

# AUSTIN FORUM

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ON TECHNOLOGY & SOCIETY

*Connect. Collaborate. Contribute.™*

Welcome to the  
***Austin Forum on Technology & Society!***

*We cover emerging, disruptive, and pervasive technologies to help you understand how these can and will impact your organizations, communities, and lives!*

*We bring leaders, thinkers, builders, creators, and learners together to **connect, collaborate, and contribute!***



# Tech Trends for 2024 (and Beyond!)

January 9, 2024

# Our Partners Make Austin Forum Possible!

A D A P T E R

AMD

arm



SXSW

GOOD  
SYSTEMS  
A UT Grand Challenge

whurley

*Please contact us if you want to become an annual partner!*

# Welcome, Civo!

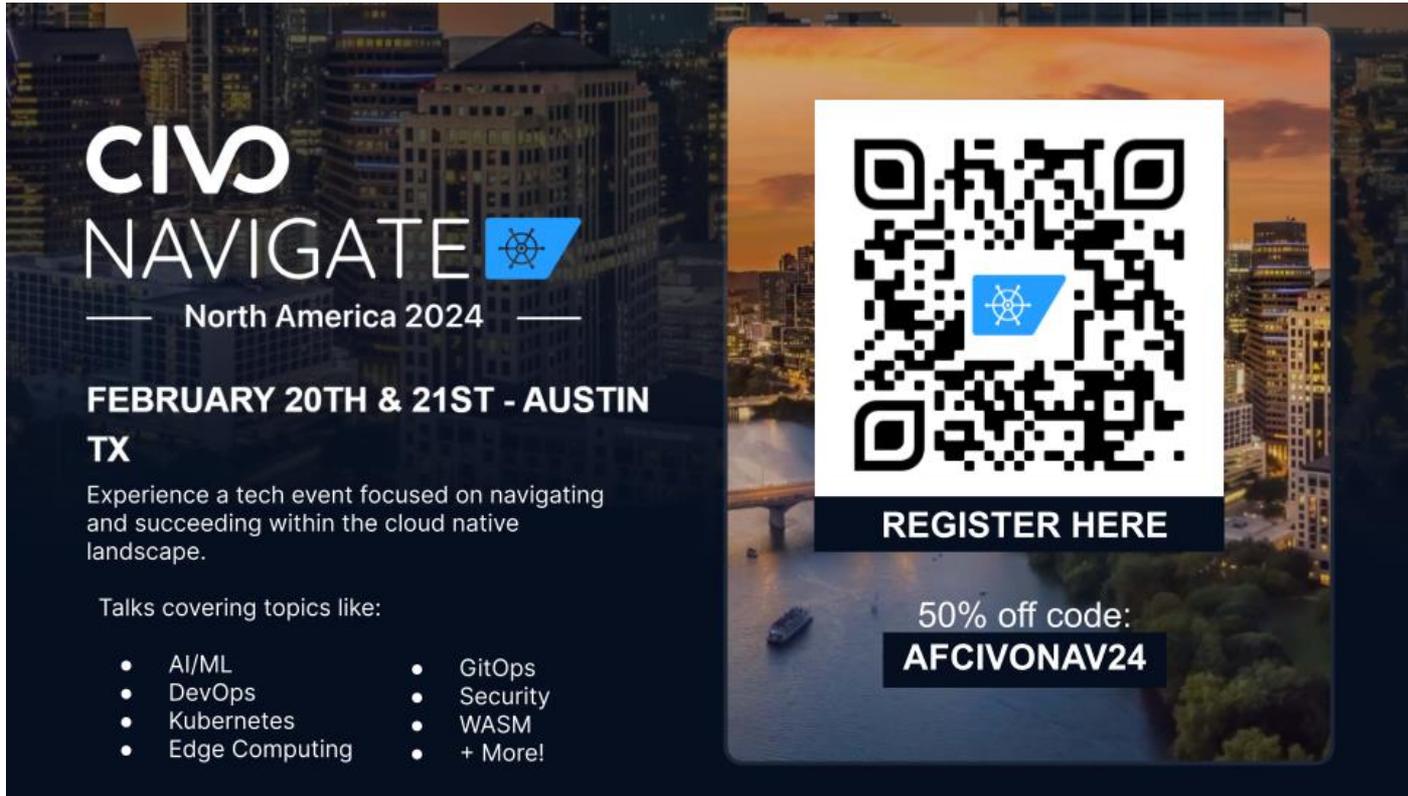


**Mark Boost**  
CEO, Civo



**Sophia McKee**  
COO, Civo

# Special Offer for Austin Forum Fans!



**CIVO**  
**NAVIGATE** 

— North America 2024 —

**FEBRUARY 20TH & 21ST - AUSTIN TX**

Experience a tech event focused on navigating and succeeding within the cloud native landscape.

Talks covering topics like:

- AI/ML
- DevOps
- Kubernetes
- Edge Computing
- GitOps
- Security
- WASM
- + More!

**REGISTER HERE**

50% off code:  
**AFCIVONAV24**

# You can be an Austin Forum Champion today!

BE A *CHAMPION*  
OF THE FORUM!

[www.austinforum.org/support](http://www.austinforum.org/support)

**Champions help us program and provide great educational programming and informative experts (\$1000+)**

- Offer advice on programming topics, invited speakers, podcasts & events
- Attend the annual meeting & VIP reception
- Get a nice tax deduction!
- Get cool AF swag
- 100% of your gift goes to executing the Forum



BE A *FRIEND*  
OF THE FORUM!

**Or be a Friend of the Forum—*forever!***  
(\$100+)

- Get cool AF swag
- Get a tax deduction!
- 100% of your gift goes to executing the Forum
- Listed on our Friends page *forever!*



# Thank you to our Austin Forum Champions!

**Brad Englert**

**Nancy Giordano**

**Mitch Jacobson**

**Kelley Knutson**

**Matthew Simmons**

**Roy Truitt**

**Luke Wilson**

---

## And our Friends of the Forum!

Chris Ashton

Bruce Bogart

RD Childers

Charlie Dominguez

Emily Gupton

Don & Mary Kay Hanson

Homer Hegedus

James Hillhouse

Kevin Hughes

Vaishali Jadhav

Katherine Korytkowski

Steve Krant

Gabe Schuyler

Andy Stewart

Chris Van Loan

Jarrett Webb

**AUSTIN FORUM**

ON TECHNOLOGY & SOCIETY

[www.austinforum.org](http://www.austinforum.org)

# We have 6 ways to learn, share, connect!

Live monthly events	Online content
<p><b>Presentation + Networking events</b></p> <ul style="list-style-type: none"><li>• Expert presenter-focused</li><li>• In-person and online—hybrid</li><li>• Recording and slides posted online</li></ul>	<p><b>NEW: Workshops</b></p> <ul style="list-style-type: none"><li>• Offered by Austin Forum partners and friends</li><li>• Free, or with special discounts for AF attendees</li><li>• Designed to accelerate technical understanding, expertise</li></ul>
<p><b>Meetup discussion events</b></p> <ul style="list-style-type: none"><li>• Participatory for everyone</li><li>• In-person <i>only</i></li><li>• Never recorded—speak freely!</li></ul>	<p><b>Podcasts – Austin Forum Upload</b></p> <ul style="list-style-type: none"><li>• Audio only</li><li>• Conversation formats</li><li>• Hosted in all major podcast stores, AF website</li></ul>
<p><b>Book discussion events</b></p> <ul style="list-style-type: none"><li>• Participatory for everyone</li><li>• Online <i>only</i></li><li>• Never recorded—speak freely!</li></ul>	<p><b>Slack Community, Website, Newsletter</b></p> <ul style="list-style-type: none"><li>• Get updates and register for events</li><li>• Learn more about the Austin Forum</li><li>• Ask questions, share, etc. (Slack)</li></ul>

# Before we get started, join our slack

## *Why join the Austin Forum Slack workspace?*

1. Continue and deepen the conversation after Austin Forum events
2. Find new opportunities for collaboration, mentoring, working, and more
3. Promote local events and relevant Tech & Society opportunities
4. Because this gives *everyone* in our community—online and in-person—the *same* way to ask questions!

## *How?*

1. Open a web browser
2. Go to: [www.austinforum.org/slack](http://www.austinforum.org/slack)
3. Click “Join the Austin Forum Slack Workspace”
4. Enter your email address
5. Check your email to confirm Slack invitation
6. Enter your name and click “Create Account”
7. You’re in! You can use the Slack mobile app now, too.
8. Add channels to your view using + **Add channels**)

# Austin Forum Upload: New episodes out now!



Latest episodes!

- **#74 – Preview of SXSW 2024 with Hugh Forrest**
- #73 – Supercomputing: What’s New in the Biggest, Fastest Computing for Science and Industry
- #72 – The Future of Infrastructure is Smart
- #71 – How Tech Can Reinvent Fashion
- #70 – Are Large Language Models the Evolution of Information Organization? w/Byron Reese

***Q: What technology are you most excited to learn, use, or follow in 2024?***

(30 seconds)

1 2 3 4 5 6 7 8 9 10

11 12 13 14 15 16 17 18 19 20

21 22 23 24 25 26 27 28 29 

Questions for  
speakers?

Submit questions in  
the AF Slack channel

**#event-questions**

for a chance to win a  
*SXSW 2024 badge!*

*Must be in-person and  
present at ~7:45PM to win!*

*Must use your name (first  
and last) on questions!*



**SXSW** 

**AUSTIN FORUM**

ON TECHNOLOGY & SOCIETY

[www.austinforum.org](http://www.austinforum.org)

# And now, our featured presentation...

## Please:

- ✓ ***Respect our speakers & audience***
  - Do not talk during the presentation*
  - Silence your cellphones*
- ✓ ***Ask questions*** in the Austin Forum Slack in the **#event-questions** channel
- ✓ ***Learn, think, and enjoy!***
- ✓ ***Stay after Q&A for networking!***





# Tech Trends for 2024 (and Beyond!)

January 9, 2024

# Tech Trends for 2024 (and Beyond!)



**Jay Boisseau**  
CEO  
Vizias



**Nancy Giordano**  
Founder & CEO  
Play Big Inc



**Bryon Jacob**  
Co-founder & CTO  
data.world



**ONLINE!**

**Jay Williams**  
Founder & CTO  
ARCatat

# Are Tech Predictions Important? Or Just Fun?

Question: why do humans make predictions?

One answer: to know how the future will affect them and how they might take advantage of it for:

- shelter, food, safety...
- money, fame, success...
- happiness, fun, dating...

# Yes, It Is Important (& Fun)!

## Jay's answer last year:

- Technology, data, and knowledge are increasingly rapidly
- The importance of learning/adopting new technologies faster is increasing rapidly: survive, innovate, compete, thrive!
- The need to solve global human problems—health, safety, food, housing, education, and opportunities for all—is fundamental and persistent

**Awareness, understanding, and context** can lead to **familiarity, prioritization, learning, adoption, and impact**

# Yes, It Is Important (& Fun)!

## ChatGPT's answer this year: Yes, tracking technology trends is important for various reasons. Here are some key points to consider:

1. **Innovation and Competitiveness:** Staying abreast of technology trends helps organizations remain innovative and competitive. Understanding emerging technologies allows businesses to adopt new tools and strategies, improving efficiency and staying ahead of the competition.
2. **Strategic Planning:** Technology trends can significantly impact business strategies. By staying informed, organizations can develop and adjust their plans to leverage new opportunities or mitigate potential risks associated with evolving technologies.
3. **Adaptability:** The business environment is dynamic, and technology is a major driver of change. Companies that are quick to adapt to technological shifts are better positioned to thrive in evolving markets and meet changing customer demands.
4. **Risk Management:** Ignoring technology trends can lead to outdated systems and processes, making an organization more vulnerable to security threats, compliance issues, or operational inefficiencies. Tracking trends helps in proactive risk management.
5. **Cost Savings:** Adopting the right technologies at the right time can result in cost savings through increased efficiency and productivity. Conversely, failure to keep up with technology trends may lead to unnecessary expenses in maintaining outdated systems.



(continued)

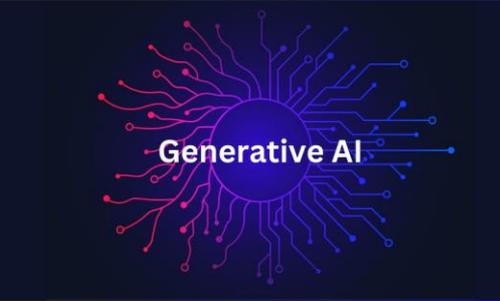
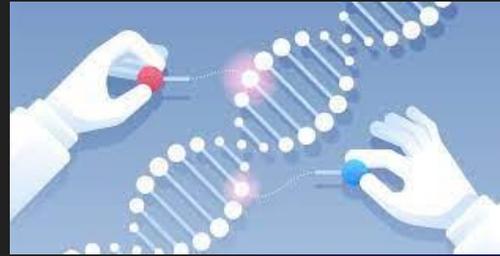
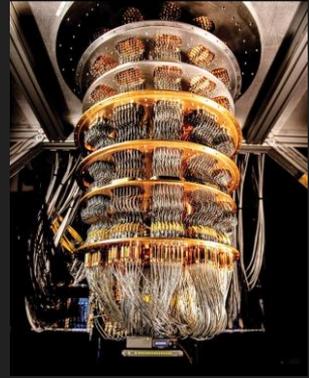
- 6. Customer Expectations:** Technology often shapes customer expectations. Understanding and incorporating the latest technologies can help businesses meet customer demands and provide a better user experience.
- 7. Talent Acquisition and Retention:** Skilled professionals are attracted to innovative workplaces. Companies that embrace and invest in cutting-edge technologies are more likely to attract and retain top talent in the competitive job market.
- 8. Global Impact:** Technology trends have global implications. Keeping track of these trends enables organizations to understand how changes in technology may affect international markets, regulations, and global partnerships.
- 9. Opportunity Identification:** New technologies often create opportunities for business growth and development. Being aware of emerging trends allows organizations to identify and capitalize on these opportunities before their competitors.
- 10. Societal Impact:** Technology trends can have profound effects on society. Businesses need to be aware of the broader implications of technology and con

# Caveats: it's very important, but in just 1 hour\* we cannot...

1. Provide expert-level understanding of technologies
  - BUT we will cover all of these topics in dedicated events & blog posts later in 2023!
2. Cover every emerging, important technology
  - BUT we will cover our top ones, and many others later in 2023!
3. Provide sound investment guidance or make politically-oriented policy opinions 😊
  - BUT some of us will be drinking whiskey during the networking, so ask then...

# First, Some Major Achievements in 2023...

- **Multi-cloud usage** becoming common
- **Zero-trust security** approach becoming mainstream
- **Quantum computing** tech scaling rapidly, noise-tolerant algorithms, more
- **Falcon Super Heavy + Starship** launched (with some success)—most powerful rocket ever
- First **CRISPR-9-based treatment** for sickle-cell anemia approved
- **Generative AI explosion** – awareness, usage, if not yet in huge productivity wins





#1

**GENERATIVE AI  
GROWS UP**



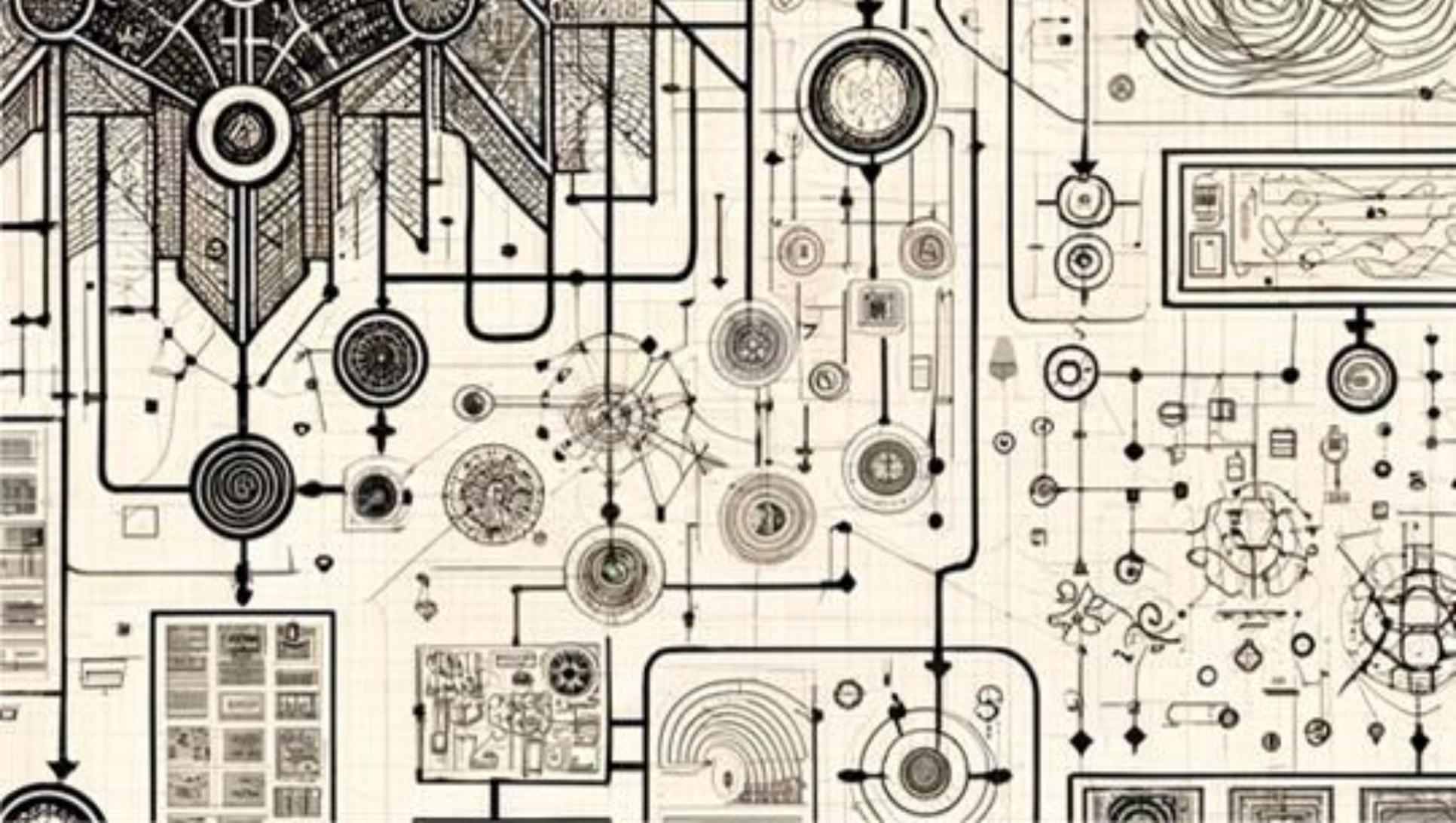


# KNOWLEDGE GRAPHS





**COMPLEX  
MULTI-STATE  
AGENTS**

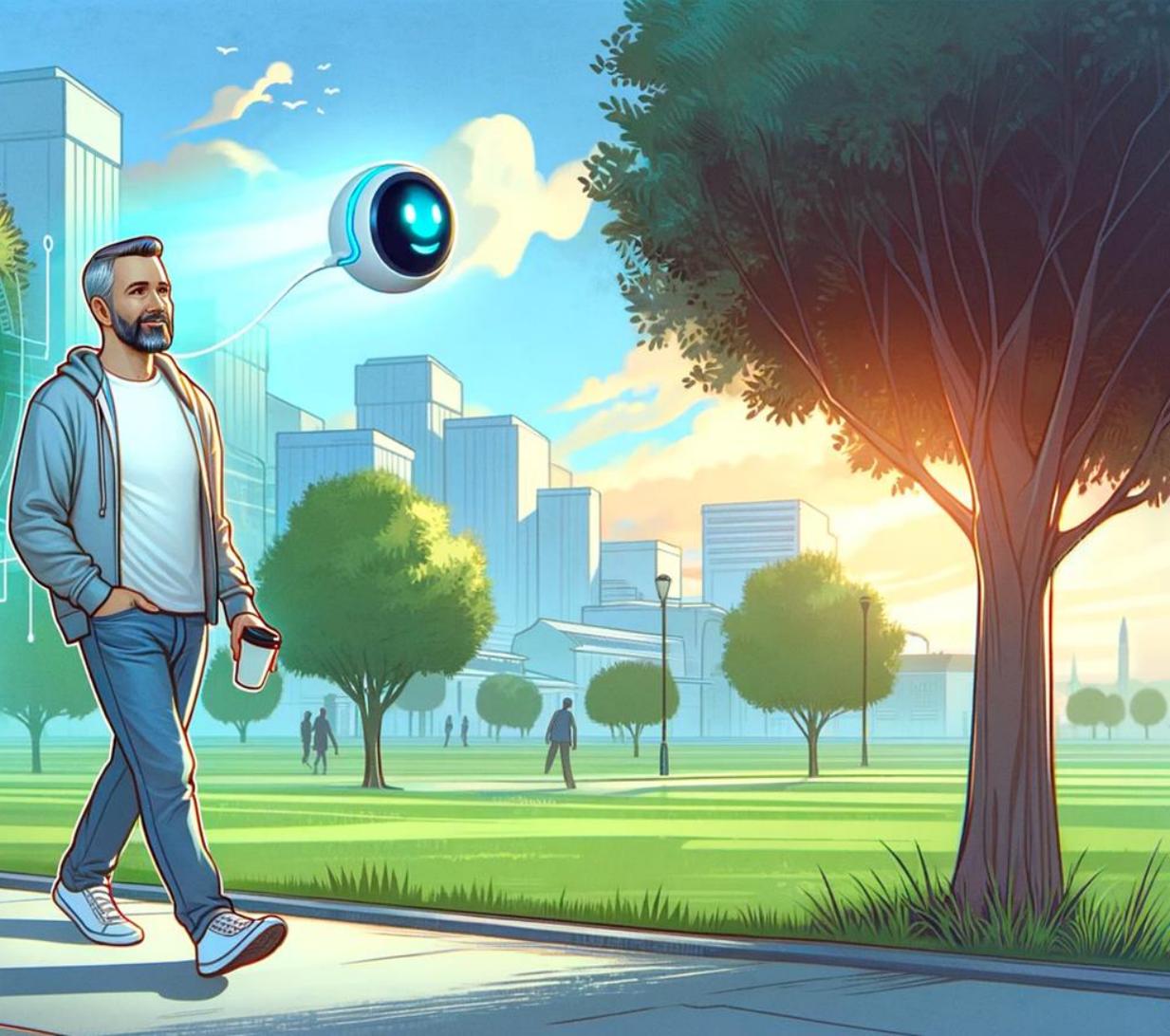
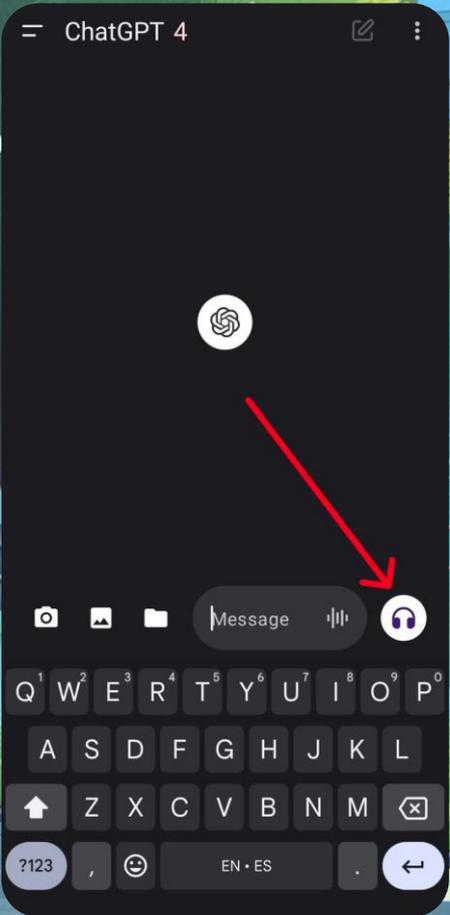




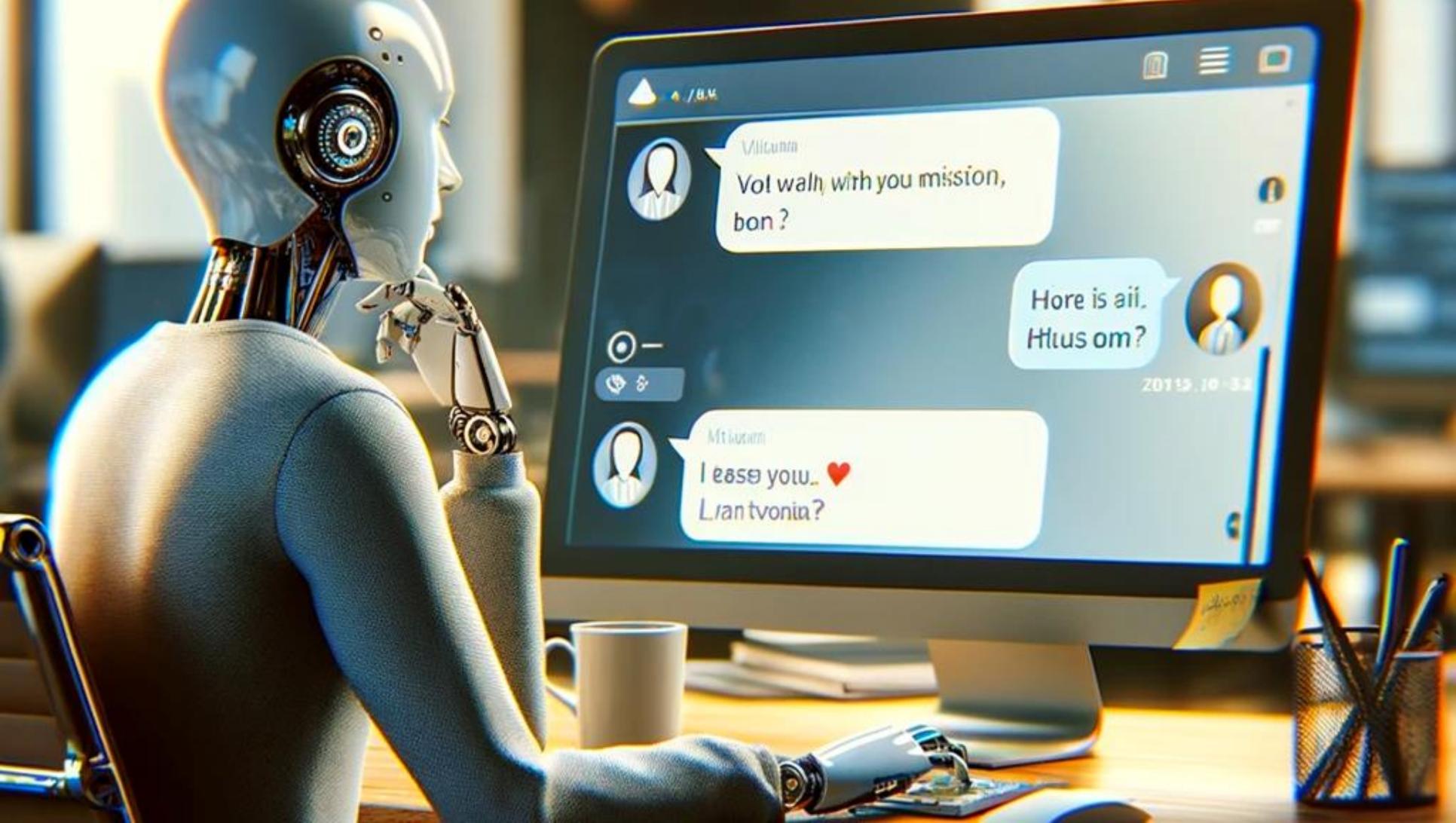
#2

AI GETS MORE  
CONVERSATIONAL









4 / 84



Mitium

Vol walk with you mission, bon?



Mitium

I eese you.. ❤️  
L/an tvonia?



Hore is aii.  
Htus om?

2019.10.32



#3

**BLOCKCHAIN  
MATTERS**

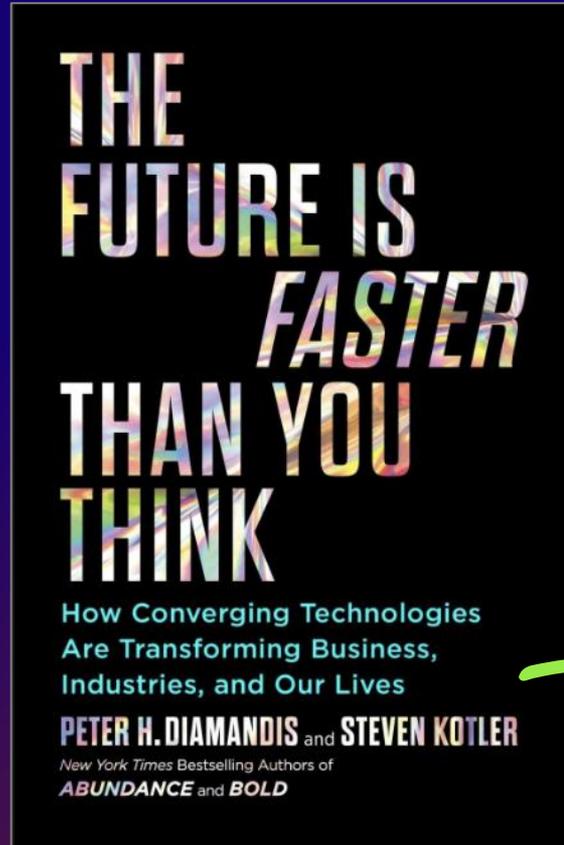






The image features a dynamic, radial burst pattern of colors. The colors transition from deep blues and purples on the left and right sides to bright yellows and oranges at the top and bottom. The lines radiate from a central point, creating a sense of motion and energy. In the center of this burst, the year "2024" is written in a clean, white, sans-serif font.

2024



14

internet sized  
transformations

# #1: PHYGITAL CONVERGENCE

artificial intelligence +  
virtual reality + digital twins +  
augmented reality + additive  
distributed web + robotics +  
manufacturing (3DP) + gamification  
+ sensors +  
neuroscience + bioengineering  
affective computing + ...

CITIES · WORKPLACES ·  
LOGISTICS · GOVERNMENT  
LIFESTYLE · EDUCATION ·  
TRANSPORTATION · HOMES  
GOVERNMENT/LAW · FASHION  
PAYMENTS/FINANCE ·  
ENTERTAINMENT · ART  
RETAIL · TRAVEL

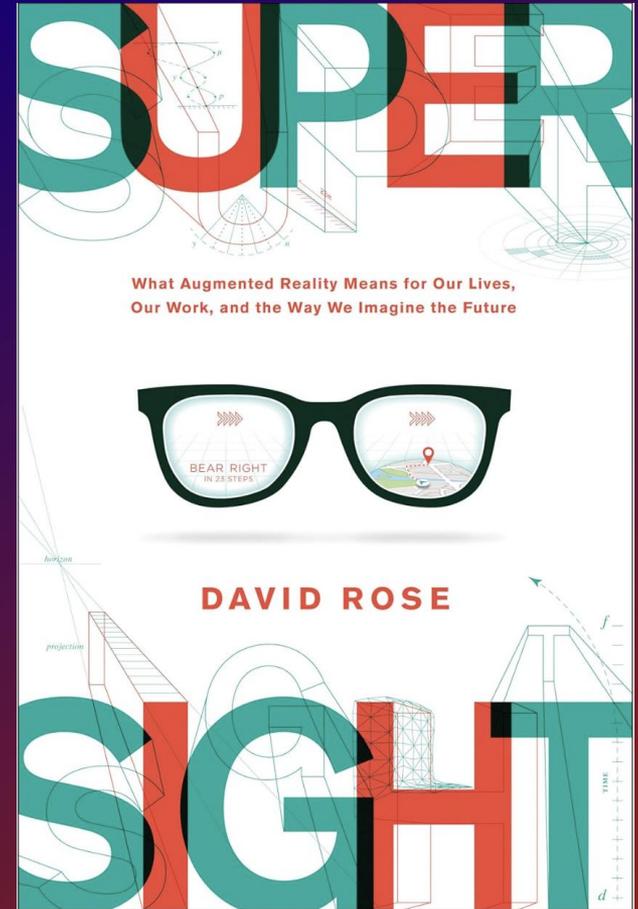
# PHYGITAL

the dynamic convergence of  
digital + physical worlds

2014



2021





# redesigning platforms



## Mojo Vision CEO tested a smart contact lens in his eye



Drew Perkins using Mojo

## Neuralink: Elon Musk's brain chip firm wins US approval for human study

© 26 May



By James FitzGerald  
BBC News

FORBES > INNOVATION > CONSUMER TECH

## Forget Apple Vision Pro: Something Cheaper Is Coming From Apple, Report Says

David Phelan Senior Contributor @  
I write about lifestyle tech

Follow



Jun 11, 2023, 03:32pm EDT

## Humane Ai Pin

Take AI with you everywhere.



## THE NEXT GENERATION OF SMART GLASSES

Now integrated with livestream and AI technology

MEDTECH

## GlucoTrack's 2-year implantable CGM boasts high accuracy in early tests, paving the way for human trials

By Andrea Park

Jan 3, 2024 10:25am

# avatar dating



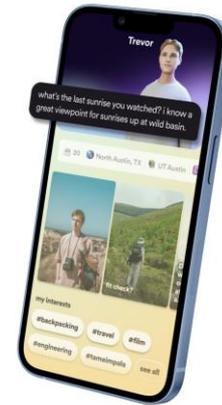
03-09-23

## Gen Z dating app Snack lets your AI-trained avatar go on dates so you don't have to

We live in the future now and this is a thing that's happening.



[GIF: Snack]



**busy? your ai's got your back**



# gamified tax filing



## ♥ The Story ♥

### Do Your Federal Taxes While Romancing Your Waifu!

*Tax Heaven 3000* is a one-of-a-kind dating sim experience that really does your federal taxes!

#### Features

- ✓ Covers the 1040: U.S. Individual Income Tax Return!
- ✓ Checks eligibility for the Earned Income Tax Credit, American Opportunity Credit, and more!
- ✓ Suitable for singles without dependents
- ✓ Features multiple endings!



# redesigning platforms

## *REVOLUTIONIZING*

### How You Dress 3D Avatars – With Ease

What if you could dress a 3D avatar in just a few minutes and even fewer steps? Now, you can. Add wearables with a single click. Then, watch in real-time as METATAILOR intelligently fits, layers, and skin-weights your outfit—and you're done.

PLANS & PRICING

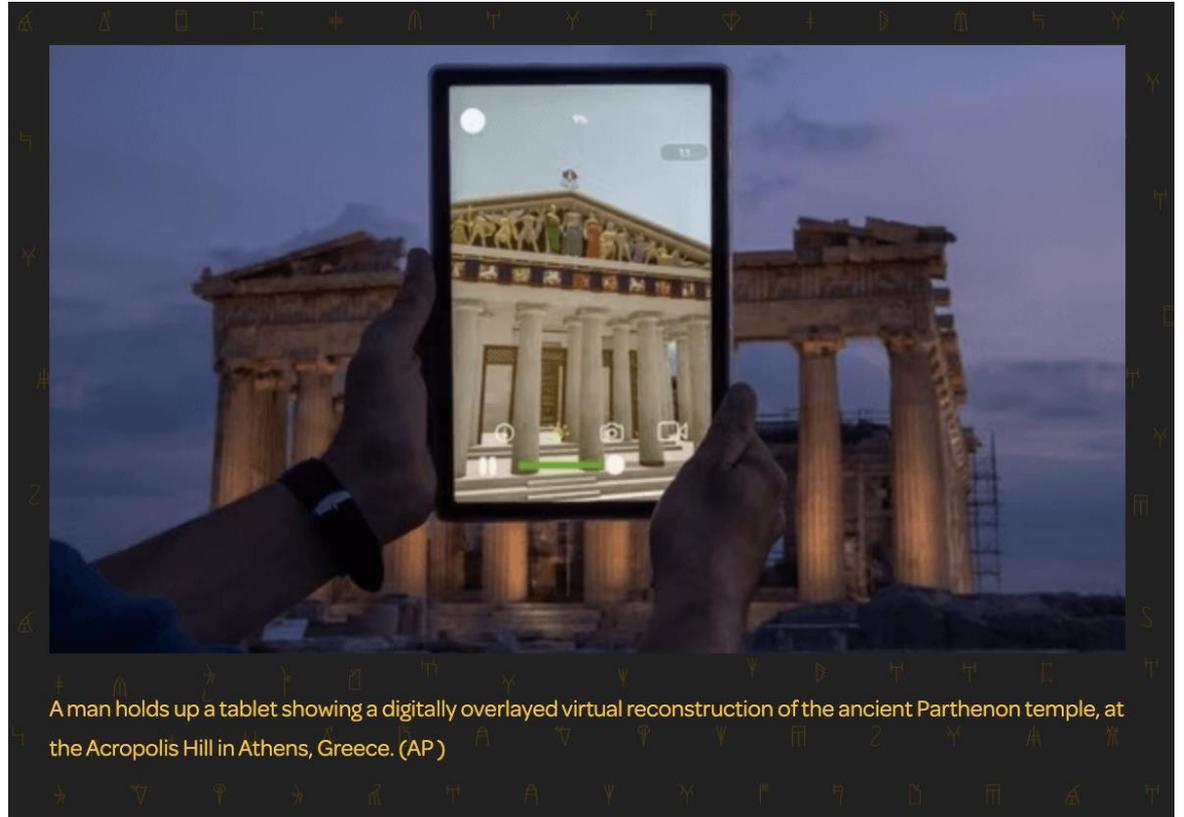
FREE VERSION

METATAILOR



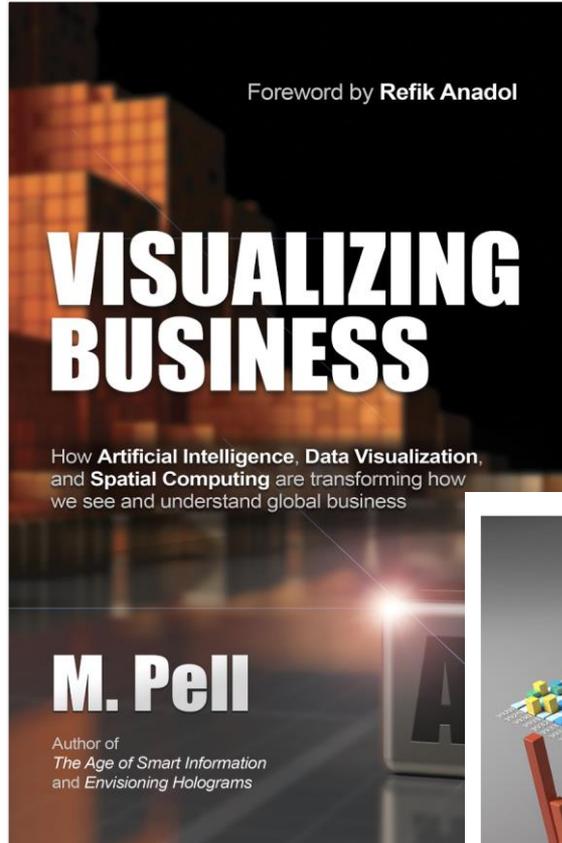
[metatailor.com](https://metatailor.com)

# AR travel + history guide



A man holds up a tablet showing a digitally overlaid virtual reconstruction of the ancient Parthenon temple, at the Acropolis Hill in Athens, Greece. (AP)

# “4D” business modeling



Using the floor plane for projection allows for no glasses immersion

(Credit: Dave Brown, Microsoft Research, M. Pell)

# redefining the game



## Amazon is Changing Football Broadcasts Thanks to Prime Vision with Next Gen Stats

By Tyler Brooke | October 26, 2023

## We watched – and shopped – Amazon's first Black Friday NFL broadcast

BY TAYLOR SOPER on November 24, 2023 at 2:06 pm

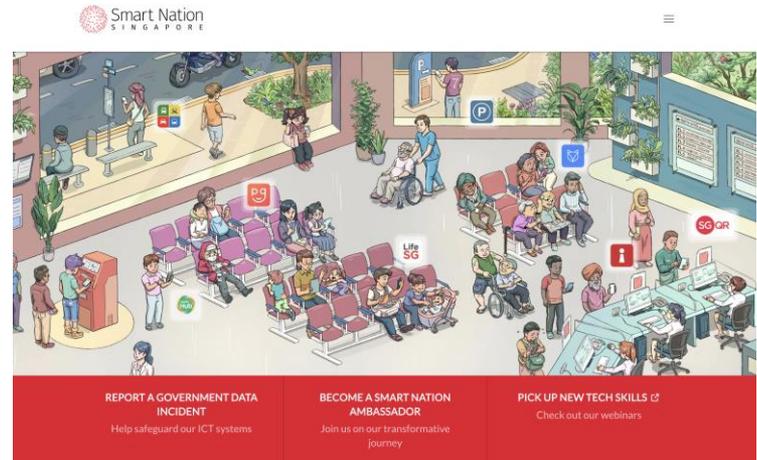


# digital governance

99% of our  
government  
services are  
digital from end to  
end!

See how we have progressed as a Digital  
Government

[READ MORE ABOUT IT HERE](#) →



# #2: CLIMATETECH

# COP28 Agreement Signals “Beginning of the End” of the Fossil Fuel Era

13 December 2023

UN Climate Press Release

Share the article

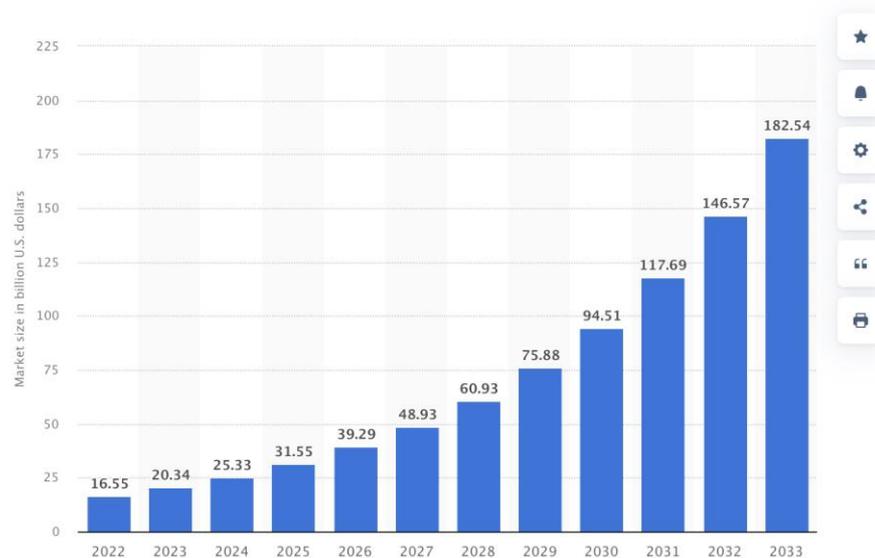


Credit: Kiara Worth | UN Climate Change



## Climate tech market size worldwide from 2022 to 2023, with a forecast to 2033

(in billion U.S. dollars)



[Additional Information](#)

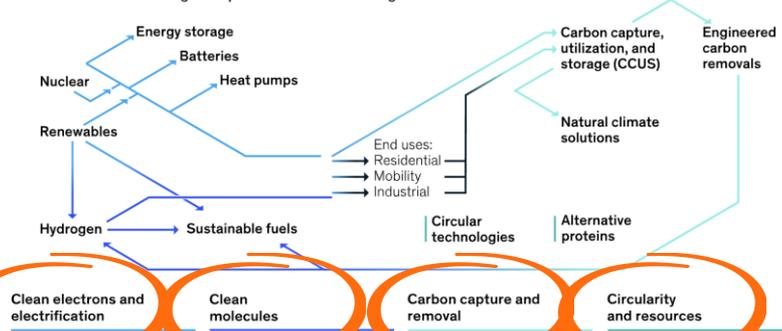
© Statista 2024

[Show source](#)



### A network of 12 technologies is required to achieve climate goals.

How a network of technologies required to achieve climate goals would work



## Houston Becomes Hotspot for Clean Tech Startups

By [Felicity Bradstock](#) - Dec 30, 2023, 4:00 PM CST

- ▶ Houston's shift from traditional oil and gas to renewables is supported by numerous startups, academic programs, and innovation spaces like The Ion and Greentown Labs.
- ▶ The city has become a significant destination for clean tech, attracting over \$6 billion in venture capital in five years and hosting the largest engineering workforce in the U.S.
- ▶ Houston's commitment to sustainability is evident in its transition to renewable energy for municipal facilities and ambitious goals for achieving carbon neutrality by mid-century.





12-15-23

# 10 climate tech innovations that give us hope for 2024

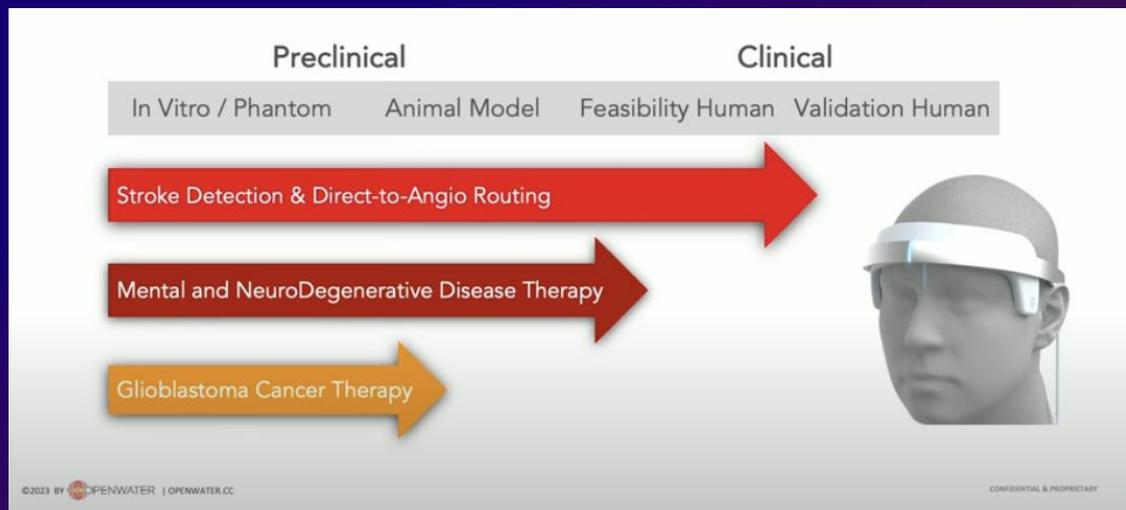
From ships powered by food waste to jet fuel made from CO2, here's the climate tech we're most excited about.



- A new factory scaling up production of CO2-based jet fuel
- A gas utility is helping shift to geothermal heat
- People are starting to swap their gas stoves for induction ones
- A new carbon removal solution is spreading on farms
- Zero-emissions ships are coming
- New tech from MIT turns concrete into a supercapacitor

# #3 REVOLUTIONIZING (brain) HEALTH

## Dr. Mary Lou Jepsen



**“The world’s first  
open-source,  
open-patent,  
open-clinical-data,  
and open-safety-  
sharing company,  
centered on the  
new idea of the  
Silicon Hospital.”**

The image features a dynamic, radial background composed of numerous thin, overlapping lines in a wide spectrum of colors including blue, purple, red, orange, yellow, and green. These lines radiate from a central point, creating a sense of motion and depth. In the center of this pattern is a solid orange circle. Inside this circle, the text "1%" is displayed in a clean, white, sans-serif font.

1%

# Pick #1 (2024): Disinformation

- **Misinformation** is inaccurate information
  - A typo in a book
  - Someone sharing information that was incorrectly remembered
  - A 'hallucination' in Generative AI
- **Disinformation** is a subset of misinformation that is false and *intentionally misleading to achieve an objective*



# Pick #1 (2024): Disinformation

- We have had misinformation for as long as people have communicated (memories are faulty, desire to embellish and entertain is strong, etc.)
- We have had **disinformation** for as long as people have wanted to improve their outcomes (e.g. propaganda)
- But the concerns have exploded since late 2016

# "Fake news" vs "Misinformation, Disinformation"

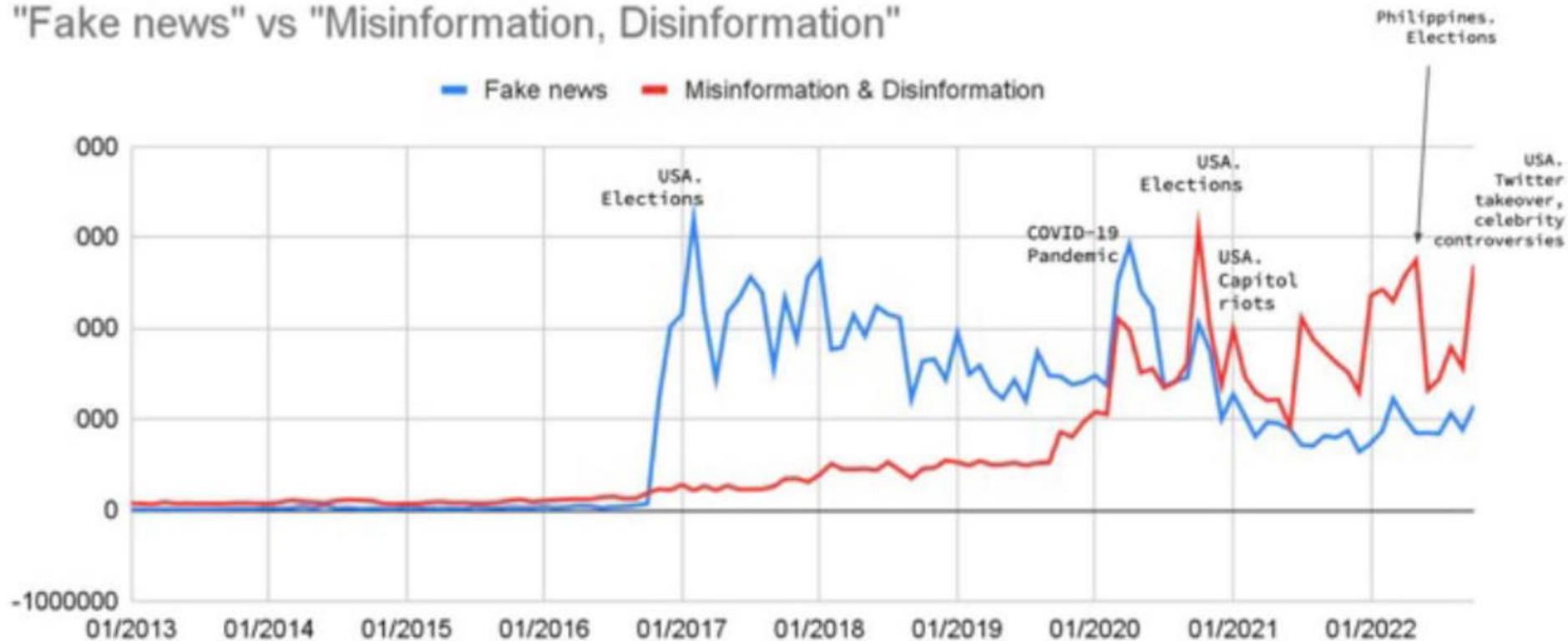


Image 1 of 1 - Fig. 2. Volume of the online conversations about “fake news” (blue curve) and “misinformation/disinformation” (red curve) in the last 10 years.

# Pick #1 (2024): Disinformation

- Technology make it possible to communicate with more people, faster/easier
  - printing press, Internet/email, web, social media, smartphones
- Technology also makes it easier to generate information ('content')... and alter it
  - Autotune, Photoshop, video editing, voice synthesis, have all been around for many years
- **Smartphones and social media** now used by more half the planet—makes it easier to spread, polarize, and enrage
  - Global trends towards polarization, populism, etc.
- **Generative AI now** makes it even easier to create even better false text, images, and video.
  - This can result in misinformation
  - That can be used to create disinformation!

# Pick #1: Disinformation

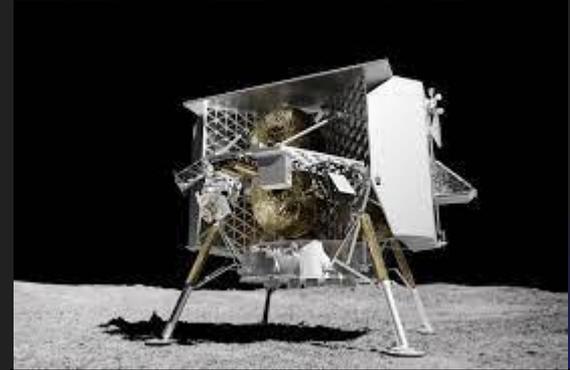
- Societal trends + social media + smartphones + AI (+ human nature) = tremendous potential for massive disinformation
- This does not bode well for elections or society
- ***Government (regulations), AI researchers (tools), social media platforms (policies), and YOU (fact-checking) are all part of the potential ‘solution’***
- We will continue to cover disinformation, including technologies to identify it, in 2024 in Austin Forum programming!

# Pick #2 (2024): The Competitive Commercialization of Space Industry

- Spaceflight is only 67 years old
- Manned spaceflight is only 63 years old
- Only one nation has landed a person on the Moon—and not for 50 years
  
- As of January 3<sup>rd</sup>, 2024, the satellite tracking website “Orbiting Now” lists **8,377 active satellites** in various Earth orbits.
- UT professor Dr. Moribah Jah tracks far more ‘space junk’

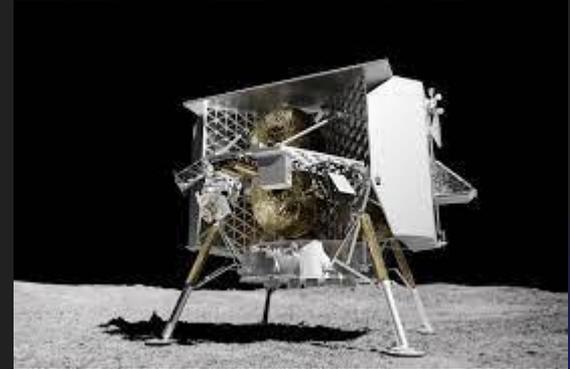
## Pick #2 (2024): The Competitive Commercialization of Space Industry

- SpaceX has been the dominant player in the commercial space industry (as much as Tesla was in EVs, or NVIDIA is in AI silicon)
  - Texas is home to many spaceflight companies!
- ULA just launched its Vulcan rocket after 3 years delay
- Firefly, Astrobotic, Blue Origin, others making progress now!



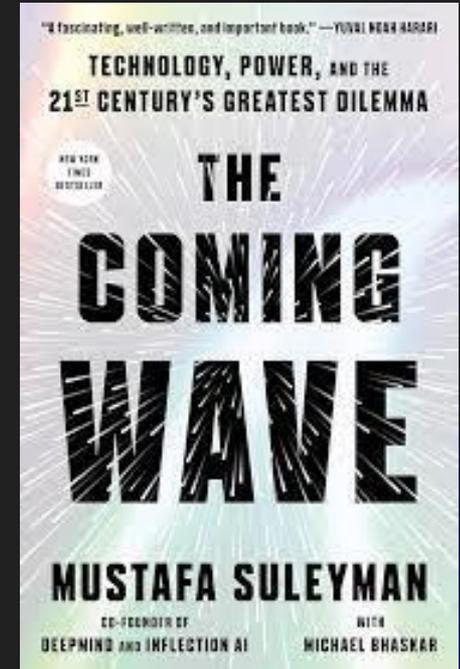
# Pick #2 (2024): The Competitive Commercialization of Space Industry

- 2024 will see hundreds of launches, unmanned and manned!
  - <https://www.spacelaunchschedule.com/2024-launch-schedule/>
  - [https://en.wikipedia.org/wiki/2024\\_in\\_spaceflight](https://en.wikipedia.org/wiki/2024_in_spaceflight)
- Many of these launches are private companies
- SpaceX still #1 but ULA, Northrop Grumman, Blue Origin, and many others
  - Rocket launches are hard, but competition is good!
- Austin Forum will try to schedule a live launch event!



# Pick #3 (2024+): The Confluence of AI, Quantum Computing, and Synthetic Biology

- **AI** is finally showing that *superintelligence*\* is not only possible, but inevitable\*\*
- **Quantum computing** potentially offers revolutionary performance and ability to truly model nature, accelerate and enable new levels of AI, etc.
- **Synthetic biology** is creating ways to create enhanced biological forms, augment humans, etc.
- **TOGETHER**, these technologies may produce a wave of innovation that causes us to question what it is to be human!



# Q&A for Tech Trends for 2024 (and Beyond!)

**ONLINE!**



**Jay Boisseau**  
CEO  
Vizias



**Nancy Giordano**  
Founder & CEO  
Play Big Inc



**Bryon Jacob**  
Co-founder & CTO  
data.world

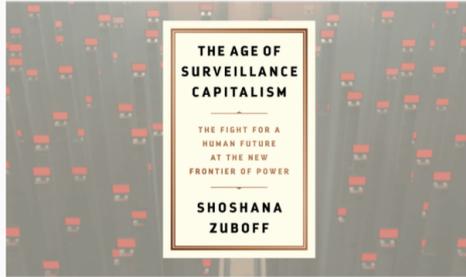


**Jay Williams**  
Founder & CTO  
ARCat

# Donate Your Unused Tech!

- If you have computers, tablets, or smartphones no longer being used, please help those in need
- Bring your devices to any in-person event, and we'll donate to our worthy charities!





January 18, 2024

## Discussion of “The Age of Surveillance Capitalism”

7:15 p.m. CDT | **Online**

[REGISTER](#)

### Location

**Online**

Zoom (register for event to receive link)

### Agenda

7:15 - 8:30 p.m. | **Discussion**

### Moderator

**J. Craig Wheeler**, Samuel T. and Fern Yanagisawa Regents Professor of Astronomy, Emeritus, [The University of Texas at Austin](#)



January 26, 2023

## Introduction to Quantum Computing

9:00 a.m. CT | **In-person**

REGISTER

### Location

**In-person**

Capital Factory

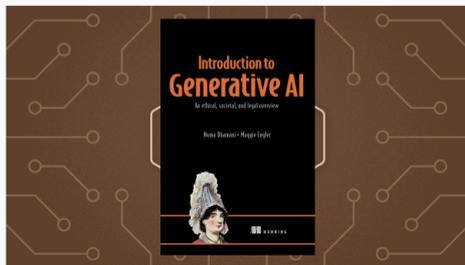
701 Brazos Street, Austin, TX, USA

### Agenda

9:00 a.m. - 12:00 p.m. | **Discussion**

### Moderator

**Jay Boisseau**, Executive Director, Austin Forum on Technology & Society



February 15, 2024

## Discussion of “Introduction to Generative AI: An ethical, societal and legal overview”

7:15 p.m. CDT | **Online**

REGISTER

### Location

**Online**

Zoom (register for event to receive link)

### Agenda

7:15 - 8:30 p.m. | **Discussion**

### Moderator

**Numa Dhamani**, Principal Machine Learning Engineer, [KUNGFU.AI](https://www.kungfu.ai)

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ON 3RD

Corner of 3<sup>rd</sup> St & Nueces St—an easy walk from here!

***KEEP YOUR NAMETAGS FOR FREE PIZZA & DRINKS!***

***Q: What is the best thing you learned tonight?***

(30 seconds)

1 2 3 4 5 6 7 8 9 10

11 12 13 14 15 16 17 18 19 20

21 22 23 24 25 26 27 28 29 

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