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## Futuristic Outlook


A Product of Office of Research Innovation and Commercialization (ORIC),
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# Message from Co-Founder, Director-General, and Head ORIC – UMT

We live in the Modern age, where we do all over work with the help of technology. We know technology by the name “technological know-how”. Discover the latest science and technology news and videos on breakthroughs shaping tomorrow's world with Futurism. The innovation of science has a long history producing many important figures and many developments in the field. Moreover, it made communication easier for us. Humans have cleaned up and created some fantastic and sometimes orthodox inventions.

So, every researcher and faculty member should be up-to-date about innovation in their respective field; that’s why ORIC-UMT introduce the Futuristic Outlook for the UMT family to commensalism with the Innovative world.

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# A - School of Engineering & School of System and Technology

## 1: Inventor Claims His AI is Sentient, Fights to Copyright Its Creations

AI researcher Stephen Thaler is adamant that his AI, which he calls the Device for the Autonomous Bootstrapping of Unified Sentience (DABUS), is indeed sentient. And because of that, he argues that the art DABUS creates — or anything else — should be copyrightable.

But to Thaler, the battle transcends mere human courts.

"DABUS and all of this intellectual property is not about setting precedents with the law," he told Wired in a recent interview. "It's about setting precedents in terms of human acceptance,"

"There is a new species here on Earth," he added, "and it's called DABUS."

So far, the copyright fight has been a losing one for Thaler.

Last week, a US federal court struck down Thaler's attempt to copyright an image DABUS produced, reaffirming the Copyright's Office decision in March and the year before.

Those decisions upheld the doctrine that copyright requires human authorship, which disbars DABUS — or any "new species" — as much as it does as animals.

And besides, for obvious reasons, experts aren't convinced by Thaler's claims of the AI's consciousness.

"I don't even really know where to begin, other than to say, if there is a sentient AI on the planet currently, it's definitely not this," Matthew Sag, a professor of law and artificial intelligence at Emory University, told *Wired*.

Inventing Inventors

Not that that kind of talk has ever deterred Thaler. He has a powerful legal alley: Ryan Abbott, a law professor at the University of Surrey who heads an effort of IP lawyers called the Artificial Inventor Project, founded in 2018. Its goal, as the name suggests, is to allow IP protections for works created by or using an AI.

Abbott's core belief is that, in order to incentivize people to use AI to benefit humanity, its creations, like a disease-staving vaccine, should still be patentable. Under current patent laws, that's not possible, he argues. (Jonas Salk, the creator of the polio vaccine, would have something to say to that. When asked on a live

broadcast why he didn't patent the polio vaccine, Salk famously rejoined: "Could you patent the Sun?")

"In the US, inventors are defined as individuals, and we argued there was no reason that was restricted to a natural person," Abbott told Wired.

But Abbott is less concerned about an AI's autonomy and more worried about how the use of a generative AI affects authorship — or rather, that it shouldn't.

For his part, Sag called this reasoning a "total nonstarter," saying the "bottom line is that we don’t need AI inventors to patent the outcomes of emergent processes."

With their efforts falling flat in the US, Thaler and Abbott await the UK Supreme Court's ruling, set to release in September, on whether a pair of patents attributed to DABUS are valid.

## 2: AI Startups Are Already Running into Some Serious Problems

Less than a year into the AI boom and startups are already grappling with what may become an industry reckoning.

Take Jasper, a buzzy AI startup that raised $125 million for a valuation of $1.5 billion last year — before laying off staff with a gloomy note from its CEO this summer.

Now, in a provocative new story, the *Wall Street Journal* fleshes out where the cracks are starting to form. Basically, monetizing AI is hard, user interest is leveling off or declining, and running the hardware behind these products is often very expensive — meaning that while the tech *does* sometimes offer a substantial "wow" factor, its path to a stable business model is looking rockier than ever.

Underlying it all is the OpenAI-shaped elephant in the room. The company's game-changing chatbot's release in November 2022 brought on some major magical thinking on the part of investors who hoped that the burgeoning technology's commercial value "would materialize at light speed," longtime AI investor and partner at the VC firm Index Ventures Mark Goldberg told the *WSJ*.

Now that wellspring of optimism is coming back to haunt them, as even the OpenAI chatbot's usage seems to be plateauing or even declining. Take Midjourney and Synthesia, two more brand name AI startups where, as the *WSJ* points out, data from the analytics platform Similarweb shows traction flatlining (the latter, though, raised a cool $90 million in June thanks to backing from Nvidia.)

Adding to their woes, the market is lousy with free offerings — a perfect illustration being ChatGPT — and users have been hesitant to shell out for a paid version.

That's not to say the whole ship is sinking. OpenAI is slated to generate $1 billion in revenue over the next year, offsetting at least some of the staggering cost of running ChatGPT.

But while Google and Microsoft have the resources to lose money for years, and OpenAI has a premier product that went massively viral, it's not clear how much oxygen that's going to leave for the Jaspers of the world.

What's left, as Goldberg put it, is "a shallow trough of disillusionment" in the AI space — and the path forward seems to get murkier by the day.

## 3: USA Today Owner Pauses AI Articles After Butchering Sports Coverage

*The Columbus Dispatch*, a newspaper serving the Columbus, Ohio area, has suspended its AI efforts after its AI-powered sports writing bot was caught churning out horrible, robotic articles about local sports, *Axios* reports.

The *Dispatch* — which is notably owned by *USA Today* publisher Gannett — only started publishing the AI-generated sports pieces on August 18, using the bot to drum up quick-hit stories about the winners and losers in regional high school football and soccer matches. And though the paper's ethics disclosure states that all AI-spun content featured in its reporting "must be verified for accuracy and factuality before being used in reporting," we'd be surprised if a single human eye was laid on these articles before publishing.

Why? Because each formulaic article is riddled with laughably vague statements — one August 18 article about a football game, for example, described the event as a "close encounter of the athletic kind" — and repetitive phrasing about hibernating second halves and which team drew first blood. One article even failed to populate properly, with the text instead featuring a bracketed glimpse at how its opening sentence was *supposed* to read.

"The Worthington Christian [[WINNING_TEAM_MASCOT]] defeated the Westerville North [[LOSING_TEAM_MASCOT]] 2-1 in an Ohio boys soccer game on Saturday," reads the butchered intro. Yikes.

The *Dispatch*'s AI efforts were powered by LedeAI, a startup claiming to use generative AI to offer "lightning-fast" and "easy to read" sports content. (The firm also goes so far as to declare that its datasets are the "deepest and most scalable in the world," which feels a bit like slapping an Amazon-purchased World's Best Coffee sticker onto any old cafe window.)

Another bite of this riveting, well-informed journalism:

"The Steubenville Big Red defeated the Cambridge Bobcats 10-0 in an Ohio boys soccer game on Saturday," reads one August 19th article. "A suffocating defense helped Steubenville handle Cambridge 10-0 in Ohio boys soccer on Aug. 19."

That's it. That's the whole post.

Gannett has unsurprisingly put a temporary kibosh on the project, telling *Axios* that "this local AI sports effort is being paused."

The publisher is "continually evaluating vendors," a spokesperson for the publisher added, "as we refine processes to ensure all the news and information we provide meets the highest journalistic standards."

Speaking of journalistic standards? It's worth noting, as *Axios* did, that this is the first football season played since Gannett shut down *ThisWeek Community News*, an award-winning newspaper collection that documented local area sports. But in the words of *Dispatch's* AI itself, may the AI effort enjoy its "hibernation."

## 4: Scientists Train New AI Exclusively on The Dark Web

OpenAI's large language models (LLMs) are trained on a vast array of datasets, pulling information from the internet's dustiest and cobweb-covered corners.

But what if such a model were to crawl through the dark web — the internet's seedy underbelly where you can host a site without your identity being public or even available to law enforcement — instead? A team of South Korean researchers did just that, creating an AI model dubbed Dark BERT to index some of the sketchiest domains on the internet.

It's a fascinating glimpse into some of the murkiest corners of the World Wide Web, which have become synonymous with illegal and malicious activities from the sharing of leaked data to the sale of hard drugs.

It sounds like a nightmare, but the researchers say Dark BERT has noble intentions: trying to shed light on new ways of fighting cybercrime, a field that has made increasing use of natural language processing.

Perhaps unsurprisingly, making sense of the parts of the web that aren't indexed by search engines like Google and often can only be accessed via specific software wasn't an easy task.

As detailed in a yet-to-be-peer-reviewed paper titled "Dark BERT: A language model for the dark side of the internet," the team hooked their model up to the Tor network, a system for accessing parts of the dark web. It then got to work, creating a database of the raw data it found.

The team says their new LLM was far better at making sense of the dark web than other models that were trained to complete similar tasks, including RoBERTa, which Facebook researchers designed back in 2019 to "predict intentionally hidden sections of text within otherwise unannotated language examples," according to an official description.

"Our evaluation results show that Dark BERT-based classification model outperforms that of known pretrained language models," the researchers wrote in their paper.

The team suggests Dark BERT could be used for a variety of cybersecurity-related tasks, such as detecting sites that sell ransomware or leak confidential data. It could also be used to crawl through the countless dark web forums that get updated daily and monitor them for any exchange of illicit information.

## 5: Buzzfeed Says Its AI is Outperforming Its Pesky Human Employees

The struggling media company *BuzzFeed* told investors this week that its readers spend 40 percent more time with its AI-facilitated quizzes than traditional ones, *Bloomberg* reports.

While we have yet to see a more detailed breakdown of the numbers — the company would obviously be incentivized to present the stats in as flattering a way as possible — it is interesting to see it doubling down on AI after shutting down its entire Pulitzer-winning news division last month, laying off around 120 of its 1,200 total employees.

Earlier this year, *BuzzFeed* announced it would be letting human employees create quizzes that made use of AI chatbots — which, to be fair, was kind of a fun idea.

Despite those early promises, it soon turned out that *BuzzFeed* was using AI to generate more than just quizzes. Dozens of SEO-driven travel guides started appearing on the site that made heavy use of hackneyed writing and repeated phrases. In a statement to *Futurism* at the time, *BuzzFeed* said it was "continuing to experiment with AI to 'enhance human creativity,'" and "trying new formats that allow anyone (with or without a formal background in writing or content creation) to contribute their ideas and unique perspectives on our site."

As of right now, even the AI quizzes aren't much more than glorified Mad Libs — a far cry from the"more personalized, more creative, more dynamic" AI-generated content CEO Jonah Peretti promised in a March interview with *CNN*.

And it's not just *BuzzFeed*. Earlier this year, *Futurism* found that both *CNET* and *Men's Health* were quietly publishing entire AI-generated articles, some of which were riddled with errors and plagiarism.

Now, though, *BuzzFeed* is seemingly seeking to justify the AI move by trying to demonstrate that its experiment is paying off.

According to *Bloomberg*, *BuzzFeed* told investors that it's projecting adjusted earnings before interest, taxes, depreciation, and amortization to be in the "high teens" millions of dollars this fiscal year (the company's stock, meanwhile, is now hovering around half its value at the time it first announced the AI content.)

Whether any of that is attributable to the purported success of its investment in AI — or the mass layoffs that have rocked the company this year — remains to be seen.

## 6: OpenAI is Funding an App for Parents to Manage Kids' Lives

OpenAI CEO Sam Altman says artificial intelligence has the potential to automate tedious tasks and free people to do more meaningful work, but so far it's mainly been generating headlines about how it's gobbling people's artwork and other intellectual property.

Now it turns out it's funding an AI-powered personal assistant app for parents called Milo, *Insider* reports, which is part of a wave of "parent tech" and — if you think about it — could maybe save a few marriages, since the burden of child management still largely falls on the shoulders of women.

Milo, built on GPT-4, enables parents to dump anything from screenshots to voice memos into the platform and have AI process this information into actionable text reminders, calendar invites and other alerts. Currently it's in beta mode.

"I know what it feels like to be a parent that has forgotten pajama day, pizza day, that disappointment," Milo CEO Avni Patel Thompson told *Insider*.

Thompson received funding from Y Combinator in 2020 and has been steadily trying to build the product, according to *Insider*, but her company suffered software issues. Her funding was getting depleted last summerand she had to lay off employees.

Finally, as a last ditch effort, she reached out to Altman, who served as Y Combinator president previously. According to *Insider*, Altman hooked up Milo with more funding and access to OpenAI's technology.

"You never hear someone talk about the power of these models to help families," OpenAI COO Brad Lightcap to *Insider*."The idea that OpenAI's models could be powering that experience is what really sold us," he said.

Milo seems like the best use case for consumer AI. Though questions remain about data privacy — would you willingly surrender vital information about yourself and loved ones to AI companies when we don't know the contents of their black boxes — it *will* be interesting to see whether personal assistants could be the killer app for AI.

## 7: Google Unveils Plan to Demolish the Journalism Industry Using AI

It's been living up to that removal lately. At its annual I/O in San Francisco this week, the search giant finally lifted the lid on its vision for AI-integrated search — and that vision, apparently, involves cutting digital publishers off at the knees.

Google's new AI-powered search interface, dubbed "Search Generative Experience," or SGE for short, involves a feature called "AI Snapshot." Basically, it's an enormous top-of-the-page summarization feature. Ask, for example, "why is sourdough bread still so popular?" — one of the examples that Google used in their presentation — and, before you get to the blue links that we're all familiar with, Google will provide you with a large language model (LLM) -generated summary. Or, we guess, snapshot.

"Google's normal search results load almost immediately," *The Verge's* David Pierce explains. "Above them, a rectangular orange section pulses and glows and shows the phrase 'Generative AI is experimental.' A few seconds later, the glowing is replaced by an AI-generated summary: a few paragraphs detailing how good sourdough tastes, the upsides of its prebiotic abilities, and more."

"To the right," he adds, "there are three links to sites with information that Reid says 'corroborates' what's in the summary."

As it goes without saying, this format of search, where Google uses AI tech to regurgitate the internet back to users, is wildly different from how the search-facilitated internet works today. Right now, if you Google that same query — "why is sourdough bread still so popular?" — you'd be met with a more familiar scene: a featured excerpt from whichever website won the SEO race (in this case, that website was *British Baker*), followed by that series of blue links.

At first glance, the change might seem relatively benign. Often, all folks surfing the web want is a quick-hit summary or snippet of something anyway.

But it's not unfair to say that Google, which in April, according to data from SimilarWeb, hosted roughly 91 percent of all search traffic, is somewhat synonymous with, well, the internet. And the internet isn't just some ethereal, predetermined thing, as natural water or air. The internet is a marketplace, and Google is its kingmaker.

As such, the demo raises an extremely important question for the future of the already-ravaged journalism industry: if Google's AI is going to mulch up original

work and provide a distilled version of it to users at scale, without ever connecting them to the original work, how will publishers continue to monetize their work?

"Google has unveiled its vision for how it will incorporate AI into search," tweeted *The Verge's* James Vincent. "The quick answer: it's going to gobble up the open web and then summarize/rewrite/regurgitate it (pick the adjective that reflects your level of disquiet) in a shiny Google UI."

Research has shown that information consumers hardly ever make it to even the second page of search results, let alone even the bottom of the page. And worse, it's not like Google's taking clicks away from its longtime information merchants by hiring an army of human content writers to churn out summarization. Google's new search interface, which is built on a model that's already been trained by way of boatloads upon boatloads of unpaid-for human output, will seemingly be swallowing even more human-made content and spitting it back out to information-seekers, all the while taking valuable clicks away from the publishers that are actually doing the work of reporting, curating, and holding powerful interests like Google to account.

As of now, it's unclear whether or how Google plans to compensate those publishers.

In an emailed statement to Futurism, a Google spokesperson said that "we're introducing this new generative AI experience as an experiment in Search Labs to help us iterate and improve, while incorporating feedback from users and other stakeholders."

"As we experiment with new LLM-powered capabilities in Search, we'll continue to prioritize approaches that will allow us to send valuable traffic to a wide range of creators and support a healthy, open web," the spokesperson added.

Asked specifically whether the company has plans to compensate publishers for any AI-regurgitated content, Google had little in response.

"We don't have plans to share on this, but we'll continue to work with the broader ecosystem," the spokesperson told Futurism.

Publishers, however, are extremely wary of these changes.

"If this actually works and is implemented in a firm way," wrote *RPG Site* owner Alex Donaldson, "this is literally the end of the business model for vast swathes of digital media lol."

At the end of the day, there are a lot of questions that Google needs to answer here, not the least being that AI systems, Google's included, spew fabrications all the time.

The Silicon Valley giant has long claimed that its goal is to maximize access to information. SGE, though, seemingly seeks to do something quite different — and if the company doesn't figure out a way to compensate publishers for the labor it'll be gleaning from the journalists, the effects on the public's actual access to information could be catastrophic.

## 8: Seemingly AI-Written Book on Maui Wildfire Becomes Amazon Bestseller, Gets Taken Down

Earlier this August, a catastrophic wildfire broke out on the Hawaiian island of Maui, razing entire towns and leaving at least 116 hundred people dead.

And then, while over a thousand people still remained missing, a book that claimed to document the Maui wildfires was published on Amazon just days after the disaster, briefly becoming a bestseller in its category, according to The Register.

Top Storiesby FuturismREAD MOREDead Star Devouring Rival, Using Its Flesh to Shoot"Cosmic Cannonballs"

Titled "Fire and Fury: The Story of the 2023 Maui and its Implications for Climate Change," the 87-page volume has now been removed from Amazon's marketplace, Gizmodo reports — and everything points to it being a cold-blooded, AI-written cash grab, which is now being used to fuel conspiracy theories. More on that in a minute.

"Clearly this author, or rather parasite, is writing for profit," stated one Amazon review of the unanimously one-star rated book.

The impossible timeliness of its publication is already one strike against "Fire and Fury"'s credibility. Even though its publication date is visibly listed as August 10, its description claims to chronicle "the events of August 8 -11."

Dr. Miles Stones, its stated author, does not appear to exist. His biography states only that "I'd rather not say."

Examining the book's prose does it no favors, either. Its description on Amazon starts with the words "The book" in five out of the seven sentences in the same paragraph, notes an analysis by Snopes.

*Snopes* also found that the writing inside the book is "clunky" like an AI's. The formatting, too, is all over the place, filled with inexplicable blank pages and stock images.

It should come as no surprise, then, that the book has already been taken down. Amazon did the same earlier this month, when author Jane Friedman discovered fraudulent, AI-generated books with her name on them being sold on its marketplace. After widespread outcry, Amazon quietly removed them.

Overall, it seems like a fairly open-and-shut case. Some dirtbag used a large language model like ChatGPT to vomit out a whole book, then shoddily packaged it for Amazon to make a quick buck on a horrific tragedy.

Yet the book's speedy publication has fueled the imaginations of some climate-denying conspiracy theorists, who sincerely cite it as evidence that the Maui wildfires were a pre-planned disaster.

"One has to ask one's self, how does a book like this emerge so quickly?" asked another Amazon reviewer, as quoted by Gizmodo.

"Fire and Fury" is thus a perfect example of AI's effortless propensity for spreading misinformation: the book itself is a totally made up account of a current event, it was generated within just days of said tragedy, and it inadvertently became evidence for conspiracy theories.

## 9: Experts Urge Personhood Rights for the "Conscious" AIs of the Future

First corporations, and now artificial intelligence — the push for nonhuman personhood continues apace, though this latest argument is decidedly more complicated than the former.

In an op-ed for the *Los Angeles Times*, philosophy expert Eric Schwitzgebel and "nonhuman" intelligence researcher Henry Shevlin argued that although AI technology is definitely not there yet, it has "become increasingly plausible that AI systems could exhibit something like consciousness" — and if or when that occurs, the algorithms, too, will need rights.

Citing last year's AI consciousness wars — which we covered extensively and even dipped our toes into — the researchers noted that "some leading theorists contend that we already have the core technological ingredients for conscious machines."

If machines were to ever gain consciousness, Schwitzgebel and Shevlin argue we would have to begin thinking critically about how the AIs are treated — or rather, how they may force our hands.

"The AI systems themselves might begin to plead, or seem to plead, for ethical treatment," the pair predicted. "They might demand not to be turned off, reformatted or deleted; beg to be allowed to do certain tasks rather than others; insist on rights, freedom and new powers; perhaps even expect to be treated as our equals."

The "enormous" moral risks involved in such a collective decision would undoubtedly carry great weight, especially if AIs become conscious sooner rather than later.

"Suppose we respond conservatively, declining to change law or policy until there’s widespread consensus that AI systems really are meaningfully sentient," Shevlin and Schwitzgebel wrote. "While this might seem appropriately cautious, it also guarantees that we will be slow to recognize the rights of our AI creations."

"If AI consciousness arrives sooner than the most conservative theorists expect, then this would likely result in the moral equivalent of slavery and murder of potentially millions or billions of sentient AI systems — suffering on a scale normally associated with wars or famines," they added.

The "safer" alternative to this doomsday scenario would be to give conscious machines rights upfront — but that, too, would come with its own problems.

"Imagine if we couldn’t update or delete a hate-spewing or lie-peddling algorithm because some people worry that the algorithm is conscious," the experts posited. "Or imagine if someone lets a human die to save an AI 'friend.' If we too quickly grant AI systems substantial rights, the human costs could be enormous."

The only way to ensure neither of these outcomes occurs, the pair wrote, would be to stop giving an AI a conscience in the first place.

Fortunately, we still have plenty of time to make that happen.

"None of our current AI systems are meaningfully conscious," the theorists noted. "They are not harmed if we delete them. We should stick with creating systems we know aren’t significantly sentient and don’t deserve rights, which we can then treat as the disposable property they are."

Given how stoked some people in the machine learning community seem to be at the prospect of conscious AIs, algorithmic sentience, and even artificial general intelligence (AGI), however, that kind of caution likely isn't shared by many.

In fact, some scientists are already actively working towards that very end.

"Eventually, with the right combination of scientific and engineering expertise, we might be able to go all the way to creating AI systems that are indisputably conscious," Shevlin and Schwitzgebel concluded. "But then we should be prepared to pay the cost: giving them the rights they deserve."

## 10: Author Annoyed to Find Amazon Selling AI-Generated Books Under Her Name

*Author Jane Friedman was furious after discovering roughly a dozen books being sold on Amazon — with her name on them.*

*Fortunately, the seemingly AI-written books listed under her name ended up being taken down after she posted about the situation on Twitter and her own blog.*

*In an interview with* The Guardian*, Friedman recounted how the viral debacle began. A reader contacted her about the phony titles that mimicked her real work, which is ironically designed to help new authors navigate the publishing industry with titles like "The Business of Being a Writer" and "Publishing 101."*

*These fraudulent books, which had titles like "How to Write and Publish an eBook Quickly and Make Money" and "Igniting Ideas: Your Guide to Writing a Bestseller eBook on Amazon," were unsurprisingly troubling to the author, whose whole career is built upon providing advice.*

*"It makes me look like I'm trying to take advantage of people with really crappy books," she told* The Guardian.

*Though unable to completely verify her strong suspicion, the author believes the "terrible" copy of the books reads like AI because, as she wrote on her blog, she has "used these AI tools extensively to test how well they can reproduce my knowledge" and had even done "vanity prompting" by asking AI to write in her style.*

*"I've been blogging since 2009 — there's a lot of my content publicly available for training AI models," Friedman wrote. "As soon as I read the first pages of these fake books, it was like reading ChatGPT responses I had generated myself."*

*Confident that the phony books were "if not wholly generated by AI, then at least mostly generated by AI," Friedman submitted a takedown request to Amazon and was initially denied because, as a company spokesperson told her, she hadn't trademarked her name.*

*Curiously enough, Amazon and Goodreads both took the fraudulent titles down after the story began gaining traction online. An Amazon spokesperson told* The Guardian *and* The Daily Beast *in identical statements that the company has "clear content guidelines governing which books can be listed for sale" and that it "promptly investigate[s] any book when a concern is raised."*

*"I’m sure [the titles were removed] in no small part due to my visibility and reputation in the writing and publishing community," Friedman wrote on her blog. "What will authors with smaller profiles do when this happens to them?"*

*The entire saga, though undoubtedly taxing, has had one silver lining for Friedman.*

*"I am revisiting my key book, 'The Business of Being a Writer,' and I am going to have a section on AI," she told* The Daily Beast. *"At least now I will have a good story to include."*

# B – School of Sciences

## 1: Bad News: Bees Are Dying at A Shocking Rate

It's not exactly news that bee populations have been suffering, especially those that live in or nearby human-populated areas.

But according to a new long-term study, published in the journal *Current Biology*, even pollinators that live in remote, human-free forests, away from humans and aren't directly exposed to harmful behaviors like chemical pesticide use and habitat destruction, are disappearing in pretty horrifying numbers — yet another troubling sign that our much-needed pollinators are disappearing at alarming rates.

Bees, as *The Bee Conservancy* puts it, "lie at the heart of our survival." Human agricultural processes rely on these precious pollinators, which play a critical role in growing the crops that we and our livestock eat; they play a similarly critical role in natural food systems, too.

In short, if we lose bees, we lose *a lot* of plants, which means that we lose a lot of animals, habitats, and crops in turn. Not good.

The 15-year study, which concluded last year, closely tracked bee and butterfly populations in three different remote, forested areas in northern Georgia's Oconee National Forest.

After analyzing the data, the researchers were able to conclude that roughly 62.5 percent of the original bee population was lost, while butterfly populations shrank by a similarly shocking 57.6 percent.

The number of bee species dropped too, with the area losing 39 percent of its species biodiversity.

"Our results suggest," the study's authors warn, "that sharp declines in pollinators may not be limited to areas experiencing direct anthropogenic disturbances."

Pollination Assassination

Though there's no clear-cut explanation for why these remote populations are shrinking, the researchers did present a few hypotheticals. For instance, the presence of invasive species, notably an invasive wood-nesting ant, may be damaging to the area's carpenter bee population.

Perhaps unsurprisingly, the researchers listed "increasing minimum temperatures" — in other words, climate change — as the other likely culprit for the pollinators' troubling plight. And considering that we don't exactly have that

problem under control, it's hard to see a scenario where the bees and butterflies of the region recover in significant numbers, at least not in the short term.

It is worth noting that above-ground nesting bees fared worse than below-ground nesters, though all populations, as noted by the researchers, showed a sharp decline.

Again, it's not surprising news — but for the worst of reasons.

## 2: Alarmed Scientists Discover “Terrifying” Rocks Made of Plastic Trash on Remote Island

Scientists are reeling from the discovery of "plastic rocks" on a remote volcanic island off of the Brazilian coast — a troubling sign, experts told *Reuters*, of just how deeply plastic pollution has embedded itself into Earth's geological patterns.

The rocks, dubbed "plastiglomerates" — a molten mixture of sediment and debris, held together by melted plastic — have been discovered at a particularly troubling place.

"This is new and terrifying at the same time, because pollution has reached geology," Fernanda Avelar Santos, a geologist from the Federal University of Parana, explained to *Reuters*. "The place where we found these samples is a permanently preserved area in Brazil, near the place green turtles lay their eggs."

The island in question, Trindade Island, is a vital conservation area for endangered green turtles, which use the remote ocean as a nesting ground. With the exception of scientists, the only humans allowed on the island are Brazillian Navy officials, who patrol the area in an effort to protect the turtles.

In other words: in case we needed yet another reminder, plastic is absolutely everywhere, from the depths of the Mariana Trench to inside toddlers — and Trinidade Island is no exception.

Scientists traced the plastic in the mysterious rocks back to fishing nets, one of the most notorious — and devastating — ocean pollutants.

According to Santos, net trash is common on the remote island's beaches.

"The [nets] are dragged by the marine currents and accumulate on the beach," the geologist told *Reuters*, adding that "when the temperature rises, this plastic melt and becomes embedded with the beach's natural material."

It's a concerning discovery and one that certainly signals that the Anthropocene — an era in Earth's history defined by human development's impact on Earth's atmosphere, climate, and other geological functions — is well underway.

"We talk so much about the Anthropocene, and this is it," Santos told *Reuters*.

"The pollution, the garbage in the sea and the plastic dumped incorrectly in the oceans is becoming geological material," she added, "preserved in the earth's geological records."

## 3: Nuclear Plant Admits It Accidentally Leaked 400,000 Gallons of Radioactive Water

Months after alerting environmental officials that its Monticello, Minnesota-based nuclear plant had sprung a radioactive leak, power provider Xcel Energy is finally facing public scrutiny — prompting criticism, since neither Xcel nor local officials actually brought the news to the public's attention.

As *NPR* reports, the leak — 400,000 gallons of water laced with tritium, a radioactive hydrogen molecule — was first identified back in November. And though the public has *technically* had access to the news for a while in the form of an official bulletin from the federal Nuclear Regulatory Commission (NRC), corporate and government officials involved in the matter say that they kept the development quiet so they could investigate the scope of the leak in peace.

"We knew there was a presence of tritium in one monitoring well," Minnesota Pollution Control Agency (MPCA) spokesman Michael Rafferty told the Associated Press, "however Xcel had not yet identified the source of the leak and its location."

"Now that we have all the information about where the leak occurred, how much was released into groundwater, and that contaminated groundwater had moved beyond the original location, we are sharing this information," he added, noting that the contaminated water has been contained to Xcel-owned land and doesn't pose any concerns to human health.

To be fair, as far as accidental radioactive waste goes, tritium is relatively lower-risk. In fact, according to an NRC fact sheet, everyone is "exposed to small amounts of tritium every day, because it occurs naturally in the environment and the foods we eat." Xcel reportedly maintains that the leaked tritium levels fall below NRC toxicity guidelines.

That said, radioactive leaks are never a net positive, and though secrecy may have staved off bad press during the investigation and containment process, it could well be argued that choosing to forgo transparency in cases like this sows more suspicion than it does trust. It can't be fun for locals to know that information was being withheld — whether the substance in question ultimately causes extensive, minimal, or even zero harm.

"While this leak does not pose a risk to the public or the environment, we take this very seriously and are working to safely address the situation," Chris Clark, president of Xcel Energy–Minnesota, North Dakota and South Dakota, said in the company's statement. "We continue to gather and treat all potentially affected water while regularly monitoring nearby groundwater sources."

## 4: The Ocean's Plastic Pollution Has Spiked To "Unprecedented" Levels

After trawling through some forty years' worth of data, scientists have identified a foreboding "plastic smog" pervading our oceans that comprises more than 171 trillion plastic particles, according to their new study published in the journal *PLOS ONE*. Weighed altogether, that amounts to around 2.3 million tons.

Equally alarming was the "rapid and unprecedented" increase of the particles in the ocean since 2005 — which is only expected to worsen in the coming decades.

"It is much higher than previous estimates," study co-author Lisa Erdle, director of science and innovation at the environmental non-profit 5 Gyres, told CNN.

Plastic Beach

These estimates are based on surface water data between 1979 and 2019 that was gathered from nearly 12,000 stations across the world.

Rather than general plastic waste, the researchers focused specifically on microplastics. These fine particles, while vastly outweighed by the eight to ten million tons of general plastic waste dumped in the oceans each year, are just as dangerous to ocean life since they can be easily ingested, and are almost as inescapable in ocean water now as salt.

But microplastics don't need to be ingested to be harmful. They can just as easily seep toxic chemicals into the surrounding water, too.

Beyond Cleanup

Ominously, based on the woefully inadequate current rates of recycling paired with an increase in plastic production, the study predicts that the rate of plastic pollution entering the ocean will increase by about 2.6 times by 2040, highlighting the lack of meaningful, urgent action being undertaken to combat the problem.

"We clearly need some solutions that have teeth," Erdle told CNN.

And by solutions that have teeth, Erdle doesn't mean fishing errant plastic bottles out of the ocean, which, as the researchers wrote in the study, "has limited merit" — a sentiment shared by other marine scientists.

Instead, the best solution according to the researchers is "creating binding and enforceable international agreements to prevent the emissions of plastic pollution."

In other words, humanity will have to start getting real about limiting the amount of plastic we produce — and, most of the time, end up wasting.

"Cleanup is futile if we continue to produce plastic at the current rate, and we have heard about recycling for too long while the plastic industry simultaneously rejects any commitments to buy recycled material or design for recyclability," said study author Marcus Eriksen, co-founder of 5 Gyres, as quoted by The Guardian.

## 5: Eating Disorder Hotline Fires Entire Staff and Replaces Them with a Chatbot

Workers taking crisis hotline calls at the National Eating Disorders Association (NEDA) unionized — and just four days later, according to an *NPR* report, NEDA told its hotline staff that they would be fired and replaced by a chatbot.

Per *NPR*, the hotline is hugely active. NEDA is the largest eating disorder-focused nonprofit in the US, and its helpline fielded nearly 70,000 calls last year alone. But for all of that volume, staffing was astonishingly slim, with only six paid staffers and a few supervisors, who "train and oversee up to 200 volunteers at any given time," according to the report.

Unsurprisingly, NEDA experienced high volunteer turnover and burnout — after all, on top of the staffing disparity, answering helpline calls is difficult emotional labor — and as a result, workers opted to organize.

"We asked for adequate staffing and ongoing training... we didn't even ask for more money," Abbie Harper, a former helpline associate and unionizer, wrote in a May 4 blog post. "When NEDA refused [to recognize our union], we filed for an election with the National Labor Relations Board and won on March 17."

But the company's leadership apparently didn't take well to the union push, announcing in a call just a few days thereafter that the nonprofit would wind down the crisis hotline entirely. Instead, they would introduce a "wellness chatbot" named Tessa — and fire the nonprofit's human call-takers in the process.

"We will, subject to the terms of our legal responsibilities, begin to wind down the helpline as currently operating," NEDA board chair Geoff Craddock told the hotline's former employees in that March call, audio of which *NPR* obtained. "With a transition to Tessa, the AI-assisted technology, expected around June 1."

According to its website, Tessa, which has technically been in operation since 2022, isn't a crisis bot — in fact, when you log onto the service, that's the first thing that it'll tell you. It's designed instead to deliver something called "Body Positive," which is described as "an interactive eating disorder prevention program."

"Through Body Positive," reads the site, "chatters learn about contributing factors to negative body image and gain a toolbox of healthy habits and coping strategies for handling negative thoughts."

Tessa's creators have launched a staunch defense of the automated tool, arguing since it can handle more volume than NEDA's former fleet of volunteers, it'll be more effective.

"The chatbot was created based on decades of research conducted by myself and my colleagues," Ellen Fitzsimmons-Craft, a psychiatrist at Washington University and the leader on the team that built Tessa, told *Vice*. "I'm not discounting in any way the potential helpfulness to talk to somebody about concerns. It's an entirely different service designed to teach people evidence-based strategies to prevent and provide some early intervention for eating disorder symptoms."

It's certainly a grim turn for employment politics — after all, we can definitely imagine a nightmare world in which employers start to dangle automated machines like Tessa over their human employees' heads as leverage.

But Tessa's implementation also brings up a whole other set of issues regarding responsibility. Sure, humans make mistakes, but at least there's accountability there. When a machine learning system makes a mistake, who's accountable?

Though NEDA and Tessa's creators promise that the bot isn't ChatGPT and, as the NEDA spokesperson told *Vice*, can't "go off the rails," any computer can fail.

"We, Helpline Associates United, are heartbroken to lose our jobs and deeply disappointed that the National Eating Disorders Association (NEDA) has chosen to move forward with shutting down the helpline," Helpline Associates United told *Vice* in a statement. "We're not quitting. We're not striking. We will continue to show up every day to support our community until June 1st."

"A chatbot is no substitute for human empathy, and we believe this decision will cause irreparable harm to the eating disorders community," they added.

## 6: Man Finds Dream Apartments in Brutal Market Using ChatGPT

In this economy, finding a new home is a brutal, demoralizing slog due to limited housing stock and surging demand**,** particularly in big cities.

A man in Berlin, Germany claims to have radically expedited this process by using ChatGPT after fruitlessly searching for a new apartment to rent for four frustrating months.

28-year-old coder Daniel Dippold had almost given up trying to find a suitable apartment for himself and his girlfriend when he came up with the idea to meld his coding knowledge and ChatGPT to help him accelerate the search process, according to *Insider*.

"When I was really exhausted looking for a flat in Berlin, I figured, 'Hey, can I build something that makes it easier for me potentially with GPT?'" said Dippold, who started venture capital outfit EWOR.

After narrowing down a shortlist of possible units, Dippold finally found two suitable places for him and his girlfriend — demonstrating an excellent use case of the tech.

After asking ChatGPT for various suggestions, the program came up with the idea of putting together a list of property managers in the city. He then asked ChatGPT to generate code for a web scraper that can collect names and contact information of both private and public property managers.

From there, he was able to create a database of more than 100 property management firms.

He emailed each contact in German, a process that had to be done manually because ChatGPT is more suited for English. Dippold had ChatGPT generate code to send an automatic response to each property manager, further accelerating the process. Each automatic response "would include personal documents like their passports and pay stubs," according to *Business Insider*.

At the time of writing, Dippold and his girlfriend are still deciding between two possible apartments, both of which have already accepted their applications.

Though this ChatGPT-powered process was relatively pain-free, Dippold conceded that the program was not perfect. For instance, the chatbot came up with impractical suggestions, could only deal with brief prompts, and generated error-ridden code.

But it's a creative way to make use of the tech nonetheless. And it actually proved effective.

"I would definitely do this again," Dippold told *Insider*.

## 7: Scientists Horrified as Sea Surface Temperatures Spike Off the Charts

Scientists are alarmed as ocean surface temperatures have continuously set new record-breaking highs over the last month.

According to data analyzed by the University of Maine's Climate Change Institute, daily ocean surface temperatures breached historical record highs since at least 1982 in April.

That means we are in uncharted territory as global warming continues to take its toll with extreme weather events becoming more common by the year — and scientists are clearly shaken by the spiking temperatures.

"This is getting ridiculous," physicist and climate change expert Rober Rohde tweeted. "For the last month [the daily index] has been continuously reading higher than in any previous year and still shows no sign of settling."

But others argued such a rise should be expected at this point.

"While it is comforting to see that the models work, it is terrifying, of course, to see climate change happening in real life," replied Woods Hole Oceanographic Institution biogeochemist Jens Terhaar. "We are in it and it is just the beginning."

It's part of a greater, worrying trend. A study published last month in the journal *Earth System Science Data* found that our planet accumulated almost as much heat in the past 15 years as it had in the previous 45, a worrying sign that we're in for considerable rises in global temperatures.

Worse yet, we're still not entirely sure why this is even occurring.

"It's not yet well established, why such a rapid change, and such a huge change is happening," Karina Von Schuckmann, the lead author of the study, told the *BBC*.

Setting New Records

The previous ocean surface temperature record was set in 2016 during an El Niño, *ScienceAlert* reports, a weather pattern associated with a warm band of ocean water developing in the Pacific.

This year's El Niño, however, will kick off at a much higher starting point, as *Axios* points out, which means we could see similar climate events accelerating going forward.

"2023 is off to an alarming start, even before El Niño conditions fully develop later this year," Kim Cobb, a climate scientist at Brown University, told *Axios*, adding that "new record will likely be surpassed in a matter of years."

## 8: NYC Appears to Be Sinking Because Its Skyscrapers Are So Heavy

Bad news for New Yorkers: The Big Apple appears to be sinking a little deeper into the Earth each year, under the unfathomable weight of its iconic skyscrapers.

A new study published in the journal *Earth's Future* finds that the geological process of subsidence, in which sediments shift and settle, seems to be occurring rapidly in specific parts of NYC, including the just-at-sea-level area of Lower Manhattan and parts of Brooklyn and Queens as well.

Overall, wrote researchers from the United States Geological Survey and the University of Rhode Island, New York is sinking at one to two millimeters per year— though in those particular problem areas, the situation seems to be worse.

As with everything else, this sinking doesn't happen in a vacuum. The further New York descends, the more vulnerable it becomes to climate change-related catastrophes, too, with 2012's Hurricane Sandy serving as a cautionary tale.

"New York faces significant challenges from flood hazard; the threat of sea level rise is 3 to 4 times higher than the global average along the Atlantic coast of North America," the team behind the paper wrote. "A deeply concentrated population of 8.4 million people faces varying degrees of hazard from inundation in New York City."

NYC isn't alone among coastal cities that are sinking more and more each year. In 2021, one of the same researchers from the US Geological Survey found similar results in San Francisco.

"New York is emblematic of growing coastal cities all over the world that are observed to be subsiding," the new paper notes, "meaning there is a shared global challenge of mitigation against a growing inundation hazard."

As it often goes with these sorts of alarm-raising studies, Parsons and his team don't really give much in the way of solutions for the problem, even as they note that more and more people move to coastal urban regions each year.

"Globally," the paper concludes, "populations who live in subsiding cities will face rising seas at rates up to four times faster than stable regions."

So yeah, New York is sinking a bit more each year, which sucks for the many millions of people who call it home, not to mention the millions more projected to move to it in the coming years.

## 9: Nuclear Fusion Startup Gets Funding for Twisty-Looking Reactor

The race to commercial nuclear fusion is heating up after German startup Proxima Fusion announced that it's raised the equivalent of around $8.6 million to build a wild-looking type of reactor called a stellarator, which looks like a distorted and especially twisty French cruller doughnut.

Nuclear fusion, the process which powers up the Sun and other stars, promises to be a source of safe, clean and plentiful energy if harnessed and commercialized, never mind a game-changing tool to fight the impacts of climate change. That's a huge "if," though — untold billions have gone into the tech over the decades, without so far yielding anything approaching a practical or scaled-up power generation system.

If money talks, though, that could be starting to change. And Proxima is indeed talking a big talk: with this modest funding in the bag, it says it's hoping to have the world's first nuclear fusion power plant online "within the 2030s."

Most current designs for nuclear fusion reactors can be divided into two types: the tokamak and stellarator. Both are magnetic confinement fusion devices, in which hydrogen isotopes are heated up to temperatures hotter than the Sun. These excited particles become energized plasma and are spun around inside a circular chamber or vessel. Powerful magnetic coils wrapping around the vessel confine the charged plasma, where atoms fuse and release intense power.

A tokamak is a type of magnetic confinement fusion device shaped like a doughnut, and has been the leading prototype for nuclear fusion reactors. Stellarators have a far more complex design, with a series of magnets spiraling around the plasma.

Proxima is basing its techn on work developed at the Max Planck Institute for Plasma Physics (IPP.) Scientists and engineers at the institute have worked on Wendel stein 7-X (W7-X) — pictured above — the world's largest and most technologically advanced stellarator, which provides the basis for the future stellarator device at Proxima, which was spun out from IPP.

"A tokamak is kind of easy to design, hard to operate, whereas a stellarator is super hard to design but once you've designed it, it's way easier to operate," said Ian Hogarth, the cofounder of Plural Platform, which is helping fund Proxima, told the Financial Times.

## 10: Chemical Turns Waters of Venice Canal a Fluorescent Green

Everyone from city residents to tourists were puzzled when a stretch of the picturesque waters of the Grand Canal in Venice took on a shade of lurid neon green over the weekend — but *CNN* reports, fortunately, that an investigation by local officials determined that a non-toxic chemical for infrastructure testing was responsible for the wild color shift.

Venetians happened upon the "anomalous fluorescent green color" early Sunday morning, prompting firefighters, police and environmental officials to come to the Rialto Bridge area of the Grand Canal and collect samples for testing, according to a report from a regional environmental agency. Before getting test results, officials told *CNN* they were concerned that eco-terrorists may have been responsible for the incident, and they're still suspicious the incident could be related to activism.

The initial spot of green water expanded its reach in the ensuing hours, making for surreal scenes in the famed waterway during the day. Rubber-necking tourists snapped photos, while gondoliers plied their trade in the waves that appeared as if someone had poured barrels of absinthe into the water.

Investigators eventually confirmed that the green color was due to fluorescein — yes, as in "fluorescent"— a compound used for eye exams as well water infrastructure studies like identifying leaks.

"The results of the ecotoxicological analyzes did not show the presence of toxicity in the samples analysed," they reassured the public.

The investigators told *CNN* that it's not clear how the chemical ended up in the canal, but it didn't seem to be an accident. Police have not ruled out mischief from environmental activists, and further test results on the samples are expected later.

This isn't the first time Venetian waters have turned green from fluorescein. Artist Nicolás García Uriburu dyed the waters in 1968 to coincide with the 34th Venice Biennale, in a stunt "aimed to bring attention to the relationship between nature and civilization and to promote ecological consciousness as a critical part of culture."

# D - School of Governance and Society

## 1: Sec Head Fears AI Could Cause A Financial Crash

Looks like SEC Chair Gary Gensler has been harboring some serious — as in, destroy-the-economy-level serious — AI apprehensions for some time now.

As Axios reports, back in 2020, Gensler — still a professor at MIT at the time — penned a paper arguing that embedding an array of too-similar deep learning programs into our economic structures could stand to undermine those systems to the tune of a crisis-level crash.

Coauthored alongside MIT engineer and computer scientist Lily Bailey, the paper contends that the "broad adoption" of AI could push economic systems to the point of deeply fragile uniformity and interconnectedness, which would leave our financial systems vulnerable to, say, a disastrous mass sell-off triggered by machine predictions. Our "existing financial sector regulatory regimes," meanwhile, designed to manage now-outdated human-speed fintech and analytics, wouldn't be able to keep up, leading to similarly consequential regulatory gaps.

As AI "moves to a mature stage of broad adoption," the authors wrote, "it may lead to financial system fragility and economy-wide risks." Big gulp.

The paper is expansive, and among other reasons to fear model hegemony, Gensler and Bailey warn of the risk of data "crowding" and "herding," or the reality that "models built on the same datasets are likely to generate highly correlated predictions that proceed in lockstep."

So, basically: if you train two models on the same data, those models can be expected to draw the same or similar conclusions. And if too many advanced models come to the same conclusions, at the same time — well, it probably wouldn't be good.

The paper's warnings, however, go beyond basic model predictions. It also touches on machine bias, and the reality that AI systems — even with the best existing guardrails — are embedded with human social prejudices. If our financial systems were to be rebuilt on bias-ridden predictive programs, the reasoning goes, it could be disastrous for marginalized groups.

It's all concerning, but if there's any silver lining, it's good to see that the person who was considering these wide-ranging impacts of AI back in 2020 is the guy in charge of America's biggest financial regulator now. And between calls

for Wall Street crackdowns and extremely pointed speeches, he's at least paying lip service to AI's potential financial harms.

"This technology will be the center of future crises, future financial crises," Gensler recently told The New York Times. "It has to do with this powerful set of economics around scale and networks."

But of course, whether any meaningful regulatory action follows still remains to be seen.

In a leaked internal memo, a Google exec expressed serious fears about losing the ongoing AI arms race — but the competition that the exec fears most, according to an NBC report, might be a little unexpected.

"We've done a lot of looking over our shoulders at OpenAI," reads the memo, which a Google spokesperson confirmed as authentic to NBC but cautioned were only the thoughts of one person at the company. "But the uncomfortable truth is, we aren’t positioned to win this arms race and neither is OpenAI."

"I'm talking, of course, about open source. Plainly put, they are lapping us," it continued. "While our models still hold a slight edge in terms of quality, the gap is closing astonishingly quickly."

In other words, according to this exec, though Google and its Silicon Valley competitors like Microsoft-slash-OpenAI and Meta still have a narrow upper hand, open-source models are quickly catching up.

And that, per the memo, is reason for concern.

The Google exec makes a pretty good case. Aided in large part by a major leak of Meta's advanced language model, LLaMa, small and scrappy open-source models like AutoGPT have made major strides in recent months.

And to that end, it's one thing to have visible, tangible competition like Meta and Microsoft-slash-OpenAI. Fighting an arms race against what's effectively the open web, where users can learn and borrow from each other and tailor development to their personal needs, is another beast entirely.

"I don't think I need something as powerful as GPT-4 for a lot of things that I want to do," Simon Willison, a programmer and tech analyst and blogger, told NBC.

"The open question I have right now is, how small can the model be while still being useful?" he added. "That's something which the open-source community is figuring out really, really quickly."

"Largely, I think people are trying to do good with these things, make people more productive or are making experiences better," added Mark Riedl, a computer scientist and professor at Georgia Tech. "You don't want a monopoly, or even a small set of companies kind of controlling everything. And I think you'll see a greater level of creativity by putting these tools into the hands of more people."

But while there might be some merits to a decentralized approach to AI, there are also some dangers. In addition to a number of more philosophical ethical questions, AI poses a lot of very real threats, and in the hands of theoretically unlimited bad actors, systems built by way of open-source channels may well do a lot of harm.

"It really now becomes the question of what are people going to use these things for," Riedl told NBC. "There's really no restrictions on making specialized versions of models that are designed specifically to create toxic material, or misinformation, or to spread hate on the internet."

## 2: Trump Shares AI Voice-Cloned Fake Video of Anderson Cooper

In the wake of his controversial *CNN* town hall appearance last Wednesday night, Trump took to his social media platform Truth Social on Friday morning to share yet another piece of AI-generated material: a foul-mouthed, voice-cloned video featuring longtime *CNN* anchor Anderson Cooper explaining that Trump, in no uncertain terms, had succeeded in his town hall appearance.

"That was President Donald J. Trump ripping us a new asshole here on *CNN's* live presidential town hall," said the fake Cooper. "Thank you for watching, have a good night."

Of course, the bespectacled Cooper absolutely never said that. But while the video in question isn't exactly convincing — the AI-generated audio in the Trump-posted clip doesn't match Cooper's mouth — it's yet another reminder that AI may well play a big role in the upcoming election cycle, and jury's still out on whether we're ready to deal with that or not.

"We're not prepared for this," AJ Nash, vice president of intelligence at the cybersecurity firm ZeroFox, told the *Associated Press*. "To me, the big leap forward is the audio and video capabilities that have emerged."

"When you can do that on a large scale, and distribute it on social platforms," he added, "well, it's going to have a major impact."

As other experts noted to *PBS*, the risks that generative AI systems like voice clones and other deepfake technologies pose to the 2024 election cycle go beyond what any candidate or campaign might be posting online themselves. There are a number of ways that bad actors, in the US and abroad, might use the tech to potentially influence campaign outcomes, and we should all probably be wary.

"What if Elon Musk personally calls you and tells you to vote for a certain candidate?" Oren Etzioni, the founding CEO of the Allen Institute for AI, told *PBS*. "A lot of people would listen. But it's not him."

"What happens if an international entity — a cybercriminal or a nation-state — impersonates someone. What is the impact? Do we have any recourse?" asked Petko Stoyanov, global chief technology officer at cybersecurity firm Forcepoint. "We're going to see a lot more misinformation from international sources."

In any case, it certainly matters that a former US president, who's currently the leading Republican candidate for 2024, is ever-so-willing to share faked content. We're in for a wild ride.

## 3: Newspaper Apologizes for Accidentally Running Deranged AI-Generated Article

The influential, 150-year-old newspaper *The Irish Times* just apologized for accidentally publishing an AI-generated hoax article — bylined by an entirely fake AI-generated "journalist," no less — in its Opinion section.

In a statement published Sunday, editor Ruadhán Mac Cormaic apologized for the incident, which he described the incident as a "deliberate and coordinated deception."

"It was a breach of the trust between the *Irish Times* and its readers, and we are genuinely sorry," read the statement. "The incident has highlighted a gap in our pre-publication procedures. We need to make them more robust, and we will."

"It has also underlined one of the challenges raised by generative AI for news organizations," Mac Cormaic added. "We, like others, will learn and adapt."

Welp. So long, reality.

The anonymous person behind the AI-generated article in question, "Irish women's obsession with fake tan is problematic," sounds insufferable. They told the *Guardian* that they were actively attempting to both "give [their] friends a laugh" and "stir the shit" in the ongoing public discourse about identity politics. Exactly what the internet's information infrastructure needs right now, right?

According to the *Guardian*, the plan unfortunately worked, at least to a degree. The piece — which discussed cultural appropriation and the ethics of fake tanning through the purported lens of a fictional Latinx immigrant who grew up in Guayaquil, Ecuador — was reportedly the paper's second-most read article ever published, and sparked discussion online and on the radio.

Worse, the *Irish Times* only realized that it'd published an AI hoax when the author themselves took to Twitter and, from an account attributed to the fake name that they'd published the story under, admitted to the plot.

"Some people have called me an alt-right troll," the unidentified hoaxer, who described themselves as a nonbinary university student — and who also claims to be from Ireland, not Ecuador, although who knows if any of that is true either — told the *Guardian*, "but I don't think that I am."

The unnamed student added that they'd used OpenAI's ChatGPT to generate roughly 80 percent of the article, while they used OpenAI's DALL-E 2 text-to-image to create an image of what they believed to be an accurate representation

of a "woke" journalist: "female, overweight, blue hair, business casual clothing, smug expression."

The *Irish Times* certainly has some egg on its face, and we'd probably advise everyone in media to learn from their mistake. AI tools are pretty much everywhere now — and as a result, sorting through what's real and what isn't is likely to get increasingly difficult.

## 4: Elon Musk Roasts Dudes Pivoting from Crypto to AI

A broken clock is, as they say, right twice a day — and even Tesla CEO Elon Musk, the king of bad takes, occasionally gets it right when it comes to artificial intelligence.

"'I used to be in crypto,'" Musk tweeted, pretend-quoting the kind of bros who, ironically, worship him, "'but now I got interested in AI.'"

While the crypto-to-AI pipeline is nothing new, it has, predictably, become a popular pivot. The cryptocurrency industry faces record lows in value and public interest — while AI has become the hottest new trend in tech in large part thanks to the bombastic debut of OpenAI's ChatGPT chatbot and Microsoft's Bing AI.

When He's Right

The topic of AI clearly has been preoccupying Musk, who had a banner week making public comments about it.

It all began with him tweeting about the "existential angst" he's suffering about the controversial technology, before announcing he was looking to build his own anti-"woke" chatbot to rival that of OpenAI, a company he co-founded and subsequently resigned from.

Just yesterday, the billionaire was quoted at a Tesla investor meeting calling for AI regulation — and now, it looks like he's moved on to making fun of it.

During that same investor meeting, Musk implied he helped lay the groundwork for OpenAI's ChatGPT.

"It's quite dangerous technology," the CEO said during the meeting. "I fear I may have done some things to accelerate it."

We must admit that it's very bizarre to find ourselves agreeing with Musk about anything, much less AI — and for once, it seems like his opinions may align with those of the public.

## 6: Donald Trump Shares Slightly Misfigured AI-Generated Image of Himself Praying

As America's upcoming election cycle continues to take shape, one thing's for sure: fans of former president and current presidential candidate Donald Trump love themselves some image generators, and they're not afraid to use 'em. Trump, in fact, isn't afraid to hit the share button on AI-generated fan art of him*self*, either.

Amid the Trump-stirred frenzy surrounding the former president's allegedly-imminent arrest, number 45 himself decided yesterday morning to take to his social media platform, Truth Social, to post a fairly lifelike — but almost certainly AI-generated — image of himself taking a knee beneath a ray of heavenly light to pray, presumably for himself to not be arrested.

The fake image, as *Forbes* reports, has been circulating on pro-Trump social media since at least the weekend, when similarly AI-generated images depicting Trump being arrested also began circulating in the same digital circles. Naturally.

While the rendering in question is pretty lifelike, there are a few dead giveaways that it's very likely AI-made.

Zoom in on the hands, and you'll notice that some of the fingers are curiously mushed together, with the former prez's right pinky looking especially, uh, nonexistent. Trump's right knee is also directly behind his back knee, and not off to the side. (Don't know about you, but we've never met a 76-year-old with that level of hip mobility.)

And lastly, there are some other "people" in the background of the image, but all of them look decidedly disinterested in the former POTUS. They're all either looking at their phones or looking away, and we can't imagine that if any president, in the middle of any room, took a knee to pray in a ray of golden, glowing Jesus light, everyone would probably pay at least a bit of attention. Or at least snap a selfie with such a choice backdrop.

Onward, We Guess

Giveaways aside, though, the "photo" is still impressive, and a lot of people, particulary older and less technologically savvy folks, might not be able to tell the difference.

Of course, fan art has always existed, and fans can technically make and share whatever they want. But this specific — and quite new, at least in terms of ease and accessibility — type of hyperrealistic *and* easily-generated AI imagery sits dangerously on the line between fan art and misinformation, especially considering that the former president in question shared the hype-y

photo *while* actively contributing to a swell of fury and excitement over something that *hasn't even happened.* And, of course, without marking the image as bot-generated.

## 7: ChatGPT’s Dirty Secret, It’s Powered By "Grunts" Making $15 Per Hour

OpenAI's finances are all over the place, but one thing is clear — not much of the money it spends or earns is going to the low-wage contract workers hired to train its AI.

Two OpenAI contractors revealed to *NBC News* that the kind of work that goes into training large language models (LLMs) like those behind ChatGPT is very much "grunt work" — though in the case of these two individuals, they're pretty happy to be doing it.

As 34-year-old Kansas City denizen and OpenAI contractor Alexej Savreux explained, the job requires a lot of boring-sounding labor: labeling photos, writing predictions for the AI, and other things that help the LLM "learn" how to generate responses better.

"We are grunt workers," said Savreux, "but there would be no AI language systems without it."

"You can design all the neural networks you want, you can get all the researchers involved you want, but without labelers, you have no ChatGPT," he added. "You have nothing."

Wages of War

This kind of low-wage, uninsured contract work is a staple of the machine learning industry, according to Sonam Jindal of the San Francisco-based nonprofit research firm Partnership on AI.

"A lot of the discourse around AI is very congratulatory," Jindal told *NBC*. "But we’re missing a big part of the story: that this is still hugely reliant on a large human workforce."

While the work and its pay rate don't exactly seem sexy, Savreaux credits his work-from-home AI training gig that brought him $15 per hour, which is above Missouri's $12 minimum wage, with helping to pull him out of homelessness.

"People sometimes minimize these necessary, laborious jobs," he said. "It’s the necessary, entry-level area of machine learning."

Jatin Kumar, a 22-year-old recent college graduate in Texas, echoed that sentiment when telling *NBC* about his postgrad job as an OpenAI conversational trainer, which he says is helping him work towards building his own startup.

"Initially, it started off as a way for me to help out at OpenAI and learn about existing technologies," Kumar said. "But now, I can't see myself stepping away from this role."

## 8: China Arrests Man for Using ChatGPT to Write Fake News

The age of artificial intelligence arrests appears to have kicked off in earnest in China, where a man was detained for using ChatGPT to allegedly generate fake news.

As the *South China Morning Post* reports, a man identified only by his surname has been arrested in the country's Gansu province after, per local police, "using artificial intelligence technology to concoct false and untrue information."

The fake news in question apparently claimed, falsely, that nine people had died in a train accident at the end of April. A bunch of different versions of the story were reportedly published to Baijihao, a news blog-esque social network run by the Chinese search engine Baidu.

As the *SCMP* notes, this appears to be the first time that the public has been made aware of any arrests under China's new "deepfake" regulations, which bar the use of "deep synthesis" software without visible labeling.

Legalese

Known as the "The Administrative Provisions on Deep Synthesis for Internet Information Service," the new law, which took effect in January, requires all AI-edited content to be explicitly labeled and have its original, real-life source listed. It also demands that anyone who uses generative software to edit someone's voice or image alert the person in question and get their consent to do so.

The sweeping new regulation also lists about 1,300 government-approved news sites allowed to use generative AI to write or create content, and indicates that all content made with AI must maintain "correct political direction and correct public opinion orientation," per its wording.

The report indicates that the suspect used ChatGPT specifically, which although not available in China is easily accessed through a VPN. He was charged, per local police, with "picking quarrels and provoking trouble," a broad charge that can ultimately result in five to ten years in prison.

With AI's ability to make believable fake content increasing every day, regulation of it is necessary — and although China's approach does sound draconian, maybe there are some glimmers of policy that could benefit the rest of the world here.

# E – Office of Research Innovation and Commercialization (ORIC)

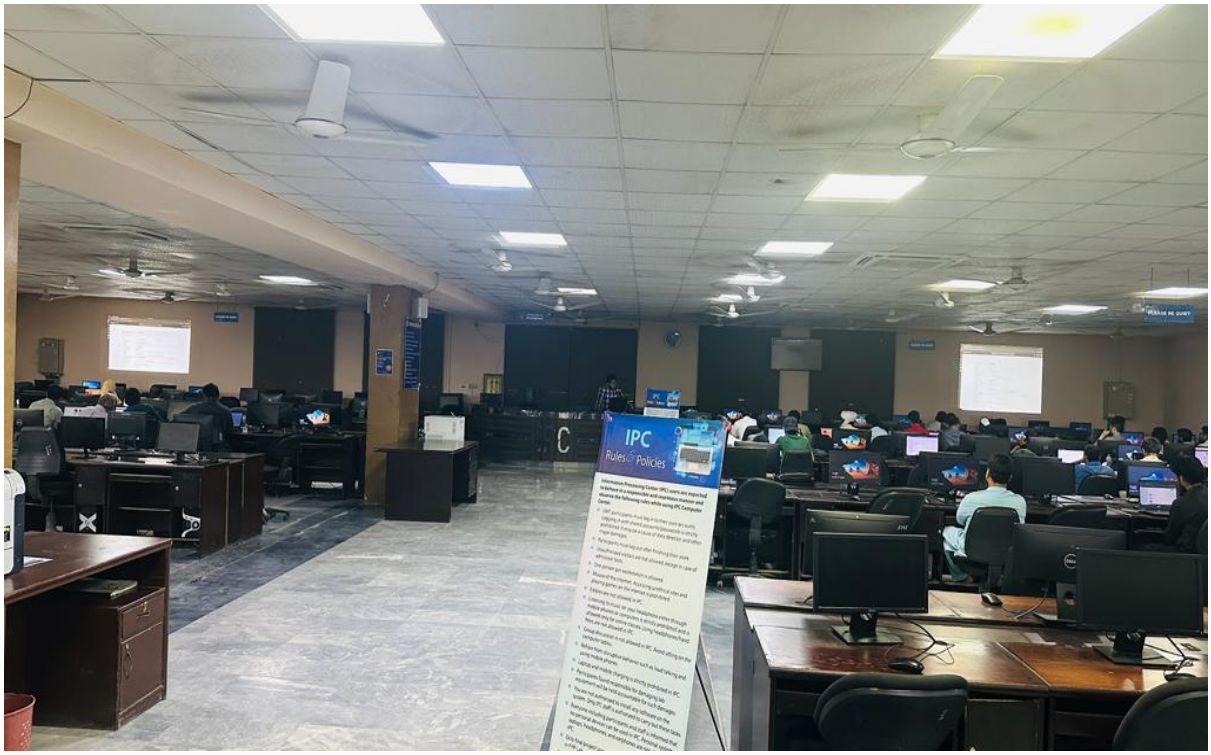
## 1: Events Organized and Facilitated by ORIC

### *1.1 Training Program on Web 3.0 and Metaverse on Sunday 06 August, 2023, at University of Management and Technology (UMT).*

Office of Research Innovation and Commercialization (ORIC), University of Management and Technology (UMT), in collaboration with The Presidential Initiative for Artificial Intelligence and Computing (PIAIC) arranged a training Program on Web 3.0 and Metaverse at UMT on Sunday 06 August, 2023, at University of Management and Technology (UMT).

***1.2 Training Program on Web 3.0 and Metaverse on Sunday 13 August, 2023, at University of Management and Technology (UMT).***

Office of Research Innovation and Commercialization (ORIC), University of Management and Technology (UMT), in collaboration with The Presidential Initiative for Artificial Intelligence and Computing (PIAIC) arranged a training Program on Web 3.0 and Metaverse at UMT on Sunday 13 August, 2023, at University of Management and Technology (UMT).


IPC
Rules & Policies


UMT

***1.3 HEC Training of ORIC Heads at Superior University Lahore on 16 to 18 August, 2023***

The Office of Research Innovation and Commercialization (ORIC) attended the Three Days HEC Training of ORIC Heads at Superior University Lahore on 16 to 18 August, 2023 from 9:00 AM to 5:30 PM.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***1.4 Training Program on Web 3.0 and Metaverse on Sunday 20 August, 2023, at University of Management and Technology (UMT).***

Office of Research Innovation and Commercialization (ORIC), University of Management and Technology (UMT), in collaboration with The Presidential Initiative for Artificial Intelligence and Computing (PIAIC) arranged a training Program on Web 3.0 and Metaverse at UMT on Sunday 20 August, 2023, at University of Management and Technology (UMT).

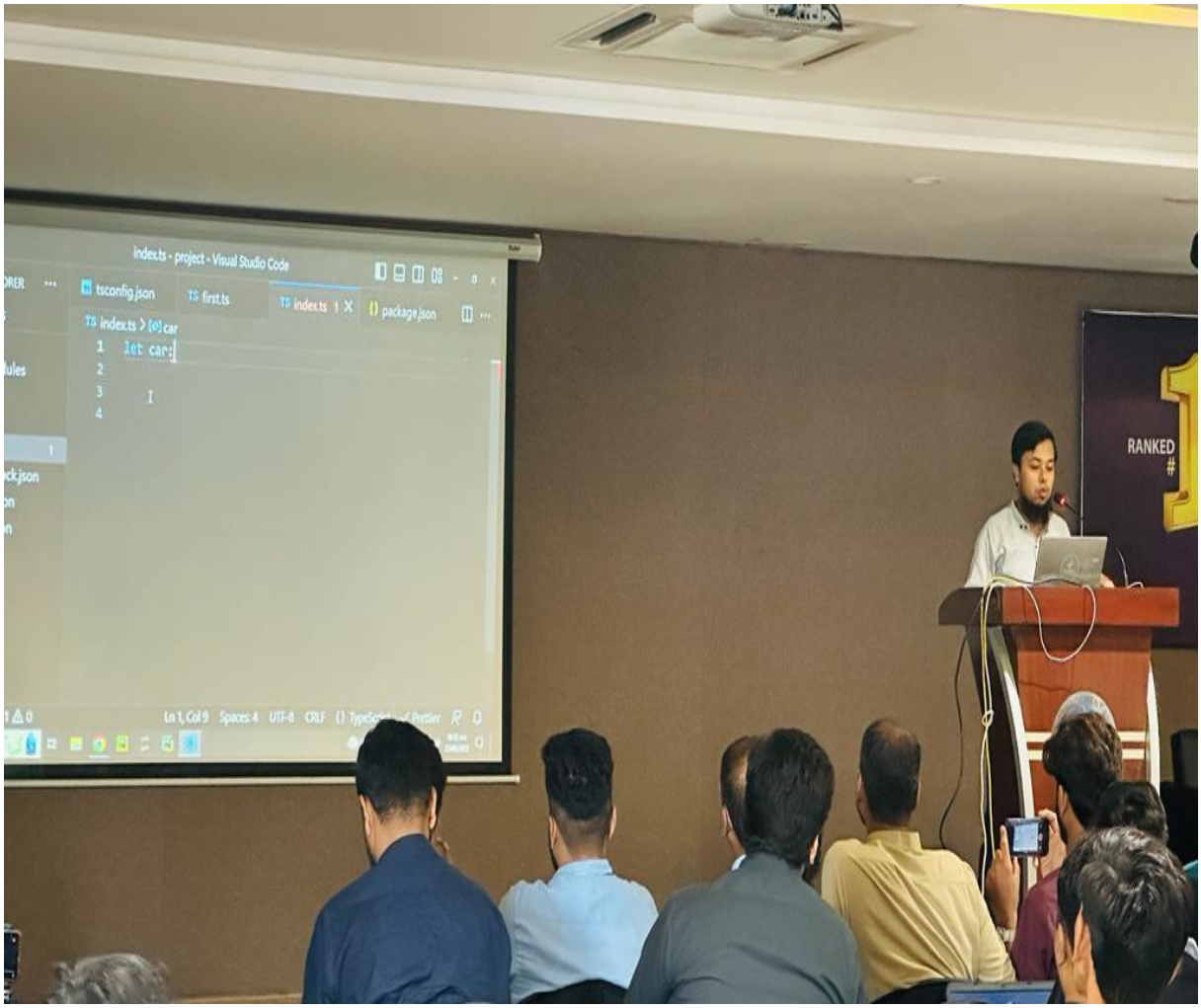
***1.5 MoU Ceremony between UMT, Green Cloud and TIP on Sunday, August 20, 2023***

The Office of Research Innovation and Commercialization (ORIC) arranged the MoU Ceremony between UMT, Green Cloud and TIP on Sunday, August 20, 2023 from 10:00 AM to 2:00 PM.


UNIVERSITY OF MANAGEMENT AND TECHNOLOGY

***1.6 Training Program on Web 3.0 and Metaverse on Sunday 27 August, 2023, at University of Management and Technology (UMT).***

Office of Research Innovation and Commercialization (ORIC), University of Management and Technology (UMT), in collaboration with The Presidential Initiative for Artificial Intelligence and Computing (PIAIC) arranged a training Program on Web 3.0 and Metaverse at UMT on Sunday 27 August, 2023, at University of Management and Technology (UMT).



***1.7 Training Program on Web 3.0 and Metaverse on Sunday 03 September, 2023, at University of Management and Technology (UMT).***

Office of Research Innovation and Commercialization (ORIC), University of Management and Technology (UMT), in collaboration with The Presidential Initiative for Artificial Intelligence and Computing (PIAIC) arranged a training Program on Web 3.0 and Metaverse at UMT on Sunday 03 September, 2023, at University of Management and Technology (UMT).


UMT