complete integration of worker and machine since the automatic lunch feeder in Charlie Chaplin's "Modern Times." Robots set the work pace and if a mechanical arm breaks down, it is replaced by a human. G.M. is demonstrating a prototype of PUMA assembling a car dashboard. In some plants, jobs like this are now done by workers sitting at a bench with bins of parts in front of them. If a worker has

New technology isn't a panacea

a daily quota of, say, 80 dashboards, he may work very hard in the morning, produce 50 units, and take it easy in the afternoon. In eliminating this control, PUMA shuts off the worker's creativity and initiative — a critical productivity loss that is not measured.

Proponents of these changes argue that if we don't adopt new technologies such as robots as quickly as possible, we will fail to be competitive with countries that do, such as Japan. The

In any case, potent labor-saving technologies are becoming far too pervasive to assume that enough jobs will automatically be created for the number of people displaced. Economic revitalization is no longer means re-employment. And the devastating social cost of unemployment is not reckoned in the savings that technology promises.

Such socially destructive use of technology need not be inevitable. Jobs for workers displaced and improved working conditions for those who remain ought to be a condition for the introduction of robots. Productivity gains, for example, could translate into a shorter work week at the same pay rather than into fewer jobs. Technologists could be desisted to ex-

A Robot Is After Your Job

By Harley Shaiken

DETROIT — Technological innovation is widely hailed as the miracle cure for the United States' economic doldrums. Its aftereffects, however, may be far from benign. The production of revolutionary new technologies such as robots — versatile, computer-controlled mechanical arms — raise two painful possibilities: sizeable losses of jobs and a deteriorated quality of working life.

The threat of lost jobs, although also dependent on social and economic factors, is especially critical. Auto makers are already buying robots in record numbers, despite a downturn that has resulted in 250,000 indefinite layoffs. Even the faltering Chrysler

Automation Anxiety



VS



Blockbuster, which once employed 60,000 people, could not compete with Netflix, a start-up with 30 employees. It has around 7,000 employees today.



1997

THINK



Who is Stoker?
(FOR ONE WELCOME OUR
NEW COMPUTER OVERLORDS)

2011

NETFLIX

ALPHAGO

2016



#think2019

2019



White Collar Jobs at Risk



- Journalists
 - Travel agents
 - Bankers
 - Insurance salespeople
 - Lawyers
 - Doctors
 - Even artists!
 - And movie producers!
-

Anxiety causes us to “downshift” into self-protective behaviors.

It makes us lose our ability to be creative, innovative, and insightful.

It causes us to frame problems too narrowly.

Then we only discover narrow solutions.

**Meaningful work isn't an outcome.
It is a strategy.**



**Mindset: Approach
your job as a calling.**

**Humans are not job seekers.
We are natural “job crafters.”**

SUBSCRIBE

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OPINION

Watson Doesn't Know It Won on 'Jeopardy!'

IBM invented an ingenious program—not a computer that can think.

By John Searle

Updated Feb. 23, 2011 12:01 a.m. ET

 SHARE  TEXT

The recent victory of an IBM computer named Watson over human contestants on the TV show “Jeopardy!” has produced a flood of commentaries to the effect that computer understanding now equals—or perhaps even exceeds—human understanding. Thinking computers, at last.

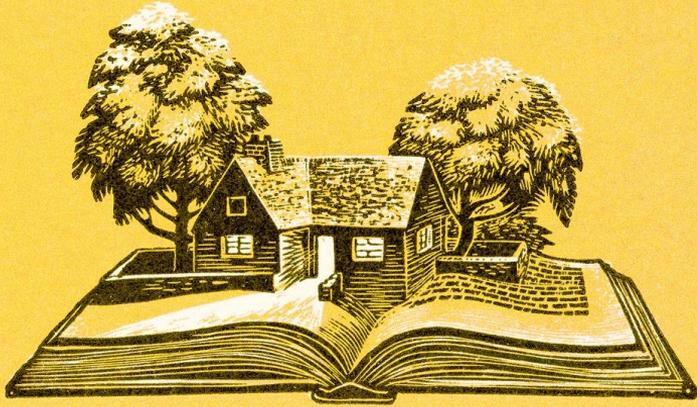
But this interpretation rests on a profound misunderstanding of what a computer is, how it works, and how it differs from a human brain.

“Working is about the search for daily meaning as well as daily bread, for recognition as well as cash, for astonishment rather than torpor; in short, for a sort of life rather than a Monday through Friday sort of dying.”

—Studs Terkel



Strategies for Meaningful Work



Know your story.

(Not just your brand or profession.)



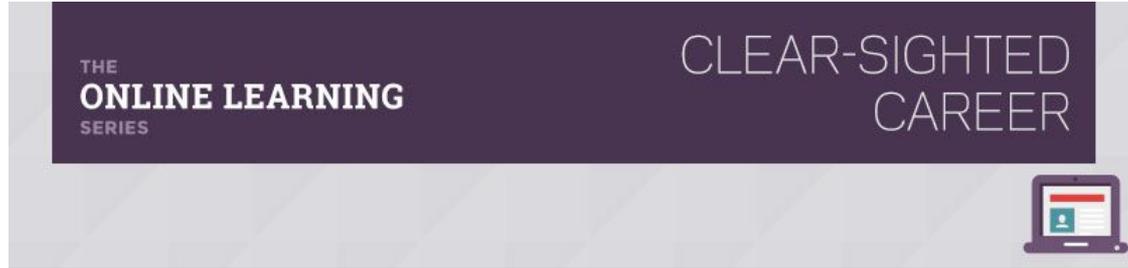
**Skillset: Embrace
continuous learning.**

Which skills?



Be a T-shaped person.

Lifelong learning



**You control your
learning portfolio.**

Strategies for Meaningful Work



Think outside the job.

The rise of “superjobs”

From Deloitte’s Human Capital Trends 2019:

Standard jobs: Roles that perform work using a specified and narrow skill set. Generally organized around repeatable tasks and standard processes.

Hybrid jobs: Roles that perform work using a combination of skill sets drawing on both technical and soft skills. Historically, these types of skills have not been combined in the same job.

Superjobs: Roles that combine work and responsibilities from multiple traditional jobs, using technology to both augment and broaden the scope of the work performed and involve a more complex set of domain, technical, and human skills.

The New York Times

PREOCCUPATIONS

Instead of Leaving a Job, Why Not Take a Pause?



FAST COMPANY

CO.DESIGN

TECH

WORK LIFE

CREATIVITY

IMPACT

AUDIO

VIDEO

NEWS



Fast Company Compass Sign up for our daily email.

Enter your email address

01.15.19 | FUTURE OF PHILANTHROPY

Google's new employee perk: paid sabbaticals to work for nonprofits

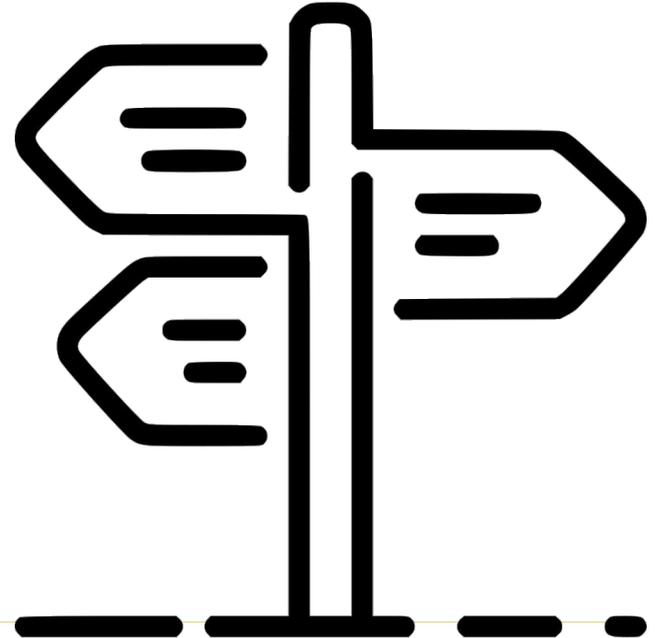
Google.org Fellowships will let employees take a break from their day job to work on projects for good.



Final Thoughts

**We cannot predict the future of work,
but we know the major factors:**

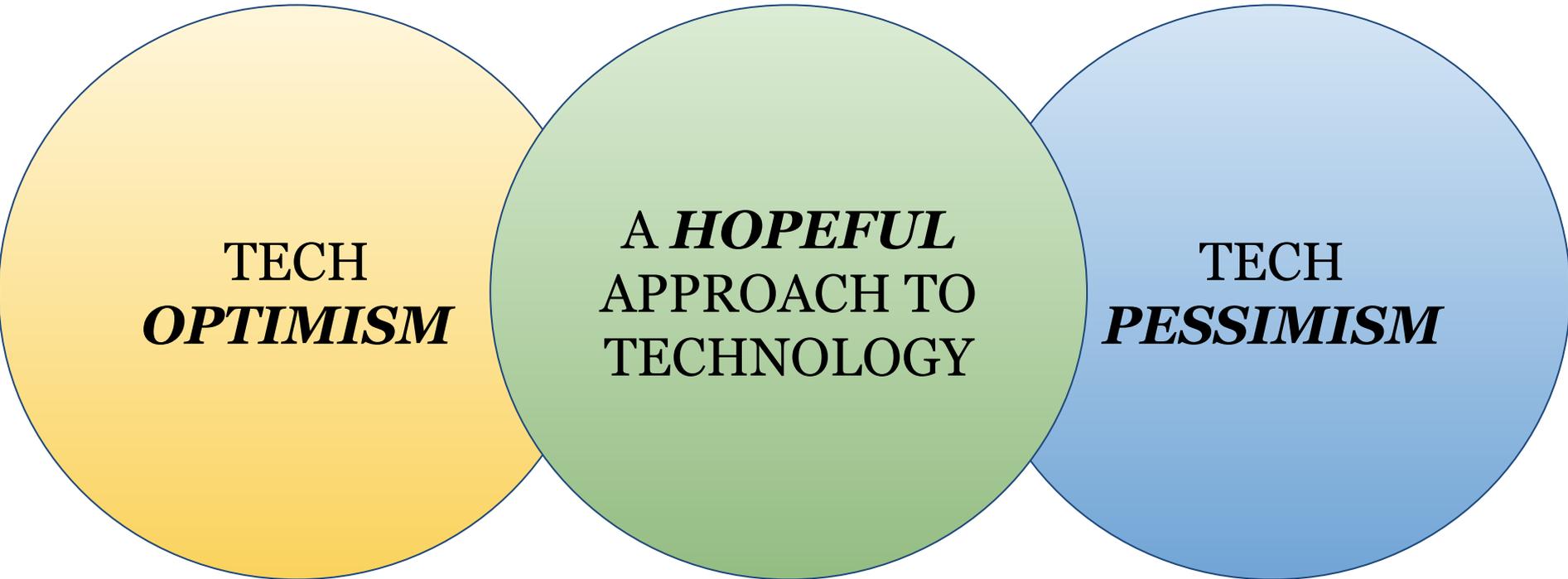
- Innovation
- Learning
- Mobility / Access



New jobs will be created. And jobs with some features do seem very safe:

- Those that require soft skills (empathy, problem solving, adaptability, creativity, persuasion, etc).
 - “High context” jobs (inputs and outputs are hard to define).
 - Those that demand high accuracy and transparency (or “explainability”) about choices.
-

Summary

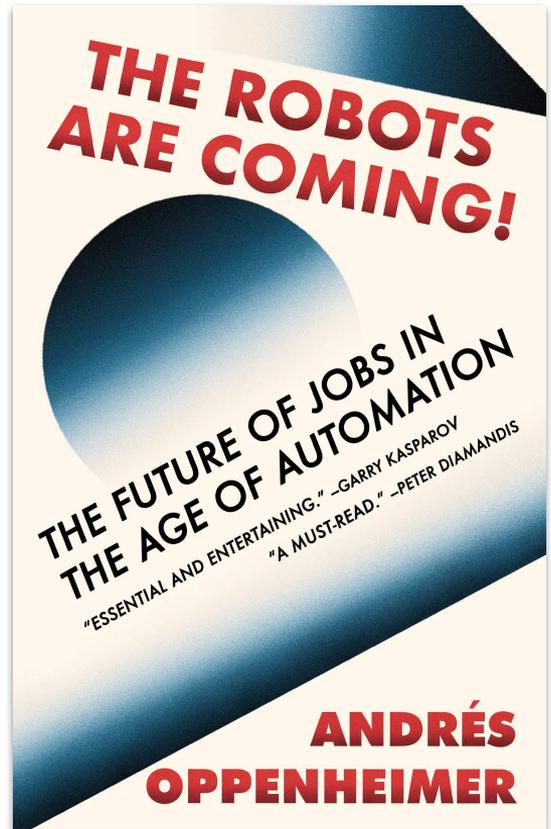
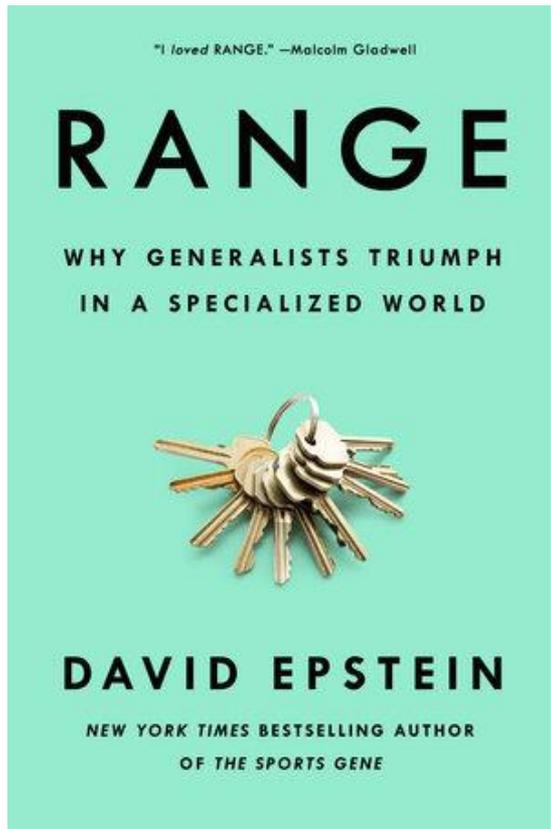


TECH
OPTIMISM

A HOPEFUL
APPROACH TO
TECHNOLOGY

TECH
PESSIMISM

Resources



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