

Technology and the future of work

Montana legislature

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FACTTANK 

NEWS IN THE NUMBERS

**Megatrends in tech:
After the pandemic, a ‘tele-
everything’ world that could help
Montana**

Next revolutions

Internet of Things, Dataverse, Virtual Reality, Augmented Reality and Intelligence, Self-propelling stuff

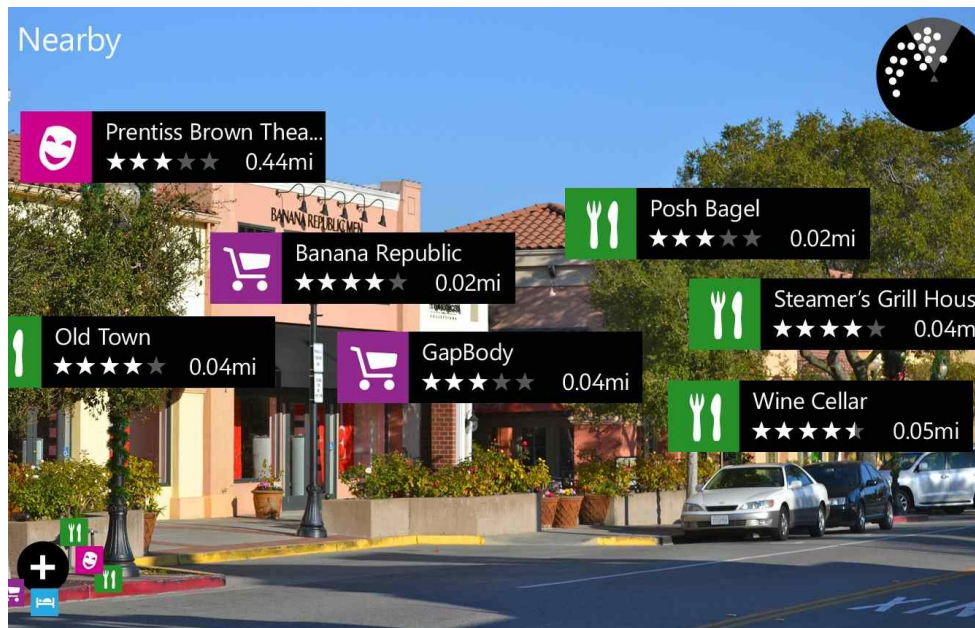


The internet will become 'like electricity' — less visible, yet more deeply embedded in people's lives for good and ill

There will be a global, immersive, ambient networked computing environment built through the continued proliferation of smart sensors/dust, cameras, software, databases, and massive data centers.



There will be real and virtual enhancements to much of human activity, including cognition. Artificial intelligence and algorithms will be ubiquitous, and people will exploit it through the use of portable / wearable / implantable technologies and autonomous tools like drones and driverless vehicles.



Social and business encounters will be shaped by virtual reality and telepresence and personal enhancements/extensions like holograms. Interfaces with data and objects will change and become easier. Speech/gesture interaction will matter more. Rich, immersive experiences will proliferate



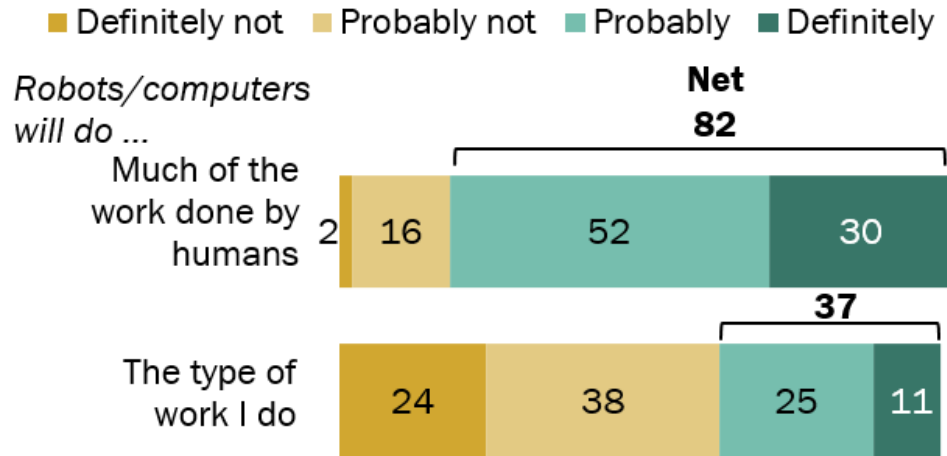
The timeframe estimated by artificial intelligence experts when **“high level machine intelligence”** will be developed allowing unaided machines to accomplish fundamental human tasks **better and more cheaply** than humans ...

32 “milestones” (352 respondents from AI community)

- **2024: outperform language translators**
 - **2027: drive a truck**
 - **2031: work in retail**
 - **2049: write best-selling book**
 - **2053: work as a surgeon**
- **2096: work as a high-level machine intelligence (AI) creator**

Public says robots will take over much of the work done by humans, but most workers don't think it will affect their own type of work

% saying, within the next 30 years, each of the following will ___ happen



AI and humans – the big sort

Areas where machines best humans

Repetitive/predictive tasks

Tasks that hinge on computational power

Classifying huge amounts of data and inputs

Making decisions based on concrete rules

Areas where humans best machines

Experiencing authentic emotions and building relationships

Formulating questions and explanations across scales and sources

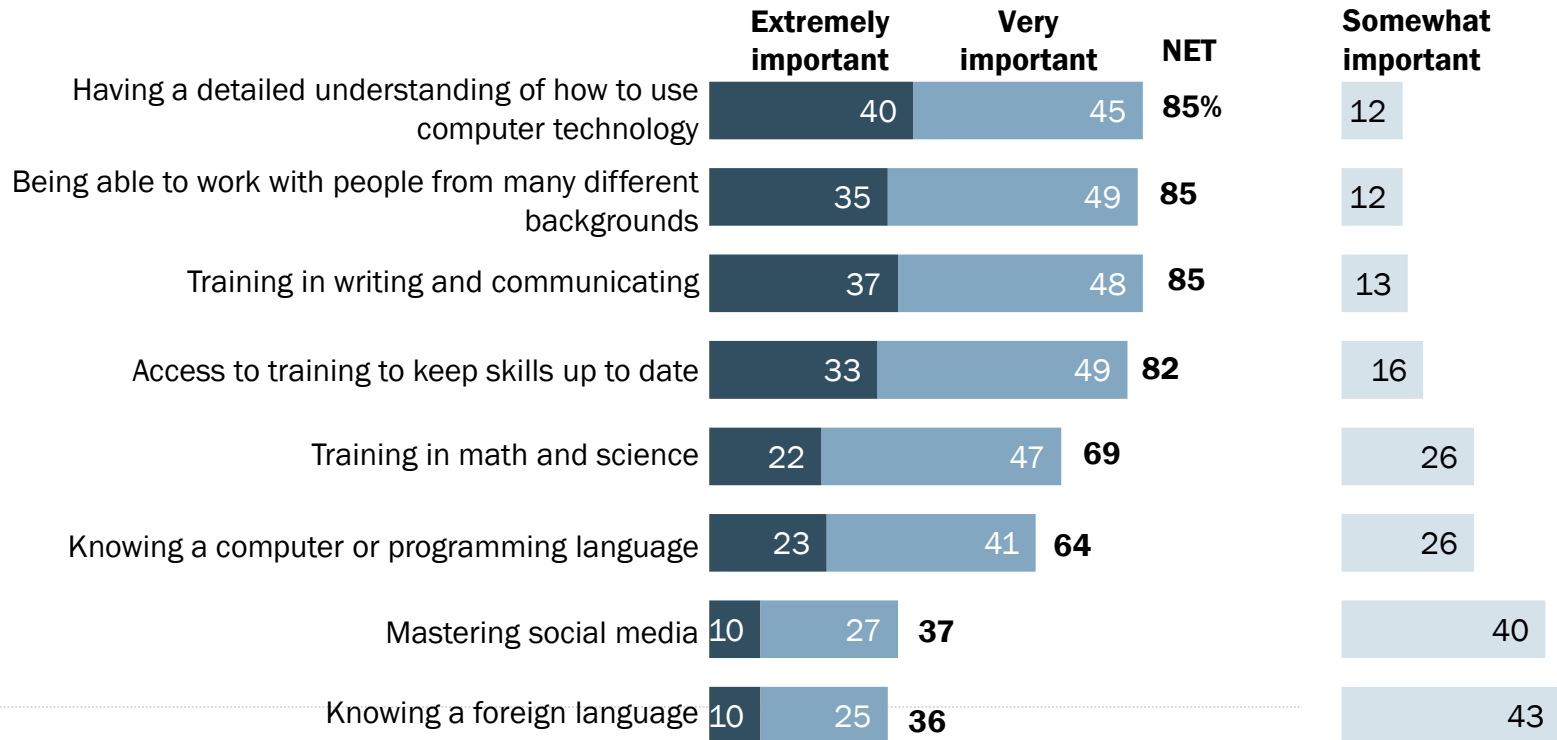
Deciding how to use limited resources across dimensions strategically (including tasks machines should be doing and what data to give them)

Making products and results usable for humans and communicating about them

Making decisions according to abstract rules

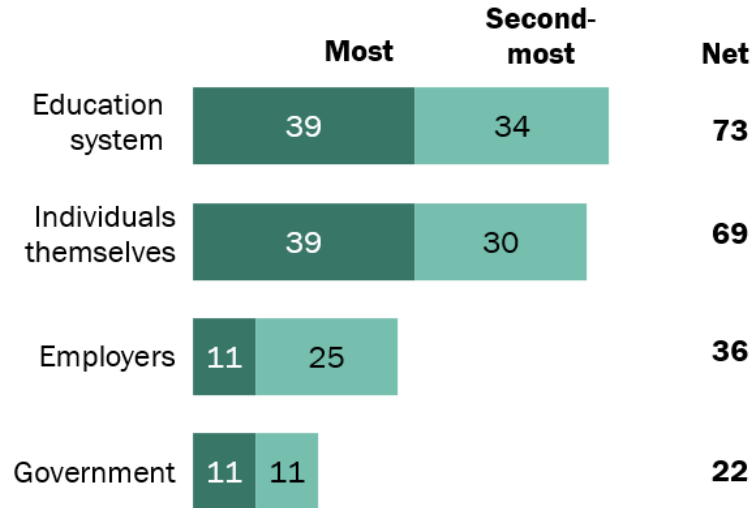
People think knowledge of computers, social dexterity, communications skills and access to training are key to success

% saying these traits are ...for workers to be successful in today's economy



Most Americans say workers should rely on the education system and themselves for skills and training

% saying, over the next 30 years, each should be most/second-most responsible for making sure American workers have the right skills and training to get a good job



In the next 10 years, do you think we will see the emergence of new educational and training programs that can successfully train large numbers of workers in the skills they will need to perform the jobs of the future?



70% - “yes”

30% - “no”

Themes

- We will adapt to these changes by inventing entirely new types of work, and by taking advantage of uniquely human capabilities
- Technology will free us from day-to-day drudgery, and allow us to define our relationship with “work” in a more positive and socially beneficial way
- The training ecosystem will evolve, with a mix of innovation in all education formats
- New credentialing systems will arise as self-directed learning expands

Sources on futurism insights

Experts Say the 'New Normal' in 2025 Will Be Far More Tech-Driven, Presenting More Big Challenges

<https://www.pewresearch.org/internet/2021/02/18/experts-say-the-new-normal-in-2025-will-be-far-more-tech-driven-presenting-more-big-challenges/>

The Future of Jobs and Jobs Training

<https://www.pewresearch.org/internet/2017/05/03/the-future-of-jobs-and-jobs-training/>

AI, Robotics and the Future of Jobs

<https://www.pewresearch.org/internet/2014/08/06/future-of-jobs/>

Experts Optimistic About the next 50 Years of Digital Life

<https://www.pewresearch.org/internet/2019/10/28/experts-optimistic-about-the-next-50-years-of-digital-life/>

The Internet of Things Connectivity Binge: What are the Implications?

<https://www.pewresearch.org/internet/2017/06/06/the-internet-of-things-connectivity-binge-what-are-the-implications/>

The Internet of Things Will Thrive by 2025

<https://www.pewresearch.org/internet/2014/05/14/internet-of-things/>

Code Dependent: Pros and Cons of the Algorithm Age

<https://www.pewresearch.org/internet/2017/02/08/code-dependent-pros-and-cons-of-the-algorithm-age/>

Many Tech Experts Say Digital Disruption Will Hurt Democracy

<https://www.pewresearch.org/internet/2020/02/21/many-tech-experts-say-digital-disruption-will-hurt-democracy/>

The Future of Truth and Misinformation Online

<https://www.pewresearch.org/internet/2017/10/19/the-future-of-truth-and-misinformation-online/>

Thank you!

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