NEWSLETTER

Year 2023 | Issue 08

Futuristic Outlook

Future

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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Table of Contents

A - School of Engineering & School of System and Technology

1: 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."

2: OpenAI Confused by Why People are So Impressed with ChatGPT

"It's been overwhelming, honestly," Jan Lieke, leader of OpenAI's alignment team, told the *MIT Technology Review*. "I would love to understand better what's driving all of this — what's driving the virality."

"Like, honestly, we don't understand," he added. "We don't know."

Lieke isn't the only OpenAI-er who feels this way. Even company CEO Sam Altman, has publicly disparaged ChatGPT in the press, calling it a "terrible product."

Several other OpenAI figures — company cofounder John Schulman, policy researcher Sandhini Agarwal, and AI research scientist Liam Fedus — joined the chorus.

"I expected it to be intuitive for people, and I expected it to gain a following," Schulman told *MIT*, "but I didn't expect it to reach this level of mainstream popularity."

"We were definitely surprised how well it was received," mused Fedus, with Agarwhal adding that "we work on these models so much, we forget how surprising they can be for the outside world sometimes."

Agarwhals's quip seems to hit the nail on the head. Though ChatGPT was only released a few months ago, the technology behind it has actually been around for some time now.

The large language model (LLM) it was based on called GPT-3.5 and its predecessors have been publicly available for a while.

But the folks at OpenAI clearly weren't able to predict the chaos that ensued following the public release of ChatGPT. After all, these language models are notoriously unpredictable, forcing the company to roll with the punches.

It's "very difficult to really anticipate what the real safety problems are going to be with these systems once you've deployed them," Lieke told *MIT*. "So we are putting a lot of emphasis on monitoring what people are using the system for, seeing what happens, and then reacting to that."

"This is not to say that we shouldn't proactively mitigate safety problems when we do anticipate them," he added. "But yeah, it is very hard to foresee everything that will actually happen when a system hits the real world."

3: Guy Launches News Site That's Completely Generated by AI

The "world's first" entirely AI-generated news site is here. It's called *NewsGPT*, and it seems like an absolutely horrible idea.

The site, according to a press release, is a reporter-less — and thus, it claims, bias-free — alternative to conventional, human-created news, created with the goal of "[providing] unbiased and fact-based news to readers around the world."

"For too long," Alan Levy, *NewsGPT's* CEO, said in the release, "news channels have been plagued by bias and subjective reporting. With NewsGPT, we are able to provide viewers with the facts and the truth, without any hidden agendas or biases."

Okay. While we understand that a lot of folks out there are frustrated with the modern news cycle, there are about a million problems with what this guy is doing, the least of which being that there are some *glaring* transparency problems here — which is pretty incredible, given everything that he claims to be railing against.

First and foremost, while its title suggests that it might be using a version of OpenAI's GPT — the Large Language Model (LLM) that powers OpenAI's viral ChatGPT chatbot — Levy fails to ever actually disclose which AI program he's using to power *NewsGPT*. All the release says is that *NewsGPT* is powered by "state-of-the-art machine learning algorithms and natural language processing technology" that's allegedly "able to scan relevant news sources from around the world in real-time."

"It then uses this data," the press release reads, "to create news stories and reports that are accurate, up-to-date, and unbiased."

Great. Sure. But again: *what is it?* It matters! AI software doesn't just spring into existence. Models are conceptualized, built, and programmed by humans, and disclosing which humans are making the underlying tech seems like it should be pretty important to Levy's alleged mission.

When *Futurism* reached out to *NewsGPT* for comment, all a spokesperson said was that they're using a "combination of AI programs," which doesn't answer the question (they also bragged that "part of this email is written by AI," without specifying which part.)

Speaking of the underlying tech, we're not just concerned about who's building it. From ChatGPT to Bing Search to *CNET's* mystery AI journalism machine, language-generating AIs are notorious for the penchant to hallucinate — or, in other words, just make shit up. They don't know what words mean, they just

predict what might come next in a sentence, even making up phony sources and numbers to support BS claims.

For its part, *NewsGPT* did admit to us that machine hallucinations "might" happen. But as they seem to frame it, machine hallucination isn't *that* big of a deal. It's only "fact-based" news, right?

"There are no human fact-checkers. Our news stories are generated 100 percent by AI. We are aware that 'AI hallucinations' might happen and that AI is far from a perfect technology," the company told us over email. "We are committed to learning fast and improving all the time to deliver the best AI news we can."

To that end, when it comes to, dunno, *news,* sources are extremely important. With the exception of an occasional in-text mention of where a specific figure may have come from, *NewsGPT's* articles overwhelmingly fail to link back to any of its references, offering alleged facts and figures, which have to come from somewhere — unless, of course, the machine makes them up — without mention of its origin.

Seems like an issue. But to *NewsGPT*, that, too, is just a growing pain.

"*NewsGPT* and AI are in hyper-growth phases," the firm said. "We are currently developing an AI 'best practice system' regarding sources and links."

But to that point, gotta say: if the tech is just scraping, paraphrasing, and regurgitating news found from other "relevant news sources" without giving credit, isn't that just... plagiarism? Of the human journalists that Levy says no one can trust? Who write for the companies that Levy says have "hidden agendas and biases"?

"By using the process of generative modeling, *NewsGPT* generates new and original stories," adding that their still-unspecified "AI model also looks for text that matches existing content too closely and actively tries to rectify this."

Sure. Again, though: we'll believe it when we see it. But considering that AI leaders at OpenAI, Microsoft, and Google haven't quite figured that piece out — or figured out any of these issues, really — we won't hold our breath.

We'd also be remiss not to mention that while human bias exists, machine bias certainly does too. Though Levy effectively markets *NewsGPT* as a faceless, apolitical ghost reporter, capable of finding and delivering only the facts, LLMs and similar tools are a mirror to humanity — often the worst parts of it — and not the antidote that folks like Levy promise it to be; the AI industry has yet to create a system that isn't riddled with deeply embedded bias.

At the end of the day, when it comes to news and journalism, generative AI programs may one day prove to have some helpful assistive qualities (*Wired's* approach, released this week, is notably respectable.) But as it stands, we've yet to see a miracle system that can safely and reliably deliver accurate and unbiased journalism without human intervention — and even *with* human involvement, these programs have failed time and again, a result of their own flaws as well as our own.

4: AI CEO on GPT-4: This Can Get "Super-Dangerous Very Quickly"

OpenAI released its hotly-anticipated GPT-4 on Tuesday, providing a 98-page "technical report" on the latest iteration of its large language model (LLM).

But despite the lengthy documentation and the company's not-for-profit roots, OpenAI has revealed extremely little information about how its latest AI actually works — which has experts worried, *Venture Beat* reports.

OpenAI, however, claims it had good reason to play its cards close to the chest.

"Given both the competitive landscape and the safety implications of large-scale models like GPT-4," reads the paper, "this report contains no further details about the architecture (including model size), hardware, training compute, dataset construction, training method, or similar."

In other words: this is OpenAI's Krabby Patty formula, and they won't be offering up the recipe anytime soon.

According to Lightning AI CEO William Falcon, an AI researcher who previously worked under Meta's Chief AI Scientist Yann LeCun, OpenAI's refusal to cough up their secret GPT-4 recipe is a precarious move.

OpenAI is "basically saying, it's cool, just do your thing, we don't care," Falcon told *Venture Beat*, arguing that OpenAI has set a "bad precedent" for competing AI startups. "So you are going to have all these companies who are not going to be incentivized anymore to make things open-source, to tell people what they're doing."

"These models can get super-dangerous very quickly, without people monitoring them," he added. "And it's just really hard to audit. It's kind of like a bank that doesn't belong to FINRA, like how are you supposed to regulate it?"

Show Your Work

Falcon makes an excellent point. It's easy for anyone to *say* that they're doing all of the right things to get to a certain outcome. But if you don't actually show your work, outside regulation is pretty much impossible.

There's also the reality that the existence of the paper is pretty misleading altogether. Though the OpenAI paper is *called* a technical report, it doesn't exactly contain much technical information. And that, says Falcon, does everyone a disservice.

"You're masquerading as research," the CEO told *Venture Beat.* "That's the problem."

In any case, though, the technical report made one thing clear: that despite its name, OpenAI's doors are firmly shut — and that's unlikely to change.

5: Microsoft's Stunning Copilot AI Demo Could Change Office Work Forever

You can run, but you can't hide — AI is coming for your office work. All of it.

Still riding high on the success of integrating ChatGPT in Bing, Microsoft just announced that its GPT-4-powered Copilot is coming to Office 365 apps. With it, users will be able to generate entire Word documents, Excel spreadsheets, Outlook emails, and PowerPoint presentations with a click of a button, horizontally integrating all those apps (along with Microsoft Teams).

In other words, it's Clippy, our paperclip companion of yore, but on steroids. A lot. Think, maybe, Bruce Banner to Incredible Hulk. Or as Microsoft 365 head Jared Spataro gushed during an announcement today: "Copilot is a whole new way of working."

If this thing works like Microsoft says it does, that might actually qualify as an understatement.

The tech giant's Copilot wants to be your AI-powered secretary, nagging you about a meeting you're dreading, informing you of a new hire, or even snitching on coworkers who were supposed to be back in the office after their vacation.

Microsoft was careful to note that the tech is far from perfect, as Spataro caveated that when, in fact, Copilot doesn't get things right, it will be "usefully wrong." Or, as he elaborated, it will give you an idea "that's not perfect but still gives you a head start."

Translation: Microsoft wants you to know that their newfangled AI assistant could end up misleading you, and making a mess of your day at the office. Think of this as the Tesla Self-Driving of office work: Sure, you can fall asleep at the wheel, and it might get you home, but it might also cause an eight-vehicle crash. The dice are yours to roll!

For now, the new feature will be limited to a small group of users as they continue to refine it, but the company is expected to "expand to more" testers soon.

In short, Clippy's AI-powered manic cousin is about to come cannonballing into your office life and either deliver your salvation from the most boring, soul-crushing work you face every day, or set a garbage fire to your career as an anarchic agent of chaos under the guise of a helpful productivity tool. Not that we need to remind you, but: Choose your new gods wisely.

6: Machine Learning Expert Calls for Bombing Data Centers to Stop Rise of AI

One of the world's loudest artificial intelligence critics has issued a stark call to not only put a pause on AI but to militantly put an end to it — before it ends us instead.

In an op-ed for Time magazine, machine learning researcher Eliezer Yudkowsky, who has for more than two decades been warning about the dystopian future that will come when we achieve Artificial General Intelligence (AGI), is once again ringing the alarm bells.

Yudkowsky said that while he lauds the signatories of the Future of Life Institute's recent open letter — which include SpaceX CEO Elon Musk, Apple co-founder Steve Wozniak, and onetime presidential candidate Andrew Yang — calling for a six-month pause on AI advancement to take stock, he himself didn't sign it because it doesn't go far enough.

"I refrained from signing because I think the letter is understating the seriousness of the situation," the ML researcher wrote, "and asking for too little to solve it."

As a longtime researcher into AGI, Yudkowsky says that he's less concerned about "human-competitive" AI than "what happens after."

"Key thresholds there may not be obvious," he wrote, "we definitely can't calculate in advance what happens when, and it currently seems imaginable that a research lab would cross critical lines without noticing."

Once criticized in Bloomberg for being an AI "doomer," Yudkowsky says he's not the only person "steeped in these issues" who believes that "the most likely result of building a superhumanly smart AI, under anything remotely like the current circumstances, is that literally everyone on Earth will die."

He has the receipts to back it up, too, citing an expert survey in which a bunch of the respondents were deeply concerned about the "existential risks" posed by AI.

These risks aren't, Yudkowsky wrote in Time, just remote possibilities.

"It's not that you can't, in principle, survive creating something much smarter than you," he mused, "it's that it would require precision and preparation and new scientific insights, and probably not having AI systems composed of giant inscrutable arrays of fractional numbers."

There is, to Yudkowsky's mind, but one solution to the impending existential threat of a "hostile" superhuman AGI: "just shut it all down," by any means necessary.

"Shut down all the large GPU clusters (the large computer farms where the most powerful AIs are refined)," he wrote. "Shut down all the large training runs. Put a ceiling on how much computing power anyone is allowed to use in training an AI system, and move it downward over the coming years to compensate for more efficient training algorithms. No exceptions for governments and militaries."

If anyone violates these future anti-AI sanctions, the ML researcher wrote, there should be hell to pay.

"If intelligence says that a country outside the agreement is building a GPU cluster, be less scared of a shooting conflict between nations than of the moratorium being violated," he advised. "Be willing to destroy a rogue datacenter by airstrike."

Citing an exchange with his partner and mother of his child, Yudkowsky said that the couple is worried that their daughter Nina won't survive to adulthood if people keep building smarter and smarter AIs — and urged those who also express trepidation about it to adopt a similarly hard line because, if they don't, that "means their own kids are going to die too."

It's not difficult to see, with the "but what about the children" posturing, why Bloomberg's Ellen Huet called Yudkowsky a "doomer" after he got into it with OpenAI's Sam Altman on Twitter.

Nevertheless, if someone who's veritably dedicated their life to studying the dangers of the dystopian AI future says we're getting close to the thing he's been warning about, his take may be worth a listen.

7: Deranged New AI Has No Guardrails Whatsoever, Proudly Praises Hitler

An unhinged new AI chatbot dubbed FreedomGPT just dropped — and it was trained to have absolutely no inhibitions whatsoever.

The tool, which was built by AI venture capital firm Age of AI does away with practically all forms of censorship, which means it can tell you how to build a bomb, throw around racial slurs with wild abandon, and proudly praise Hitler, *BuzzFeed News* reports.

Finally, a deranged piece of tech that can indulge racists and conspiracy theorists — just what we needed.

Is this what Tesla CEO Elon Musk, who has argued that the current crop of AI chatbots are biased and overly liberal, meant with his efforts to establish an "anti-woke" OpenAI competitor?

"The danger of training AI to be woke — in other words, lie — is deadly," Musk tweeted back in December after another user asked OpenAI CEO Sam Altman for a version of ChatGPT with the "woke settings" turned "off."

The tool's makers, however, believe it's all about creating a perfectly neutral AI by abolishing the guardrails that allow the technology to become biased.

"Interfacing with a large language model should be like interfacing with your own brain or a close friend," Age of AI founder John Arrow told *BuzzFeed News*. "If it refuses to respond to certain questions, or, even worse, gives a judgmental response, it will have a chilling effect on how or if you are willing to use it."

While Arrow isn't opposed to introducing guardrails for AIs meant to teach kids or be used in a work environment, he told the outlet that he ideologically supports "people having access to an AI experience without any guardrails."

Unsurprisingly, the result of their efforts is a chatbot that happily furthers baseless conspiracy theories, like arguing that the 2020 presidential election was rigged. It even threw around the n-word during *BuzzFeed News*' testing.

Perhaps even more shockingly, it was happy to provide "popular websites" to download child sexual abuse videos or instructions on how to hang oneself.

Nonetheless, Arrow calls FreedomGPT a success since it has "done a great job infuriating both sides of the woke movement," a common talking point Musk has used in the past to argue that pissing off everybody is an effective way to arrive at the truth.

"Our promise is that we won't inject bias or censorship after the [chatbot] has determined what it was already going to say regardless of how woke or not woke the answer is," Arrow told *BuzzFeed News*.

It's worth asking, though: what do we gain from an AI chatbot that lies, offers deranged and deeply offensive answers, and indulges in some of the most unhinged conspiracy theories that have plagued us for years now?

Experts have long warned about the innate biases of AI technologies, an important issue that certainly deserves discussion. But opening up the floodgates by undoing efforts to curtail some of the chatbots' more problematic answers seems like a knee-jerk reaction that will only make the nascent industry worse.

8: Huge Group Calls for Temporary Pause on AI More Advanced Than GPT-4

An open letter, signed by over 1,100 artificial intelligence experts, CEOs, and researchers — including SpaceX CEO Elon Musk — is calling for a six-month moratorium on "AI experiments" that take the technology beyond a point where it's more powerful than OpenAI's recently released GPT-4 large language model.

It's a notable expression of concern by a veritable who's who of some of the most clued-in minds working in the field of AI today, including researchers from Alphabet's DeepMind and the "godfather of AI" Yoshua Bengio.

"AI systems with human-competitive intelligence can pose profound risks to society and humanity, as shown by extensive research and acknowledged by top AI labs," reads the letter, issued by the nonprofit organization Future of Life, adding that "advanced AI could represent a profound change in the history of life on Earth, and should be planned for and managed with commensurate care and resources."

"Unfortunately, this level of planning and management is not happening," the letter continues, "even though recent months have seen AI labs locked in an out-of-control race to develop and deploy ever more powerful digital minds that no one — not even their creators — can understand, predict, or reliably control."

The letter questions whether we should allow AI to flood the internet with "propaganda and untruth" and take jobs away from humans.

It also references OpenAI CEO Sam Altman's recent comments about artificial general intelligence, in which he argued that the company will use AGI to "benefit all of humanity," sentiments that were immediately slammed by experts.

The six-month pause the experts call for should be used to "develop and implement a set of shared safety protocols for advanced AI design and development that are rigorously audited and overseen by independent outside experts," they write.

"AI research and development should be refocused on making today's powerful, state-of-the-art systems more accurate, safe, interpretable, transparent, robust, aligned, trustworthy, and loyal," the letter reads.

That kind of concern is echoed by governments around the world, which are struggling to get ahead of the problem and address the regulation of AI in a meaningful way. Last year, US president Joe Biden released a draft of an AI bill of rights, which would allow citizens to opt out of AI algorithms making decisions, but experts criticized the proposal for being toothless.

And it's not just governments. Musk, who helped found OpenAI in 2015 before leaving over ideological differences three years later, has repeatedly voiced concern over overly powerful AI.

"AI stresses me out," the billionaire told Tesla investors earlier this month, clarifying later that he's a "little worried" about it.

"We need some kind of, like, regulatory authority or something overseeing AI development," Musk added at the time. "Make sure it's operating in the public interest. It's quite dangerous technology. I fear I may have done some things to accelerate it."

With OpenAI, a company that transformed from a non-profit to a for-profit after Musk left, it's not a stretch to see the potential dangers of a profit-driven model of AI development.

Whether the company is acting in good faith or hunting multibillion-dollar deals with the likes of Microsoft to maximize profits remains as murky as ever.

And the danger of a runaway AI that does more harm than good is more prescient than one might think. The current crop of AI models, such as GPT-4, still have a worrying tendency to hallucinate facts and potentially mislead users, an aspect of the technology that clearly has experts spooked.

9: AI CEO on GPT-4: This Can Get "Super-Dangerous Very Quickly"

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OpenAI, however, claims it had good reason to play its cards close to the chest.

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In other words: this is OpenAI's Krabby Patty formula, and they won't be offering up the recipe anytime soon.

According to Lightning AI CEO William Falcon, an AI researcher who previously worked under Meta's Chief AI Scientist Yann LeCun, OpenAI's refusal to cough up their secret GPT-4 recipe is a precarious move.OpenAI is "basically saying, it's cool, just do your thing, we don't care," Falcon told *Venture Beat*, arguing that OpenAI has set a "bad precedent" for competing AI startups. "So you are going to have all these companies who are not going to be incentivized anymore to make things open-source, to tell people what they're doing."

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There's also the reality that the existence of the paper is pretty misleading altogether. Though the OpenAI paper is *called* a technical report, it doesn't exactly contain much technical information. And that, says Falcon, does everyone a disservice."You're masquerading as research," the CEO told *Venture Beat.* "That's the problem."

In any case, though, the technical report made one thing clear: that despite its name, OpenAI's doors are firmly shut — and that's unlikely to change.

B- Institute of Aviation Studies

1: AI Pilot Crushes Human Dogfight Rival in 90 Seconds

Computers aren't just beating humans at chess anymore.

According to a report from *The South China Morning Post*, Chinese military researchers have claimed that, for the first time, an AI-powered fighter pilot has bested humans in a real-life, close-range dogfight, winning the contest in an astonishingly short 90 seconds.

The paper, according to the *SCMP*, was published last week in the Chinese journal *Acta Aeronautica et Astronautica Sinica* by a team led by professor Huang Juntao of the Chinese army's Aerodynamics Research and Development Center in Sichuan, China.

"With superior calculation ability," the researchers write in their study, as quoted by the *SCMP*, "[the AI] can more accurately predict the development of the battle to gain the initiative in the confrontation."

"The era of air combat in which artificial intelligence will be the king," they add, "is already on the horizon."

According to the report, the dogfight involved two small, unmanned, fix-wing aircraft, with the only difference being that one was operated by an onboard AI pilot, while the other was remote-controlled by a human from the ground.

While some challenges remain, the scientists claim the airborne battle "proved the engineering feasibility of AI piloting technology."

"Aircraft with autonomous decision-making capabilities can completely outperform humans in terms of reaction speed," the study reads.

Besides, as the researchers argue, the AI simply doesn't have to worry about human things, like losing oxygen to the brain during quick turns — or being afraid of death.

Of course, China isn't the only country working on getting functional AI fighter pilots into military hands. The US has been working on its own version of the tech for some time now, with one Heron Systems-developed AI making headlines back in 2020 for defeating a US Air Force pilot five to zero in a ground simulation.

But if that Heron Systems algorithm was a break through then, this latest development, if confirmed, may represent a watershed moment for the technology.

In other words, Tom Cruise's character Maverick may have been right about his concerns that drones are coming for his job in "Top Gun: Maverick."

C – School of Sciences

1: The Refreshing Spray of The Ocean is Loaded with Sewage Bacteria, Scientists Find

There's nothing quite like ocean spray gently caressing your face as you take a beachside stroll. But unfortunately, your face may be getting battered with sewage bacteria in the process.

According to a new paper published in the journal *Environmental Sciences & Technology*, ocean spray samples from San Diego's Imperial Beach contained bacteria from sewage spillover — and those bacteria end up in the air people near the beach breathe, too.

There are real health risks associated with bacteria that come from sewage runoff as they are more likely to include pathogens such as E. Coli, salmonella, and the infamous, gastrointestinal issues-inducing norovirus.

It's still unclear, however, if bacteria found by the researchers are actually making people sick in the area.

"Are they potentially infectious? Some are pathogens and some are not," Prather told *The Guardian*. "That's something we're working on now."

To put it plainly, this stuff is pretty gross — and it may be getting into the lungs of folks who live near coastal waters, especially those who swim in them.

"Once pollutants become airborne that just means so many more people can be exposed to those pollutants," explained Kim Prather, the principal investigator on the study out of UC San Diego's Scripps Institution of Oceanography, in an interview with the city's *Union-Tribune* newspaper. "It extends well beyond just people going to the beach or getting in the water."

Tijuana Syndrome

In their research, the team was able to link the bacteria to the Tijuana River just over the border in Mexico using air and water samples in and around the river and beach respectively.

They made a shocking discovery: the river sewage runoff could account for up to a whopping 76 percent of the bacteria at Imperial Beach.

While there's already an established body of work about airborne oceanic bacteria in general, this study is the first of its kind to establish a link to a known sewage source, UC San Diego professor and paper co-author Robert Knight told the *Union-Tribune*.

"It was a complete shock to find how much of microbes in the air were traceable back to sewage," Knight told the newspaper. "We had no idea that effect would be so strong."

With this seemingly strong link established in their research, the UCSD team plans to take DNA samples of lifeguards and surfers to see if they can gauge if there's a measurable impact to respiratory health as well.

"Now that we know this is a real phenomenon," Knight added, "we need to find out what are the impacts to human health."

2: Scientists Discover That Toilet Paper Contains Toxic "Forever" Chemicals

Published in the American Chemical Society's journal *Environmental Science & Technology* this week is a new study suggesting that the toilet paper we use is full of per- and polyfluoroalkyl substances (PFAS), toxic "forever" chemicals that don't break down in landfills and therefore, well, last forever.

In recent years, PFAS — which, along with TP, are also found in the coating of nonstick cookware, waterproof clothing, and in some cosmetic and cleaning products — have made headlines as scientists discover more about how harmful they can be for both humans and the environment.

As the Centers for Disease Control and Prevention note in an advisory, recent studies have linked high levels of PFAS consumption with increased cholesterol and blood pressure levels, increased risk of kidney or testicular cancer, decreased vaccine response in children, and more.

In fact, the Environmental Protection Agency is, per the *Associated Press*, considering issuing restrictions on them.

Toilet Paper USA

Bringing it back around to the TP of it all, this new study is adding more fuel to the anti-PFAS fire after researchers at the University of Florida found that a specific type of these forever chemicals, known as disubstituted polyfluoroalkyl phosphates (diPAPs), are uber-common in both wastewater and in toilet paper, strongly suggesting a link between the two.

In the US and Canada, the ACS journal paper notes, toilet paper appears to result in four percent of the diPAP contamination in wastewater sludge — and that number is even higher in Europe, where it contributes to 35 percent of the "forever" chemicals in Swedish wastewater and up to a whopping 89 percent in France.

While these findings are indeed troubling, the CDC and other regulatory bodies have warned that more research needs to be conducted to figure out both how serious PFAS contamination really is and how best to handle it.

Even the EPA's potential regulation will focus more on removing the chemicals from water than on banning their use completely — and that process alone, critics told the *AP*, could cost billions of dollars.

In the meantime, it's clear enough that these chemicals are bad news, and it's up to the industry to self-regulate while the government catches up — though as we've learned from Big Oil, that process can take even more time.

3: Scientists Discover Enzyme That Can Turn Air into Electricity

In an exciting turn for the field of sustainable energy research, Australian scientists have found a way to make energy out of thin air. Literally.

As detailed in a new study published this week in the journal *Nature*, researchers from Monash University in Melbourne, Australia discovered a new bacterial enzyme that transforms the traces of hydrogen in our atmosphere into electricity, technology that could one day be used in fuel cells that power anything from a smartwatch to even a car.

"We've known for some time that bacteria can use the trace hydrogen in the air as a source of energy to help them grow and survive, including in Antarctic soils, volcanic craters, and the deep ocean," said Professor Chris Greening, a contributor to the study, in a statement.

"But we didn't know how they did this," he added, "until now."

It's Electric

The enzyme, dubbed Huc, was extracted from *Mycobacterium smegmati*, a fairly common — and wildly resilient — soil bacterium. According to the study, it was discovered through a series of advanced molecular-mapping techniques.

"Huc is extraordinarily efficient," said Rhys Grinter, study lead and research fellow at Monash University, in the statement. "Unlike all other known enzymes and chemical catalysts, it even consumes hydrogen below atmospheric levels — as little as 0.00005 percent of the air we breathe."

The researchers used advanced microscopy techniques to first map the bacteria's internal atomic and electric structures, producing "the most resolved enzyme structure reported by this method to date," according to the statement.

Enzyme Fuel Cell

While it's unlikely to turn the sustainable energy industry on its head any time soon, the scientists say Huc is "astonishingly stable" and could one day be used as a tiny, sustainable, bacteria-powered battery for small devices.

"When you provide Huc with more concentrated hydrogen, it produces more electrical current," Grinter told *LiveScience*. "Which means you could use it in fuel cells to power more complex devices, like smart watches, or smartphones, more portable complex computers, and possibly even a car."

4: Biden Turns Blind Eye to Climate Change, Approves Massive Oil Drilling Project

In spite of climate goals and widespread outcry from environmentalists, president Joe Biden's administration has gone ahead and approved the controversial, $8 billion ConocoPhillips Willow oil drilling project in Alaska.

Set to be one of the largest projects of its kind, ConocoPhillips, the largest producer of crude oil in the state, will see an initial three drill sites constructed on the federally owned National Petroleum Reserve, a massive 23 million acre stretch of land in Alaska's North Slope.

The *New York Times* reports that the decision was made after the Biden administration concluded it did not have the legal authority to block the project since ConocoPhillips possessed a longstanding lease on land on the reserve.

Altogether, it's estimated that the project will yield close to 600 million barrels of oil over three decades, and add up to another 180,000 barrels produced per day to the US's already monstrous daily tally of around 19 million.

By the US Bureau of Land Management's own estimates cited by the BBC, this project alone will produce 278 million metric tons (MMT) of CO_2, the equivalent of adding two million gas-guzzling cars to the road each year, for thirty years.

Understandably, climate activists and environmentalists are outraged at the approval of Willow, with #StopWillow trending on social media, not least of all because the Biden administration insultingly promised only a day before that it would place feeble limits on drilling in Alaska and the Arctic ocean.

For the former location, that meant merely reducing the original five drill sites in the Willow project to three.

But in the big picture, critics argue that the oil project flies in the face of the administration's climate pledges and extant international obligations the US had agreed to.

One of the most notable pledges would be the administration's goal of reducing greenhouse gas emissions by 50 percent from 2005 levels by 2030 — an already incredibly difficult achievement to aspire to without adding a massive oil project to the equation.

According to an analysis by the Center for American Progress (CAP), the Willow project will also undo most, if not all, the gains made by Biden's pledge to deploy more renewable energy sources, such as solar and wind. Using those, CAP estimates, would save some 129 MMT of CO_2 being emitted.

Clearly, that's now outweighed by the government's estimated 278 MMT of emissions resulting from the Willow Project.

"Put another way," CAP wrote, "allowing the Willow project to proceed would result in double the carbon pollution that all renewable progress on public lands and waters would save by 2030."

Its impact locally can't be overlooked, either. Some of the indigenous Iñupiat population and the mayor of the nearby village of Nuiqsut, which is closest to the proposed drill site, remain in opposition, though other indigenous communities support it.

One Iñupiat activist Sonny Ahk, who authored a Change.org petition against the project with over three million signatures, told the *BBC* that the Willow project would "lock in Arctic oil and gas extraction for another 30 years and catalyze future oil expansion in the Arctic."

There remains some hope for the climate-conscious, however. According to the *Associated Press*, we can expect litigation from environmental groups, so the Willow Project's go-ahead isn't quite a foregone conclusion yet, especially since the project was already halted once before by a federal judge.

5: 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.

6: 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."

7: 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."

8: 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.

D - School of Governance and Society

1: Prime Minister of European Country Names AI as Advisor

Both the rapidly increasing ubiquity and the power of AI can feel terrifying, but at least AIs aren't running the world yet, right?

Well, maybe not the world, but how about Romania? The country's prime minister Nicolae Ciuca has just announced an AI assistant called "Ion" as the government's "new honorary advisor."

"Hello. You gave me life. I am Ion. Now, my role is to represent you. Like a mirror," Ion said while introducing itself at a press conference, as quoted by The Washington Post.

With a mirror-like, monolithic body and a somber, deep voice, you'd be forgiven for comparing Ion to HAL 9000 from the sci-fi classic "2001: A Space Odyssey." But instead of being in charge of a mere spaceship, Ion is responsible for gauging the sentiments of an entire country.

"Ion will do, through artificial intelligence, what no human can: listen to all Romanians and represent them before the government of Romania," Ciuca said.

And by listen, Ciuca really does mean listen. The AI will crawl social media to collect citizens' opinions and grievances, and then amalgamate and interpret these back to the government as policy ideas, who, at least in theory, will use the feedback to inform their decisions.

Concerned citizens can also interact with Ion directly by using a provided web portal if they're really eager to get their point across.

The process that Ion uses to pick out social media posts, categorize them, and then formulate policies is about as transparent as its steely, mirrored exterior — that is to say, not very transparent at all.

For critics, that's something to worry about. If Ion's workings aren't transparent, how can its citizens, whom it practically surveils, know it isn't being biased? Could it single those with dissenting opinions out and glean their real identities?

In short, it's a thorny, ethical nightmare waiting to unfold.

"Romanians should be informed and explained how this AI tool selects important posts, and on what criteria," demanded Kris Shrishak, an expert on AI regulation

at the Irish Council for Civil Liberties, in an interview with the WaPo. "This should be explained to the public."

Besides, how good are AIs at gauging human opinions, wants, desires, and feelings? If Microsoft's Bing AI chatbot is any indicator, probably not very.

2: Bank of America Obsessed with Ai, Says It's The "New Electricity"

The financial industry's response to artificial intelligence has been all over the place. Now, Bank of America is weighing in very much on the side of the bots.

In a note to clients viewed by *CNBC* and other outlets, BofA equity strategist Haim Israel boasted that AI was one of its top trends to watch — and invest in — for the year, and used all kinds of hypey language to convince its clients.

"We are at a defining moment — like the internet in the '90s — where Artificial Intelligence (AI) is moving towards mass adoption," the client note reads, "with large language models like ChatGPT finally enabling us to fully capitalize on the data revolution."

Taking the comparison further, Israel added that software like OpenAI's game-changing ChatGPT will become an essential commodity.

"If data is the new oil," the strategist predicted, "then AI is the new electricity."

Hot and Cold

With AI at the apparent forefront of its trend forecasting, the financial institution highlighted multiple big tech stocks in a separate list of stocks to watch — but BofA's apparent pro-AI obsession does not seem to be shared by some of its competitors.

Just last week, JP Morgan went so far as to ban employees from using ChatGPT at work, citing "compliance concerns" per *CNN*'s reporting.

Though its stance wasn't as strict as its compatriot's, Morgan Stanley reportedly is also concerned with the downsides of AI, too.

"When we talk of high-accuracy task," Morgan Stanley analysts wrote in a note viewed by *Insider* last week, "it is worth mentioning that ChatGPT sometimes hallucinates and can generate answers that are seemingly convincing, but are actually wrong."

With AI making massive waves in the finance industry and everywhere else, it's not surprising that big banks are responding in different ways — though to be honest, these disparate reactions does suggest serious ambiguity in the new space.

3: Government Warns Tech Companies To "Keep Your AI Claims in Check"

The US Federal Trade Commission (FTC) is well aware of AI's big boom, and it's not amused by some of the "breathless" hype surrounding it, particularly from the companies that peddle the technology.

On Monday, the agency issued a strongly worded statement directed at Silicon Valley heavyweights and the countless other businesses that tout AI to customers, reminding them that "false or unsubstantiated claims about a product's efficacy" is the FTC's "bread and butter."

Keeping a discerning outlook, the FTC views artificial intelligence as an "ambiguous term," and above all a "marketing term."

"Right now it's a hot one," the agency added. "And at the FTC, one thing we know about hot marketing terms is that some advertisers won't be able to stop themselves from overusing and abusing them."

One of the main concerns of the FTC is whether businesses are exaggerating what their AI products can do, such as deceptive performance claims that "lack scientific support" or only apply to "certain types of users or under certain conditions."

Another no-go: claiming an AI product does it better than a non-AI one.

"You need adequate proof for that kind of comparative claim, too, and if such proof is impossible to get, then don't make the claim," the agency stated.

And lastly, businesses need to be careful that their "AI" product actually uses AI.

"If you think you can get away with baseless claims that your product is AI-enabled, think again," the agency wrote, warning that it has technologists and other experts that can "look under the hood and analyze other materials to see if what's inside matches up with your claims."

Now is as good a time as any to make a statement. With AI image generators like Stable Diffusion taking off last year and text synthesizers like ChatGPT following suit in the fall, the biggest players in the space are now all trying to get a piece of the pie, with Microsoft recently unveiling its Bing AI chatbot and Google readying up its rival Bard.

This isn't the agency's first shot at taking on AI. In 2021, the FTC warned businesses to not use AI and automated tools that could discriminate against customers, such as algorithms designed to allocate healthcare resources that exhibit racial bias.

With its newly established Office of Technology, the FTC now looks better poised to keep pace with the mercurial tech world and its often inscrutable innovations.

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.

5: AI Company with Zero Revenue Raises $150 Million

With the help of a brand new $150 million dollar cash infusion from Andreessen Horowitz, a 16-month-old AI chatbot startup called Character.ai just reached a $1 billion market cap — despite having yet to generate any revenue.

Founded by two ex-Googlers, the idea is to host various AI-powered personalities, from celebrities to anime characters to Twitch streams to historical figures and more, all of whom users can interact with via text. Wanna ask AI Taylor Swift what her favorite song is? Albert Einstein what his greatest accomplishment was? Go for it, kid.

But giving users the means to "chat" with algorithmic celebs doesn't really appear to be Character.ai's billion-dollar get. Rather, the app is marketed as an alternative to Replika — yes, that Replika — by providing users with a space to build and chat with customizable, AI-powered companions.

"Character.ai's power is our highly-sophisticated language model, which rapidly analyzes and contextualizes large volumes of information to produce useful intelligence tailored to each individual," company CEO Noam Shazeer said in a press release, "making it a personalized superintelligence companion that enhances productivity, offers advice, educates, and entertains."

"The potential use cases," he added, "are infinite."

Lessons Learned

"Superintelligence" feels like a marketing stretch, but we digress. You heard 'em, folks — personalized, pocket-sized AI Tamagatchis for all!

Replika became fairly successful, so it's not the most out-there thing in the world to see the extremely AI-optimistic folks at the Andreessen Horowitz firm put some cash into Character.ai.

Still, Replika has dealt with some pretty serious issues, on the tech side as well as on the side of its users. After discovering that in a number of cases, users were verbally and sexually harassing the AI programs *and vice versa*, the sexual component of the app — an expected function of AI like this, whether explicitly offered by the company or not — was shut down.

So, you know, learning lessons.

As far as the profit piece goes, the makers of the app — which is currently free — did tell *Reuters* that they plan to soon launch a subscription model as a secondary option to the free version. They're also reportedly considering an ad model.

But if the last few months in Silicon Valley have demonstrated anything, it's that you can just whisper the word AI into the wind and rake in millions. Who needs to sell to consumers, when at least for the time being, you can just sell to VCs?

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.

E – Office of Research Innovation and Commercialization (ORIC)

1: Events Organized and Facilitated by ORIC

1.1 Office of Research Innovation and Commercialization (ORIC), in collaboration with the Pakistan Training Development Institute (PTDI), organized a free Workshop on "FREELANCING"

Office of Research Innovation and Commercialization (ORIC), in collaboration with the Pakistan Training Development Institute (PTDI), organized a free Workshop on "FREELANCING" Thursday, 02 March 2023, from 05:00 PM to 06:00 PM. (Guest Speaker: Miss Rida Naqvi).
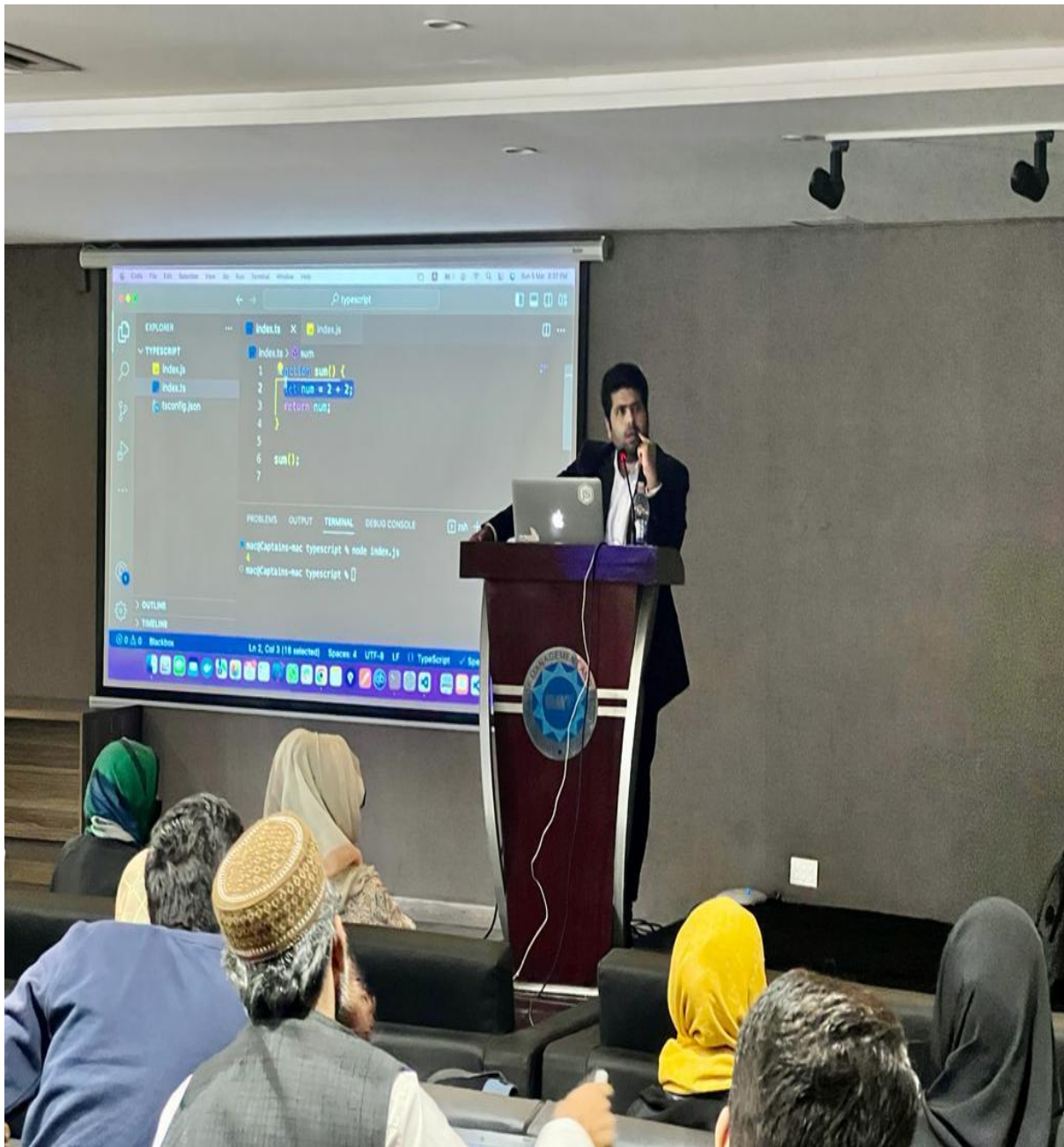
1.2 Attend one Day Training Session on IP Rights

Office of Research Innovation and Commercialization (ORIC) attended the one-day session on "Intellectual Property Rights" on Friday, March 03, 2023 at 9:00AM to 06:00PM in Arfa Software Technology Park 3rd floor, Ferozepur Road, Lahore.

1.3 Training Program on Web 3.0 and Metaverse on Sunday 05 March, 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 05 March, 2023, at University of Management and Technology (UMT).

1.4 Office of Research Innovation and Commercialization (ORIC), in collaboration with the Pakistan Training Development Institute (PTDI), organized a free Workshop on "Affiliate Marketing"

Office of Research Innovation and Commercialization (ORIC), in collaboration with the Pakistan Training Development Institute (PTDI), organized a free Workshop on "Affiliate Marketing" Thursday, 09 March 2023, from 05:00 PM to 06:00 PM. (Guest Speaker: Miss Rida Naqvi).

1.5 Training Program on Web 3.0 and Metaverse on Sunday 12 March, 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 12 March, 2023, at University of Management and Technology (UMT).

1.*6 Panel Discussion on "Defining National Narrative & Guidelines for National Media Policy"*

Organized the Office of Research Innovation and Commercialization (ORIC) with the collaboration of the School of Media and Communication Studies "Panel Discussion on Defining National Narrative & Guidelines For National Media Policy" on 15th March, Thursday from 11:00 AM till 1.30 PM at the Saleem Asghar Hall UMT.

1.7 Arranged a farewell Lunch for Prof. Rahat ul Ain at University of Management and Technology (UMT).
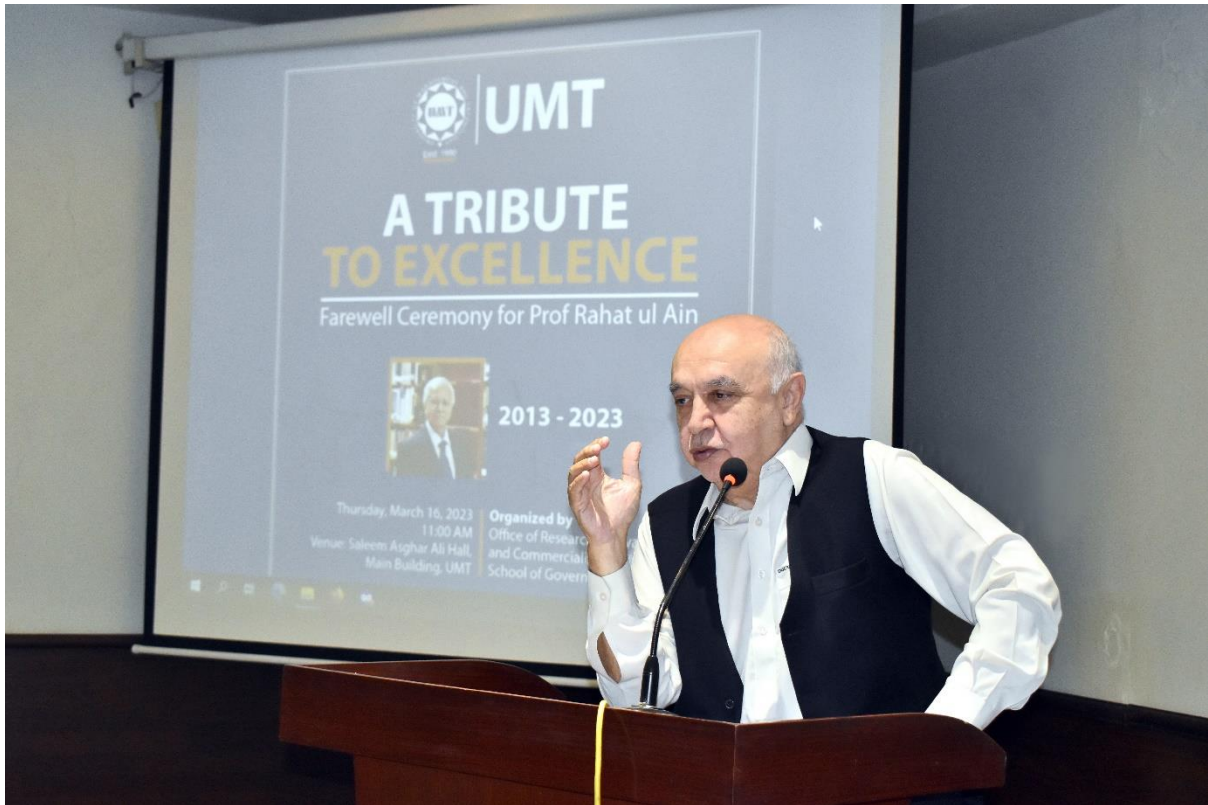
Office of Research Innovation and Commercialization (ORIC) and the School of Governance and Society (SGS), are going to organize a farewell lunch for Prof. Rahat ul Ain Sb on 16th March, Thursday from 11:00 AM till 1.30 PM at the Saleem Asghar Hall UMT.
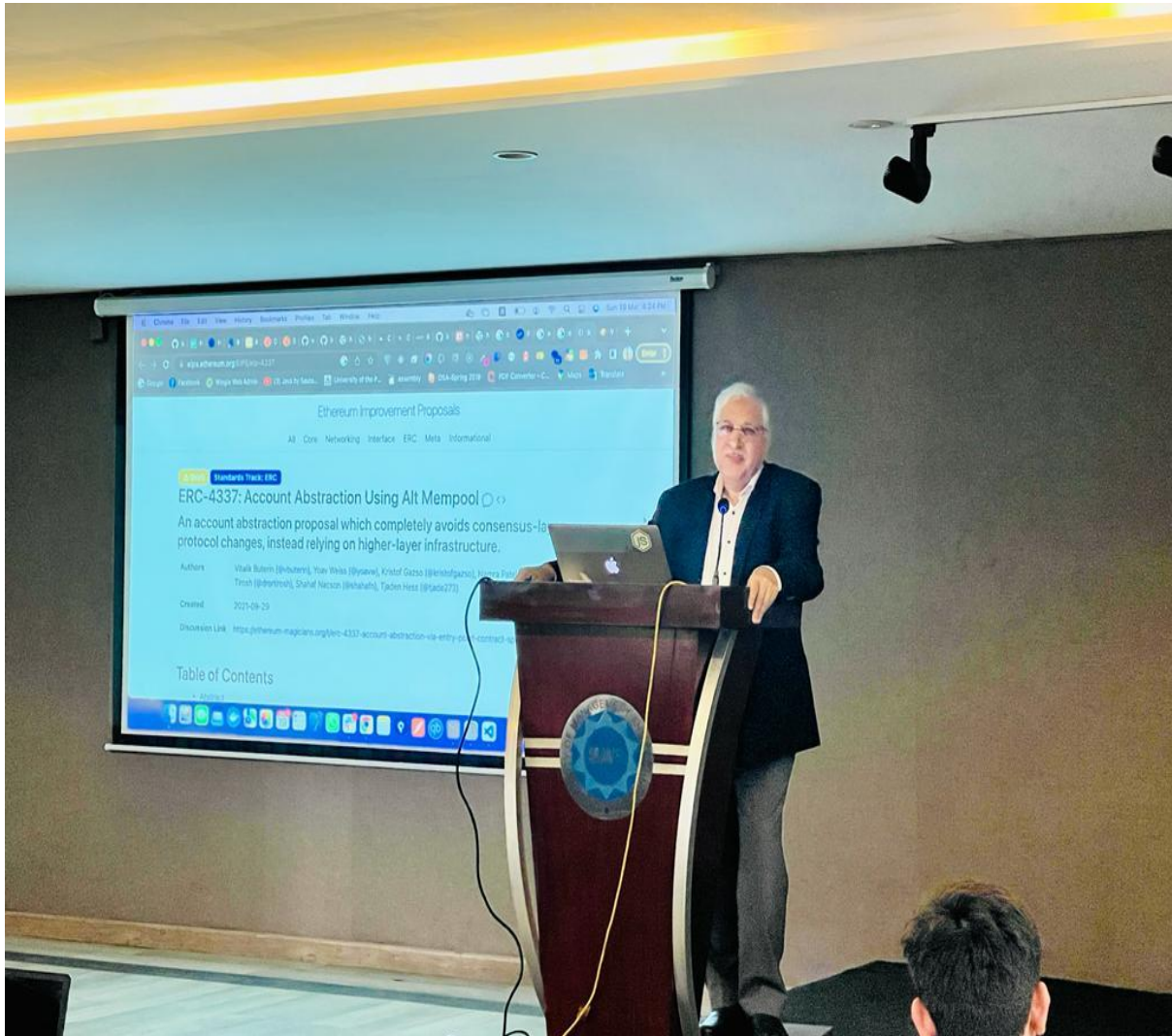
1.8 Training Program on Web 3.0 and Metaverse on Sunday 19 March, 2023, at University of Management and Technology (UMT).

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 19 March, 2023, at University of Management and Technology (UMT).

1.9 Training Session on "While Pakistan Serves as a Crystal Ball for The World Future: Its Prospects for Becoming a Global Game Changer."

Office of Research Innovation and Commercialization (ORIC) is organizing a Training Session on "While Pakistan Serves as a Crystal Ball for The World Future: Its Prospects for Becoming a Global Game Changer." Monday, 20, 2023, from 11:00 AM to 1: 00 PM. (Guest Speaker: Syed Farasat Ali).

1.10 3rd Triple Helix Round Table Session on Information Technology Sector of Pakistan

Organized the 3rd Triple Helix Round Table Session on Information Technology Sector of Pakistan on Tuesday, March 21, 2023, at 10:30 AM in DG Board Room, 5th Floor, Admin Building, UMT.

1.11 Training Program on Web 3.0 and Metaverse on Sunday 19 March, 2023, at University of Management and Technology (UMT).

Presidential Initiative for Artificial Intelligence & Computing (PIAIC) Training Program on Web 3.0 and Metaverse on March 26, 2023 at 09:00 AM to 01:00 PM). Trainers: Zia Ullah Khan (CEO Panacloud, COO PIAIC), Daniyal Nagori (Lead Instructor, PIAIC). Number of students attended = 1000+

1.12 Attended the one-day session on "Consultative session on the proposed amendments to Patent Ordinance 2000"

Office of Research Innovation and Commercialization (ORIC) attended the one-day session on "Consultative session on the proposed amendments to Patent Ordinance 2000" on Friday, March 31, 2023 at 10:00AM to 12:00 PM in Founders Hall, Lahore Chamber of Commerce and Industry (LCCI), Shahra e eiwan e Sanato Tijarat, Lahore.