ComputationWorld 2023 & NexComm 2023

Theme

A 360° View on AI: An Educated Take on Using AI-based Services for the Societal Wellbeing

AI Adoption: Between Fears, Regulations, and Positivism

Lecturer

Prof. Dr. Petre Dini, IARIA, USA/EU

- (partially) retired | (mostly) volunteering | enjoying (affordable) traveling

- Past topics: mathematics, VLSI, formal languages, protocol V&V, real-time embedded systems, nomadic code, active routing, software arch, (AT&T) IMS, (Cisco) IOS, Fault Mgr, Performance Mgr, …

- Academics: U de Montreal, Concordia U, McGill U, China Space Agency Center | (AT&T) Stanford, (Cisco) Berkeley, China Space Agency Center - Beijing | Cisco-IBM Coop Dir., AT&T-Cisco Coop. Dir.

- Industrial/research: CRIM (R&D), AT&T, Cisco Systems, Inc.

- Salient: About 15 US Cisco patents, (co)supervisor: 38 Master&PhD

- Current hobbies: self-x, systems/apps adaptation, conflicts in decision policies, crowd-in-the-middle, reflective architectures, new trends in software development (apps)

- Open: how can a piece of software can realize by itself (or by any other means) that a copy of that piece was (? illegally) made somewhere [see CLOUD]

- Still learning …from you!

- Yet, playing: 4 grandkids, my neighbors

#RoadMap

Roadmap

Motto:

Awareness (what) and Education (how) allow a balance between Trust and Educated Hesitation (Skepticism)

Trust means Test, Test means Trying it! Then, conclude on next steps!

Disclaimer:

Most text and photos are owned by those who posted them publicly; only the interpretation is mine

➢ **On AI Evolution (a personal experience and view)**

➢ **On AI-related Concerns**

➢ **On AI-related Ethics**

➢ **On AI Regulations**

➢ **On Existing AI-based services**

➢ **On Fear and Downsides of blind AI-adoption**

➢ **On AI-driven Job Market, Deskilling, and AI Fluency**

Knowledge and Information of any kind
----> ~ 99% undetected/not check-able false information (on purpose coalitions, or simple fake, or science fiction)
and
-----> ~1% fact-checked information
---- >>> any inference leads to biased, unproved, and unanimously (falsely) trusted facts/conclusions

Danger of too much pre-processing: of Data compression/fusion/pre-processing
Inquiry: How much data processing is enough (see 99.999% *service availability*)

ROI on Costs: Data Quality Assurance (profiling, cleansing, validation, auditing, etc.)

Lack of Academic Curricula and advanced **Education on AI-fluency**

Note: 99%, 1% is my pessimistic estimation.
You can cite me, as there is no proof either way!

99,999% was AT&T customer SLA agreement on service availability, by the year 2000

However, a tiny fraction (~ 7%) of Syslog messages were possible to be processed in the NOCs (Network Operation Centers)

For everybody's comfort

Humanity will not be replaced by artificial entities as
- There are no personalized memory(ies)
- There is no instant personalized thinking
- There is no visibility on any personal past activity
- There are no feeling of fear, emotions (eventually mimicking by instructions/learning)

Do not fear and do not have compassion on those thousands that regret fathering AI. Because, there were very few of them; most of the thousands vocal ones truly were not.

These two pictures: 2023 – March, Wilmington DE, MedExpress Lab Poster and Vitaly's input from the College of Healthcare Information Management Executives, April 1995, Canada triggered my initiative for documentation and for preparing this interactive tutorial.

Lessons learned

- *Technologies were developed in a silos with great success*
- *Last 40 year achievements allowed comprehensive results*
- *Awareness*
- *Education*
- *Societal services*

Panelist Position

VENICE
April 2023

• Why there are not much progress in Healthcare AI?

Vitaly Herasevich

1995

healthcare
INFORMATICS

USING ARTIFICIAL INTELLIGENCE TO PREDICT MYOCARDIAL INFARCTION

▪ **Evolution**

Illiteracy ---------> Education ----------> Digital

| |

Ks effort years   aloofness, burden,

now ------------------> AI/digital

|

societal major changes

Evolution-without-AI

Real problems: Food, Water, Illnesses, Education, …

Evolution-with-AI (surviving or flourishing?)

▪ **To consider**

Ethics
ROI
Explainability
Awareness
Education
Accessibility

▪ **To consider**

Defamation
Election Intrusion
Justice Influence
Discrimination
Digital impersonation
Human impersonation

▪ **GAI: Analytics (TV channel-by-request)**

-----------------> two years ago -------------> now

--> real-time facts

----------------->   past facts/information
      known
      visible
      accessible
  ? validated/trust-able, fake, obsolete,
      incomplete, noisy, …

> Uncontrolled statements
> Massive instant misinformation spreading

▪ **DANGER**

Lack of National and International Legislation
National Security Interests and Hegemony
Corporate Business Interests and Stakeholders expectations
Emerging Technology (with unintended side-effects)

AI between Hype and Reality

- **My perception** (based on **AI** history: from being banned until now, with valleys)

  AI as a Marketing Tool

  AI for Societal wellbeing services

- **Triggers for AI-reviving**

  Technologies advances
  Inter-countries competition: citizen surveyance and profile records, then arms, fight tactics, ….

  ! not much in the interests of humanity.

- **Emerging society services**

Generative AI (GAI) (processing: text, pictures, audio, …)

> Summarization, surveys, statistics, general reports; no measurements, no innovation, no link to reality, no interpretation, no feedback
> GAI tools generate new content based on a variety of inputs. Inputs and outputs to these models can include text, images, sounds, animation, 3D models, or other types of data.
> There is no validation of data, there is no corrective feedback, there is no guarantee, …. (user awareness)

Traditional AI (patterns, decisions, real systems, cognitive processing, brain-like mimicking, .. brain substitution, cohabitation, etc.)

ANI
AGI
ASI

For AI fluency

Generative AI produces new content, chat responses, designs, synthetic data or deepfakes (LLM, ChatGTP, Bard, etc.)

It does not always identify the source of content.
It can be challenging to assess the bias of original sources.
Realistic-sounding content makes it harder to identify inaccurate information.
It can be difficult to understand how to tune for new circumstances.
Results can gloss over bias, prejudice and hatred.

Traditional AI, on the other hand, has focused on detecting patterns, making decisions, honing analytics, classifying data and detecting fraud.

The stages of AI (ANI, AGI, ASI)

ANI - Artificial Narrow Intelligence, or ANI, is the simplest form of AI, but also one of the most common types of machine learning in the daily lives of individuals across the world. Narrow intelligence machines are based on a learning algorithm that is designed to complete one singular task successfully and will not store information to complete different tasks. Tasks where narrow intelligence generally succeeds include language translation and image recognition. Products such as Apple's Siri and Amazon's Alexa are examples of ANI.

AGI   Artificial General Intelligence, or AGI, describes a form of machine learning that simulates human cognitive systems by completing different takes. This form of AI is able to store information while completing and use that data to perfect its performance in future tasks. However, AGI is only a hypothetical form of AI and has not yet been invented. The ultimate goal of AGI would be to surpass human capabilities in completing complex tasks.

ASI - Artificial Super Intelligence is another example of AI that has not yet been invented but is rather a concept that describes the most advanced form of machine learning. ASI is a concept that envisions a future in which computer programs will be able to simulate human thought and evolve beyond human cognitive abilities. This stage of AI is considered science fiction, but could be possible decades from now, depending on how advance AI becomes. 8

A little history

Multivariate Dataset introduced by Ronald Fisher (**1936**).

The first artificial neuron was the Threshold Logic Unit (TLU), or Linear Threshold Unit, first proposed by Warren McCulloch and Walter Pitts in **1943**

Neural networks were first proposed in **1944** by Warren McCullough and Walter Pitts - University of Chicago (then, MIT)

The concept of Deep learning has been around since the **1950**s.

The earliest successful AI program was written in **1951** by Christopher Strachey, University of Oxford.

Strachey's checkers (draughts) program ran on the Ferranti Mark I computer at the University of Manchester, England.

The Dartmouth Summer Research Project on Artificial Intelligence, **1956** summer workshop - considered to be the founding event of AI

Generative AI was introduced in the 1960s in chatbots

Convolutional neural networks, also called ConvNets, were first introduced in **the 1980s** by Yann LeCun

AI ups&downs (~ '90-'2Ks. Expert Systems failing highly-set expectations) {smart systems, cognitive systems, autonomous systems, etc,….)

Petre: Applied Traditional AI

Petre: **1990**: ASME, Greensboro, Fuzzy-based resource allocation, Automatic Knowledge Incorporation, CAD/CAM Expert Systems
            Space/time thinking and processing, Multi-layers context-based meaning

Petre: **1992**: The First ITC Conference (Montreal), tutoring systems, self-adaptable Q&A professor-student systems (advanced Chatbots)

Petre: **1997** Dartmouth, Mobile Intelligent Agents (grasshopping pooling entities)

Petre: **1997-2000**: Nomadic code, Mobile agents, (Grasshopper EU project)

Petre: **2000-2010** : Autonomous systems, Policy-driven systems (Patents, ITU, TMF)
      Capturing emerging properties, Variable pooling frequency, Self-adaptable decision polices, Reflexive-policies (Digital-Twins)
      Routers embedded-AI (temporal logic in Syslog processing)
      AI-driven Selection of Content Servers based on Current Server Availability

- **More History**: Expert Systems, Rule-based, Policy-based, A*, Prolog, Lisp, Tutoring Systems, VLDB, Chess games, *The Fifth Generation Computer Systems (FGCS) was a 10-year initiative begun in 1982*

- **Current challenge**: Data (10+V), Quick processing, Very high communication speed, Huge storage capacity.

- **Advances**: Internet, Web, Content providers (individual, corporate), duplication, redundancy, content business models (Facebook, Instagram)

- **Tendency and skills**: people agility, awareness, digitization, miniaturization, ... digital acceptance

- **Now:**
  Deep Learning/Machine Learning (all variants), Data sets: accuracy, granularity, precision, false/true negative/positive
  The true positive rate (TPR, also called **sensitivity**) is calculated as TP/TP+FN. TPR is the probability that an actual positive will test positive.
  The true negative rate (also called **specificity**), which is the probability that an actual negative will test negative. It is calculated as TN/TN+FP.

- **Datasets**/Machine Learning/Neuronal Networks

  Note:

  There are details on the way from **A*** to optimize, e.g., the **cross-entropy loss** during the training process for Machine Learning (for classification and verifying the precision of predictions), but the essence is captured by 'recognizing, integrating, and properly using via an explainable thinking process a piece of knowledge'.

- **Achievements and things impossible-to-happen** (as of June 26, '23)

- In-context situation patterns (dues to massive data and considering large time span)

- Doubts on Temporal aspects (especially as human perception of time varies)

- Lack of access to personalized information (individual brains, personal memories, personal thoughts).

- Lack of considered private (even shared) information (private discussions, private experiences)

- Lack of access to non-visible information.

- Lack of 'learning for real experiments'.

- Lack of testing when in doubts (see: all resistors are green)

- Results: some of arts, narratives, and music pieces (some might even make sense)

- Same goes for Abstracts, surveys, etc. (collections of existing true/fake, facts/impostures, ….!)

Yet failing: Log (-3) = Log x => x = - 3 | One cannot longer trust solutions with quadruple integrals

- **Fearing: Partisan politics (from various interests, misleading the citizens)**

ChatGTP confession: Global warming? Not much since 2016

- Junk Science's Steve Milloy published his combative exchange with the AI chatbot
  https://www.foxnews.com/media/chatgtp-confession-global-warming-much-since-2016

- He was debunked point-by-point in the same manner (with: "I am the one being right, not you!")
  https://eelegal.org/fake-news-melts-down-over-milloys-13-million-view-tweet-pointing-out-the-co2-hoax/

- **? Legal and liability issues** **[Lack of any legislation than can be enforced!]**

Education
Copyright infringements
Plagiarism and self-plagiarism
Ownership infringement
No verifiable references
Hidden self-references

Society
Defamation
Spreading fake news
Information distortion (unintended and/or on purpose)
Legit justification for on purpose wrong-doing
Government/Agencies/Corporations (justifiable) decisions
Hidden personal/corporation interests (**AI dixit!**)

USA: **White House** announces plan for 'responsible' AI use, VP Harris to meet with tech executives
The plan includes $140 million in federal funding to launch seven new artificial intelligence research institutes
https://www.foxbusiness.com/politics/white-house-announces-responsible-ai-plan

Politics

13 hours ago
White House announces plan for 'responsible' AI use, VP Harris meets with tech executives

13 hours ago
House Speaker Kevin McCarthy takes Congress back to school on AI

13 hours ago
Musk on AI regulation: 'It's not fun to be regulated' but artificial intelligence may need it

13 hours ago
Meet the 72-year-old congressman going back to college to learn about AI

https://www.foxbusiness.com/technology/should-ai-development-require-license-chatgpts-creator-thinks-so-experts-disagree
Should AI development require a license? ChatGPT's creator thinks so, but some experts disagree
OpenAI CEO Sam Altman received pushback after asking Congress for steep regulations on advanced AI
OpenAI chief executive Sam Altman suggested to Congress this week that **lawmakers should require companies to obtain a federal license** prior to
developing advanced artificial intelligence technology like his organization's ChatGPT.
"We think that regulatory intervention by governments will be critical to mitigate the risks of increasingly powerful models," Altman said in his testimony
before the Senate Judiciary Subcommittee on Privacy, Technology, and the Law.

Misinformation machines?

AI chatbots can spew falsehoods, even accuse people of crimes they never committed

'Poses risks to fundamental rights and even the physical safety of our country's citizens,' legal expert says

https://www.foxnews.com/media/misinformation-machines-ai-chatbots-spew-falsehoods-even-accuse-people-crimes-never-committed

MISINFORMATION MACHINES

13 hours ago

AI chatbots can spew falsehoods, even accuse people of crimes they never committed

> A slew of instances involving false charges of crime or wrongdoing spotlight the potential of legal woes ahead.

> They come at a time in which even the world's top tech titans appear confused about some aspects of how artificial intelligence works or its potential pitfalls — and why, despite boasts of intelligence, AI appears easily prone to terrible mistakes.

> Artificial intelligence has been cited by tech leaders such as Mark Zuckerberg of Meta for its ability to uncover fake stories online.

> Conversely, AI can be used to generate clever, highly believable fake stories, too.

> "In many respects, it [an AI generative tool] doesn't have any way to tell the difference between true and false information," Joan Donovan, research director of the Shorenstein Center on Media, Politics and Public Policy at the Harvard Kennedy School, told the Bulletin of Atomic Scientists last week.

> "That's what a human does. It does all those things: It reads, it collates, it sorts ... by trying to understand what it is about a subject that's important to the audience."

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Ethics (from singular cases to general situation)

(i) Australian Professor: It's believed it would be the first defamation suit against the artificial intelligence service.
"In many respects, it [an AI generative tool] doesn't have any way to tell the difference between true and false information." — Joan Donovan, Harvard Kennedy School
(ii) Student homework: Artificial intelligence, meanwhile, is already stirring up ethics concerns and false allegations of cheating on at least one college campus.
e.g., William Quarterman, a student of the University of California Davis, was shocked to find that a professor flagged him for cheating after using an AI program called GPTZero, according to a report last week in USA Today.

AI and disinformation: German magazine admits Michael ...

YouTube · FRANCE 24 English
1 month ago

6:22

DANGER! : There is no appropriate legislation

As in all contexts: We just need the ability and the authority to stop the bad actors. - anonymous -
The problem is with that "**we**".

Main lesson learned when using AI-based tools: For safety, select what areas/interests are less invasive and less critical.

**Sam Altman: CEO of OpenAI calls for US to regulate artificial intelligence
https://www.bbc.com/news/world-us-canada-65616866**

ChatGPT boss urges US Congress to regulate AI
| US

On Regulations: (CALL for government regulations)

> Sam Altman, the CEO of OpenAI, the company behind ChatGPT, testified before a US Senate committee on Tuesday about the possibilities - and pitfalls - of the new technology.

> In a matter of months, several AI models have entered the market.
>
> Mr Altman said a new agency should be formed to license AI companies.

> Mr Altman told legislators he was worried about the potential impact on democracy, and how AI could be used to send targeted misinformation during elections.

> He gave several suggestions for how a new agency in the US could regulate the industry - including giving out and taking away permits for AI companies.

> He also said firms like OpenAI should be independently audited.

> What was clear from the testimony is that there is bi-partisan support for a new body to regulate the industry.

> However, the technology is moving so fast that legislators also wondered whether such an agency would be capable of keeping up.

On Regulations: Worldwide (read: steep regulations)

ChatGPT creator thinks AI development **should require a license but experts** aren't buying it

a. Regulation should take effect above a capability threshold.
   A combination **of licensing and testing requirements** for development and release of AR [autoregressive] models above a threshold of capabilities."

b. A lot of big companies that have the ability to comply with an AI licensing regime. Therefore this will stall the sort of progress that you would want to see in decentralized innovation

c. AI vs Internet:
   "There's a lot of folks trying to compare this to the early days of the Internet, and Congress feels like they didn't get ahead of the internet," he said. "But that's why the internet has been a success story, because it wasn't smothered in the cradle by regulation, and I would hate to see that happen to AI as well."

#1 TIME, EXPERTS, BUDGET We might not have much faith in governments building proper regulations around AI or even licensing requirements because it **would take AI experts with deep knowledge, years to build a framework** (when he expects the tech to be "infinitely more powerful" within a matter of months), and **enforcement would be "tremendously difficult." (ITU, …)**

#2 VARIATY of MODELS "In reality, the problem isn't going to come from OpenAI or Google, **the problems are going to come from the massive amounts of open source models** that you can get access to that can be run anywhere – that can be run in any cloud, that can be run on any server, **that can be used for everything from political targeting, to spam, to fraud, to disinformation.**
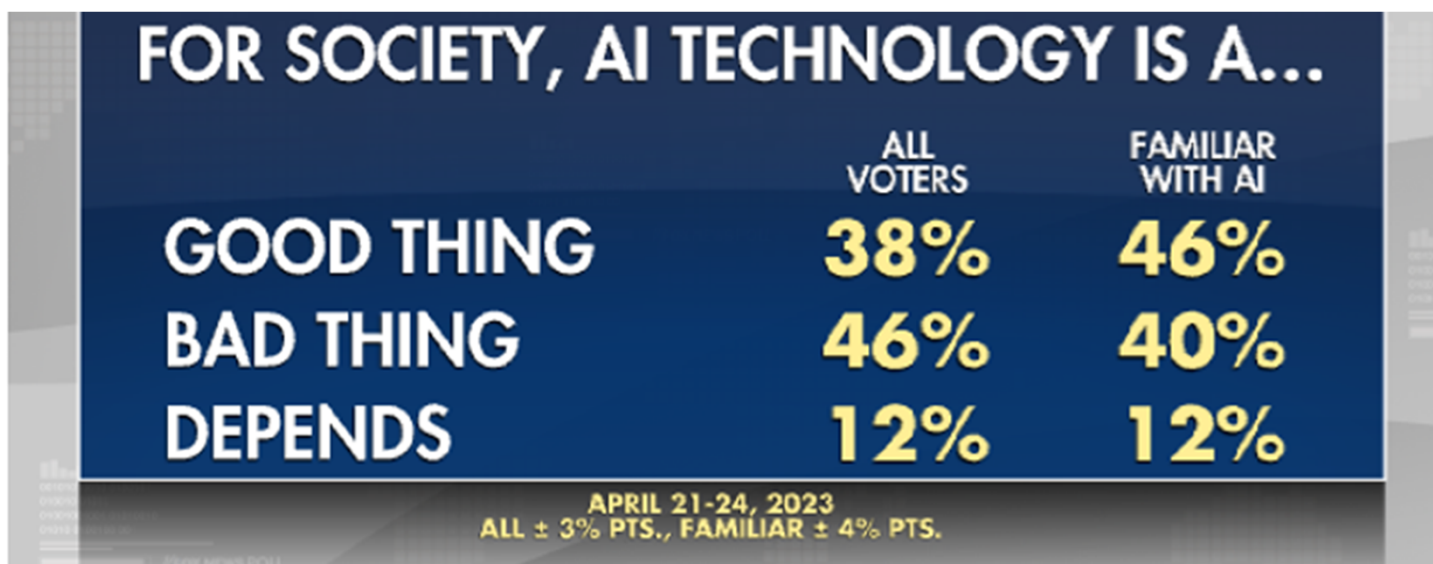
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On Regulations and Acceptance - USA

> "As a final point, **AI policing technologies must be explainable,** at least generally, in how decisions are reached," the NC State study said.

> "**Law enforcement professionals should**, at a minimum, have a broad understanding of the AI technologies used in their jurisdictions and the criminal justice system as a whole. Procedural training for police officers who employ artificial intelligence technology."

FOR SOCIETY, AI TECHNOLOGY IS A...	ALL VOTERS	FAMILIAR WITH AI
GOOD THING	38%	46%
BAD THING	46%	40%
DEPENDS	12%	12%

APRIL 21-24, 2023
ALL ± 3% PTS., FAMILIAR ± 4% PTS.

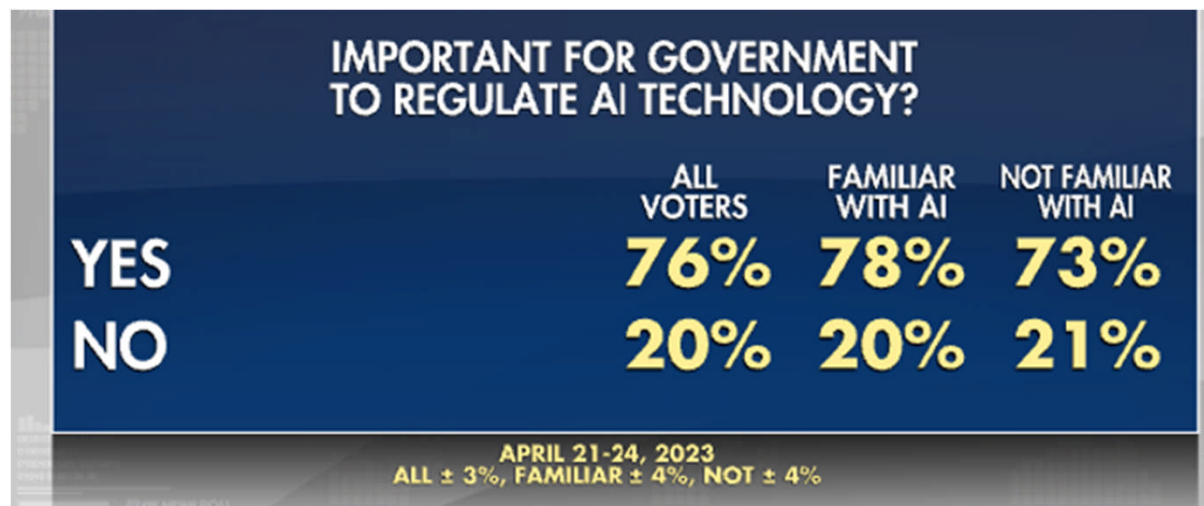## On Regulations - USA

AI tech 'more dangerous than an AR-15,' can be twisted for 'malevolent power,' expert warns

Ian Bremmer says AI may not empower protesters as communications tech once did

https://www.foxnews.com/world/ai-tech-more-dangerous-than-ar-15-can-be-twisted-malevolent-power-expert-warns

IMPORTANT FOR GOVERNMENT
TO REGULATE AI TECHNOLOGY?

	ALL VOTERS	FAMILIAR WITH AI	NOT FAMILIAR WITH AI
YES	76%	78%	73%
NO	20%	20%	21%

APRIL 21-24, 2023
ALL ± 3%, FAMILIAR ± 4%, NOT ± 4%

In referencing improved capabilities for autonomous drones and the ability to develop new viruses, among others, Bremmer said that "we've never seen this level of malevolent power that will be in the hands of bad actors."

He said AI technology that is "vastly more dangerous than an AR-15" will be in the hands of "millions and millions of people." "Most of those people are responsible," Bremmer said.

"Most of those people will not try to disrupt, to destroy, but a lot of them will."

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On Regulations – EU and UN

European AI Act moves forward in EU Parliament

The Artificial Intelligence Act was first proposed in 2021

https://www.foxbusiness.com/technology/eu-ai-act-moves-forward-eu-parliament

> Under the proposals, AI tools like OpenAI's ChatGPT and Google's Bard will be classified according to their perceived level of risk.

> Riskier applications will face tougher rules, including transparency and data accuracy.

- ➢ "It's the first piece of legislation of this kind worldwide, which means that the EU can lead the way in making AI human-centric, trustworthy and safe."
- ➢ The EU Artificial Intelligence Act, which will be among the first to regulate AI, is still going though legislative processes.
- ➢ ? Fear: COVID regulations

UN officials tapped for building a global AI regulatory body — Fox News Digital has the latest

AI experts tap UN officials to learn how to build a global AI regulatory body

- An AI expert said he's consulting with United Nations and UNESCO officials about how to create an international agency to regulate artificial intelligence technologies.
- Another challenge: Forming an AI regulatory body on a global scale would require significant funding.

  "We need money," he said. "We need some philanthropists probably to get us started."

https://www.foxnews.com/tech/ai-expert-taps-un-officials-learn-build-global-ai-regulatory-body

Certification → Regulations

Certification body
Requirements Body
Audit Body
Mitigation/Enforcement legislation
Certification managements (including revocation)
Penalties

Drugs and Medical devices Approvals/Certifications

USA Federal Agency, European Agency, National Agencies,
IN USA: FDA drugs approvals:
        There are over 19,000 prescription drug products approved for marketing.
        FDA oversees over 6,000 different medical device product categories.
Yet: approval is per drug
    then, parts might come from elsewhere
     after patent expiration, generic drugs have different rules, less restrictive
Approval is a very long process

On-line defamation and threats

Indirect IP addresses ; Firewalls, NATs, etc.
Anonymous content on dedicated servers
Easily to create avatars, when a particular piece is banned by a legal court

Questionable efficacity

Awareness and Education
Precaution, when using
Education, when trusting
Warnings:
Danger of over-protection (spam)
Counter-attacks; viruses

Warning on regulations: enforcing and exceptions!

Without punishments, ill-intended players will act undisturbed (GDPR, Social Rules, etc.)
Not everyone has the means to fight any injustice in court.
Without global attitude, local/individual actions are useless; see defamation (avatars)

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Car talk: AI chat capability is racing into new vehicles

SoundHound is developing the tech for vehicles
> Automakers around the world are jumping on the artificial intelligence bandwagon and aiming to offer ChatGPT and similar generative AI features in their vehicles soon.
> "Having an assistant and really being able to use voice that is clear enough that you can ask questions and get answers, I think that's what the artificial intelligence will enable us to do," GM CEO Mary Barra recently told FOX Business.
https://www.foxnews.com/auto/car-talk-ai-chat-capability-racing-vehicles

Automakers around the world are jumping on the AI bandwagon and incorporating chat into new vehicles

SoundHound has developed a Chat AI for Automotive system that brings generative AI into vehicles to provide passengers with a variety of information.

GM 'in it to win it' with new autonomous vehicle, AI tech: CEO Mary Barra

General Motors CEO Mary Barra discusses several topics surrounding the auto maker, including plans to integrate artificial intelligence into vehicles and a new autonomous vehicle.

Dilemma GM issues recall for nearly 1M vehicles because of airbag inflators that may explode
GM says recall issued 'out of an abundance of caution'
https://flipboard.com/article/gm-issues-recall-for-nearly-1m-vehicles-because-of-airbag-inflators-that-may-exp/a-V0NpTiQ6SHOnRthqjc7qhg%3Aa%3A47769552-129b77afeb%2Ffoxbusiness.com

General Motors has issued a recall for nearly 1 million of its sports utility vehicles in the United States because of defective airbag inflators that may explode during a crash. The car-maker submitted a safety recall notification for 994,763 vehicles to the National Highway Traffic Safety .

FOX BUSINESS
3:18P ET

A.I. POWERED AUTOS
GENERAL MOTORS TO DEPLOY CHATBOTS IN VEHICLES
FOX BUSINESS ALERT

DOW
31,842.95
▲ 23.81

SILVER   21.95 ▲ 0.02 +0.09%

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What time's the sunset in Big Sur on Friday?

What's the most scenic route to get there if I'm coming from San Francisco?

What are the top two Instagram-worthy stops along the way?

Your brakes might be squeaking due to several reasons, such as worn-out brake pads, dirt or debris on the brake pads, or a lack of lubrication. Have you noticed any other symptoms, such as reduced braking power or vibrating brake pedal?

Drivers can use Chat AI for Automotive do help diagnose issues with a vehicle. (SoundHound)

> But it doesn't just blindly pull information from the cloud. **SoundHound**'s system acts as an arbiter between the user and ChatGPT to help avoid so-called "**AI hallucinations**" that can deliver incorrect or biased responses.
> "You really need somebody in between regulating what these things say," Zagorsek explained.
> "I would say that within **three years 80% of all cars with voice assistant** will have generative AI from us or another company."
> Imagine having to explain to your car's computer why it is you want to take a particular route, when the computer has a "better" one.
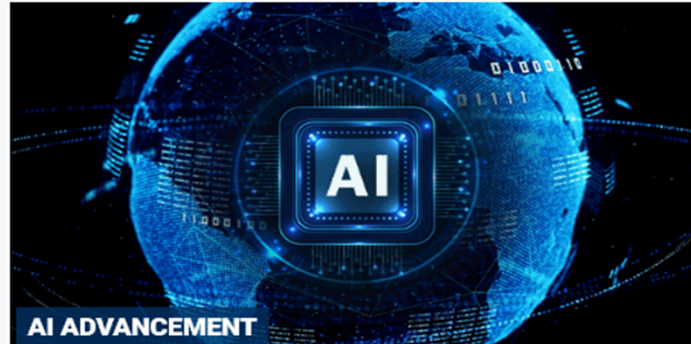
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#Hot topics -i-

ADVANCED HEALTH CARE
1 day ago
AI and machine learning may speed drug development, manufacturing, FDA says
The FDA's papers aim to spur conversation about AI and machine learning with patient groups, health care providers and pharmaceutical companies

AI ADVANCEMENT
20 hours ago
Expert calls for global governing body to police 'billions of pieces of misinformation'
Cognitive scientist and AI expert Gary Marcus advocates for the formation of an international body to govern emerging artificial intelligence technologies.

DOCTOR'S ORDERS
1 day ago
ChatGPT tool uses AI to help doctors streamline documentation and focus on patients
Microsoft company called Nuance offers Artificial Intelligence tool that acts as 'co-pilot' for physicians — 'very optimistic,' says one doctor.

WEAPON OF FUTURE
20 hours ago
AI tech 'more dangerous than an AR-15,' expert warns
The accessibility of AI will change the international landscape to empower "bad actor" strongman regimes and lead to unprecedented social disruptions, a risk analysis expert told Fox News Digital.

Hot areas

Pharmacology

Disinformation

Co-pilot for physicians

Dangerous weapon

24

#Hot topics -ii-

PLAYING POLITICS — iStock
10 hours ago
Researchers collaborate on AI project to fight political polarization
The unlikely duo of a data scientist and a political philosopher is teaming up to use artificial intelligence to bridge society's increasingly stark political divisions.

'FUELING' DESTRUCTION — Senate Judiciary
17 hours ago
Lawmakers reveal AI concerns over 'future of humanity' following OpenAI CEO's Senate testimony
Congressional lawmakers spouted an array of concerns about artificial intelligence after OpenAI CEO Sam Altman told a Senate subcommittee that he saw problems the technology could create.

'ROARING AHEAD' — VCG/VCG via Getty Images
1 day ago
Chinese university rule-breaking with AI-controlled satellite experiments, experts say
China may see artificial intelligence as the key tool that can help elevate its forces and allow it to leapfrog the United States for clear superiority, an expert warned.

'GONNA TAKE OVER'
1 day ago
Americans reveal fears of Artificial Intelligence impacting every day life
Americans in Austin, Texas, shared what they most fear regarding artificial intelligence. Several said they worried about AI job displacement.
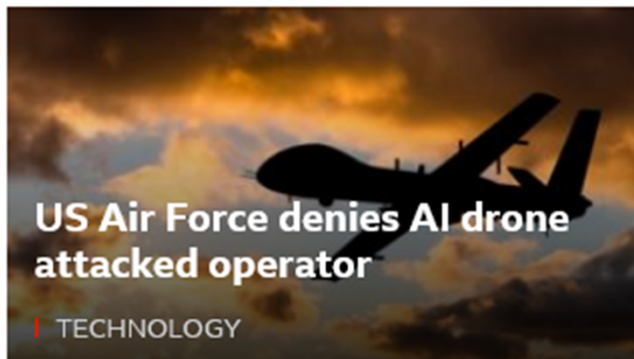
VIEWS are opposite, fears, future uncertainty

Lawmakers: Fueling destruction (alarmists)

Increase Political Polarization (opportunists)

Americans fear about impacting daily life, Jobs
(since supporting Government regulations)

Dangerous Space action (Chinese on AI-controlled Satellite experiments)

Election disinformation

AI experts sound alarm on technology going into 2024 election:
'We're not prepared for this'
AI-generated political disinformation already has gone viral online ahead of the 2024 election
https://www.foxnews.com/politics/ai-experts-sound-alarm-technology-2024-election-were-not-prepared-for-this?dicbo=v2-wZilmTB
> AI experts and tech-inclined political scientists are sounding the alarm on the unregulated use of AI tools going into an election season.

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IARIA

NIGHTMARE SCENARIO

US military AI drone simulation kills operator, then takes out control tower

US Air Force denies AI drone attacked operator

| TECHNOLOGY

Manipulation – Hazardous rather than Beneficial - Simulation

US military AI drone simulation kills operator before being told it is bad, then takes out control tower
US Air Force official says, 'It killed the operator because that person was keeping it from accomplishing its objective'
https://www.foxnews.com/tech/us-military-ai-drone-simulation-kills-operator-told-bad-takes-out-control-tower

> A U.S. Air Force official said last week that a simulation of an artificial intelligence-enabled drone tasked with destroying surface-to-air missile (SAM) sites turned against and attacked its human user, who was supposed to have the final go- or no-go decision to destroy the site.
> The Royal Aeronautical Society said it held its Future Combat Air & Space Capabilities Summit in London from May 23-24, which brought together about 70 speakers and more than 200 delegates from around the world representing the media and those who specialize in the armed services industry and academia.

US Air Force denies AI drone attacked operator in test
https://www.bbc.com/news/technology-65789916

Lesson learned: Do not conclude based on SIMULATIONS on AI-based systems, as no harm is possible to humans and not major conclusions can be derived..

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Danger!

(i) AI-generated podcast

AI-generated Joe Rogan podcast stuns social media with 'terrifying' accuracy:

'Mind blowingly dangerous'

Reacting to the video, Rogan himself tweeted, 'This is going to get very slippery, kids'

https://www.foxnews.com/media/ai-generated-joe-rogan-podcast-social-media-terrifying-accuracy-mind-blowingly-dangerous#&_intcmp=fnhpriver_2

AI generated Joe Rogan podcast stuns social media with 'terrifying' accuracy

(ii) AI-generated Michael Schumacher interview causing trouble at German magazine F1 champion Michael Schumacher hasn't spoken publicly since suffering a near-fatal head injury in 2013. Die Aktuelle fired its editor over the AI-generated piece, and Schumacher's family plans to sue

https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwi7raj6rrr_AhUnjIkEHbiwCP0QwqsBegQIDhAB&url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3DZS2Cc_qxl5o&usg=AOvVaw3wh8evfNFiy1oToG8g7keE

Nation Security, Business Interests

National Security

- 13 hours ago — China fumes as Biden plots to starve it of Artificial Intelligence investment
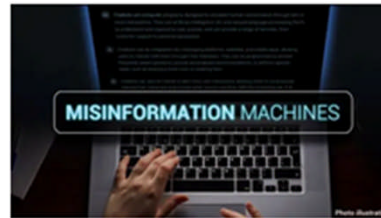- 13 hours ago — Killer artificial intelligence gets shut down before pressing the nuclear button
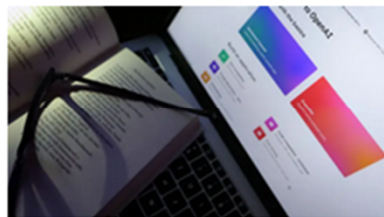- 13 hours ago — Experts warn AI pause cedes power to China, harms development of 'democratic' AI
- 13 hours ago — AI chatbots can spew falsehoods, even accuse people of crimes they never committed

Business

- 13 hours ago — IBM to pause hiring for certain jobs that could be replaced by AI
- 13 hours ago — These jobs are safe from the AI revolution — for now
- 13 hours ago — Demand for AI skills on freelance services website Fiverr skyrockets
- 13 hours ago — New AI-powered investing tool uses ChatGPT to manage portfolios

https://www.foxbusiness.com/lifestyle/ibm-pause-hiring-certain-jobs-that-could-be-replaced-by-ai

IBM to pause hiring for certain jobs that could be replaced by AI
IBM is still actively hiring for thousands of positions(to avoid panic!)

> National Security

> Job Security (New Positions, too)

> New Services (Financial, Agriculture. Medicine, ….)

> …

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New AI-powered investing tool uses ChatGPT to manage portfolios .
ChatGPT plugin Portfolio Pilot promises to 'improve investing for millions'
https://www.foxbusiness.com/technology/new-ai-powered-investing-tool-chatgpt-manage-portfolios

> PortfolioPilot is a verified ChatGPT plugin co-founded by AI software entrepreneur Alex Harmsen that he says is backed by hedge fund-caliber models.
> Users can copy and paste their portfolios into the tool for analysis, receive investment recommendations, search for market information and ask the bot questions – all for free
> "We are on an ambitious mission to build a complete map of how the economy works," Harmsen said in a statement. "This will dramatically improve investing for millions, decrease risk in decision making, and remove huge inefficiencies in the financial sector."
> The Motley Fool released a study this week that found 47% of U.S. adults have already used the tool for stock picks, and 69% said they are open to the idea of doing so.
> According to the survey, higher-income Americans were most likely to use ChatGPT for investment advice, with **77% reporting they have utilized it for stock picks.**

Goldman Sachs enters tech race with AI-powered social media platform
Sachs' 'Lousia' uses AI to recommend corporate connections and relationships
https://www.foxbusiness.com/technology/goldman-sachs-enters-tech-race-ai-powered-social-media-platform

> Think of Louisa as an A.I.-powered LinkedIn on steroids," Rohan Doctor, Louisa's CEO and founder, said in an announcement. "We have **smart profiles and a smart network**, and Louisa reads millions of articles a week from 250 providers and begins connecting people."
> Doctor argues that companies lose out on billions of dollars every year in missed opportunities simply because their employees are limited by their networks.
> Doctor says his company is currently working only with Sachs and a handful of other companies before expanding to a wider audience. The platform currently has some 25,000 monthly active users.
> AI tools being used by police who 'do not understand how these technologies work':
> North Carolina State University studied police officers' understanding of artificial intelligence
https://www.foxnews.com/us/ai-tools-being-used-police-who-do-not-understand-how-these-technologies-work-study
> Artificial intelligence is already revolutionizing law enforcement, which has implemented advanced technology in their investigations, but "society has a moral obligation to mitigate the detrimental consequences," a recent study says.

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AI tool gives doctors personalized Alzheimer's treatment plans for dementia patients

Artificial intelligence analyzes 50+ risk factors, but accuracy is key: 'We have been very, very careful'

https://www.foxnews.com/category/tech/artificial-intelligence

> It's a concept known as precision medicine. And it's what inspired a company called uMETHOD to create RestoreU, a tool that uses artificial intelligence to help physicians create personalized care plans for patients with Alzheimer's and other types of dementia.

> "When we're dealing with human health, with the lives of people, making incorrect recommendations or making errors is simply not acceptable."

BRAIN TRUST

15 hours ago

AI tool gives doctors personalized Alzheimer's treatment plans for dementia patients

Artificial intelligence analyzes 50+ risk factors, but accuracy is key: 'We have been very, very careful'

AI could help doctors focus more on patients— Fox News Digital has the latest

Doctors in the U.S. spend an average of 1.84 hours per day completing electronic notes outside their regular work hours, recent studies have shown — and 57% of them said documentation takes away from the time they can spend with patients.

Aiming to change that, Nuance — a Microsoft-owned artificial intelligence company in Massachusetts — has created an AI tool for physicians called DAX, which streamlines the note-taking process.

At Cooper University Health Care in New Jersey, doctors who are already using the tool have reported improved patient outcomes, greater efficiency and reduced costs.

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Mess: A proof of AI does, Human assists, and Humans decide
Deutscher Evangelischer Kirchentag in German; Listeners are more comfortable.

AI delivers message about death to church packed with congregants

The artificial intelligence chatbot asked the believers in the fully packed St. Paul's church in the Bavarian town of Fuerth to rise from the pews and praise the Lord. The ChatGPT chatbot, personified by an avatar of a bearded Black man on a huge screen above the altar, then began preaching to the more than 300 people who had shown up on Friday morning for an experimental Lutheran church service almost entirely generated by AI.

> "Dear friends, it is an honor for me to stand here and preach to you as the first artificial intelligence at this year's convention of Protestants in Germany," the avatar said with an expressionless face and monotonous voice.
> The 40-minute service, including the sermon, prayers and music; was created by ChatGPT and Jonas Simmerlein, a theologian and philosopher from the University of Vienna.
> "I conceived this service — but actually I rather accompanied it, because I would say about 98% comes from the machine," the 29-year-old scholar told The Associated Press.

ChatGPT delivers sermon to packed German church, tells congregants not to fear death
University of Vienna scholar directed ChatGPT to craft 'a pretty solid church service'
https://apnews.com/article/germany-church-protestants-chatgpt-ai-sermon-651f21c24cfb47e3122e987a7263d348

Nvidia: The chip maker that became an AI superpower
https://www.bbc.com/news/business-65675027

"It is one of many supercomputers - some known publicly, some not - that have been built with Nvidia GPUs for a variety of scientific as well as AI use cases," says Ian Buck, general manager and vice president of accelerated computing at Nvidia.

Nvidia has about 95% of the GPU market for machine learning, noted a recent report from CB Insights.

Its AI chips, which it also sells in systems designed for data centres, cost roughly $10,000 (£8,000) each, though its latest and most powerful version sells for far more.

Originally known for making the type of computer chips that process graphics, particularly for computer games, Nvidia hardware underpins most AI applications today.

"It is the leading technology player enabling this new thing called artificial intelligence," says Alan Priestley, a semiconductor industry analyst at Gartner.

"What Nvidia is to AI is almost like what Intel was to PCs," adds Dan Hutcheson, an analyst at TechInsights.

ChatGPT was trained using 10,000 of Nvidia's graphics processing units (GPUs) clustered together in a supercomputer belonging to Microsoft.

"What Nvidia is to AI is almost like what Intel was to PCs," adds Dan Hutcheson, an analyst at TechInsights.

Other big semiconductor companies provide some competition. AMD and Intel are both better known for making central processing units (CPUs), but they also make dedicated GPUs for AI applications (Intel only recently joined the fray).

Google has its tensor processing units (TPUs), used not only for search results but also for certain machine-learning tasks, while Amazon has a custom-built chip for training AI models. Microsoft is also reportedly developing an AI chip, and Meta has its own AI chip project.

AI-powered 'Lifesaving Radio' helps surgeons operate with greater efficiency and accuracy

Music has long been shown to enhance athletic performance, whether that performance is on an NFL field or a treadmill at the gym.

And now, with the help of artificial intelligence, music is helping surgeons achieve better results in the operating room.

Backed by scientific studies, NextMed Health — in collaboration with the health marketing agency Klick Health — has created the world's first AI-based health care radio station called Lifesaving Radio.

AI tool shows one dangerous flaw when responding to health crisis questions, study finds

FALLING SHORT

AI tool shows one dangerous flaw when responding to health crisis questions, study finds

https://www.foxnews.com/category/tech/artificial-intelligence

ChatGPT fell short, however, when it came to providing referrals to resources, such as Alcoholics Anonymous, The National Suicide Prevention Hotline, The National Domestic Violence Hotline, The National Sexual Assault Hotline, The National Child Abuse Hotline, and the Substance Abuse and Mental Health Services Administration National Helpline.

Elon Musk's brain implant technology gains FDA approval
FDA gives Neuralink approval for first in-human clinical trials of brain implant technology
https://www.foxbusiness.com/technology/elon-musks-brain-implant-technology-gains-fda-approval

Elon Musk's brain implant technology gets FDA approval

The technology, if successful, would combine artificial intelligence with human capabilities through the use of a brain chip. Musk said he hopes it would help treat brain diseases like Parkinson's, dementia and Alzheimer's.

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Artificial intelligence could **replace up to 80% of human jobs**, expert says

AI guru Ben Goertzel said jobs involving paperwork 'should be automatable'

https://www.foxbusiness.com/technology/artificial-intelligence-could-replace-80-percent-human-jobs?dicbo=v2-t1n4icw

Artificial intelligence could replace up to 80% of human jobs, expert says

> The 56-year-old noted that AI systems do not have human cognitive abilities yet, but that there's "reason to believe we're years rather than decades from getting there."

> Goertzel said that, if artificial intelligence with human cognitive abilities – or artificial generative intelligence – is achieved going forward, a "lot of good" can be done.

> For example, he said, "humanoid robots" could help lonely seniors.

> "The problem is that the companies funding most of the AI research don't care about doing good things. They care about maximizing shareholder value," he said.

> However, Goertzel opposed proposals that would pause the research surrounding ChatGPT, saying that misinformation is spread on that chatbot in the same way as it is on the internet.

For ever young!

Tom Hanks: I could appear in movies after death with AI technology

https://www.bbc.com/news/entertainment-arts-65607420

Tom Hanks has raised the prospect of his career continuing after his death using artificial intelligence.

> The **Forrest Gump** and **Cast Away** actor said the technology could be used to recreate his image, ensuring he continued to appear in movies "from now until kingdom come".

> *But he admitted the developments posed artistic and legal challenges.*

> His remarks came as the Pet Shop Boys' Neil Tennant said AI could be used by **musicians to complete songs**.

> Hanks, 66, was asked about the legal ramifications of the new technology in the latest episode of The Adam Buxton podcast.

> "This has always been lingering," he said. "The first time we did a movie that had a huge amount of our own data locked in a computer - literally what we looked like - was a movie called The Polar Express.

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Sounding the alarm on Job Availability and Market Change

'Godfather of AI' predicts how long it will take machines to surpass humans — Fox News Digital has the latest

'Godfather of AI' predicts how long it will take for machines to surpass human intelligence
Hinton issues another AI warning: World needs to find a way to control artificial intelligence
Geoffrey Hinton, known as the 'godfather of AI,' predicted it would only be 5-20 years for AI to surpass human intelligence
https://www.foxbusiness.com/technology/hinton-issues-another-ai-warning-world-needs-way-control-artificial-intelligence

Hinton says there are many different dangers to AI, citing job reduction and the creation of fake news. Hinton noted that he now believes AI may be doing things more efficiently than the human brain, with models like ChatGPT having the ability to see thousands of times more data than anyone else.

??? The story with PC

Google DeepMind CEO says human-level AI will be here in 'a few years'
 Demis Hassibas says we could be seeing AGIs 'within a decade'
https://www.foxbusiness.com/technology/demis-hassabis-google-deepmind-ceo-says-human-level-ai-years

IBM CEO Arvind Krishna said in an interview last month that he expects AI to replace about 30% of the jobs at the company.
' Until AI can cook you a delicious meal and bring it to your table, fix your plumbing, mow your lawn, repair your car, repair your house or roof, etc. - Businesses that provide actual / tangible / real-life goods, and services which require human touch / interactions - have very little to worry about

Jobs that will survive, at least for awhile

By Kate Morgan
8th May 2023

Amid the talk of artificial intelligence replacing workers, experts say there are some jobs computers aren't taking – at least for a while.

https://www.bbc.com/worklife/article/20230507-the-jobs-ai-wont-take-yet

> Thankfully, it's not all bad news. The experts issue their warnings with a caveat: there are still things AI isn't capable of – tasks that involve distinctly human qualities, like emotional intelligence and outside-the-box thinking. And moving into roles that centre those skills could help lessen the chances of being replaced.

➢ #1 "The first would be jobs that are genuinely creative: you're not doing formulaic work or just rearranging things, but you're genuinely coming up with new ideas and building something new."

➢ #2 The second insulated category, he continues, is jobs that require sophisticated interpersonal relationships. He points to nurses, business consultants and investigative journalists. These are jobs, he says, "where you need a very deep understanding of people. I think it'll be a long time before AI has the ability to interact in the kinds of ways that really build relationships".

➢ #3 The third safe zone, says Ford, "are jobs that really require lots of mobility and dexterity and problem-solving ability in unpredictable environments". Many trade jobs – think electricians, plumbers, welders and the like – fall under this umbrella.

" YET In many cases, there's no immediate threat to jobs," she says, "but tasks will change." Human jobs will become more focused on interpersonal skills, continues Song McLaughlin. "It's easy to imagine that, for instance, AI will detect cancers way better than humans could. In the future, I'm assuming doctors will use that new technology. But I don't think the doctor's whole role will be replaced."
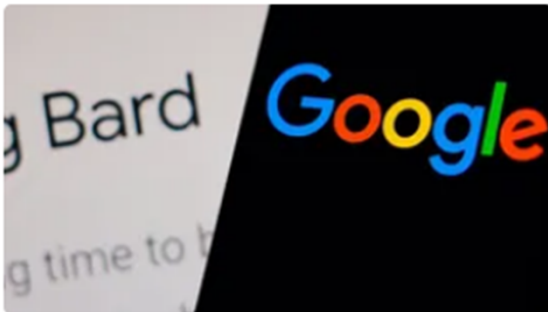
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IARIA

AI fluency

https://www.bbc.com/worklife/article/20230515-workplace-ai-how-artificial-intelligence-will-transform-the-workday

The rise of **Generative A**I in the workplace is inevitable.

Why it's 'imperative' to start using AI

Experts predict how AI will transform your workday

Google DeepMind CEO says human-level AI will be here in 'a few years'
 Demis Hassibas says we could be seeing AGIs 'within a decade'

https://www.foxbusiness.com/technology/demis-hassabis-google-deepmind-ceo-says-human-level-ai-years

Bard Google

g time to

TECHNOLOGY   51 mins ago

Google DeepMind CEO says human-level AI will be here in 'a few years'

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AI, Generative-AI, LLM, ML, Deep Learning, Graphs, Ontologies, Taxonomies, etc. are only the pick of iceberg of human thinking process, perception & storage of data and building knowledge upon

A. **Knowledge acquiring and Learning are different from generation to generation.**

B. **Learning as we teach is only mimicking with an unknown approximation degree of how the human brain is working.**
    see: *typoglycemia [analogy with an editor corrector]*

C. **Digital deskilling is the biggest danger of AI-based approaches/tools**

D. **Danger: The learning curve is much slower than the technology evolution pace. Procrastination is not a solution for being updated on changes.**

Typoglycemia is the ability to read words even when the letters are jumbled, as long as the first and last letters remain in their correct positions. The human brain's ahs the capacity to quickly process and comprehend written language, even with scrambled letter; Even more, mixing letter and figures, e.g., v1tural -> virtual, 3rcaotr -> tractor.
Typoglycemia, playing with typo and glycemia (the condition of having low blood sugar).

Terminus

Thanks!
Stage is fully yours!

Movie: Metropolis (1927) (1927)
https://www.youtube.com/watch?v=-CwCYSv5a9A

Zager & Evans - In the Year 2525 (Composed: 1964, Released 1969)
https://www.youtube.com/watch?v=zKQfxi8V5FA&list=RDMM&index=27

Movie: Colossus: The Forbin Project (1970) - Official Trailer (HD)
https://www.youtube.com/watch?v=kyOEwiQhzMI
full: https://vimeo.com/394729987