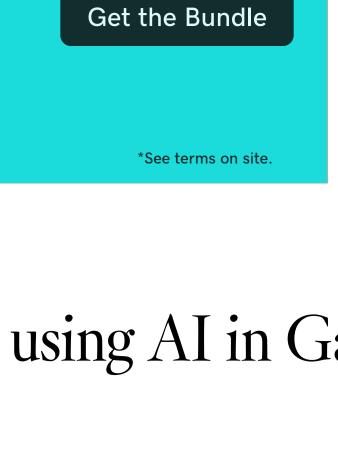
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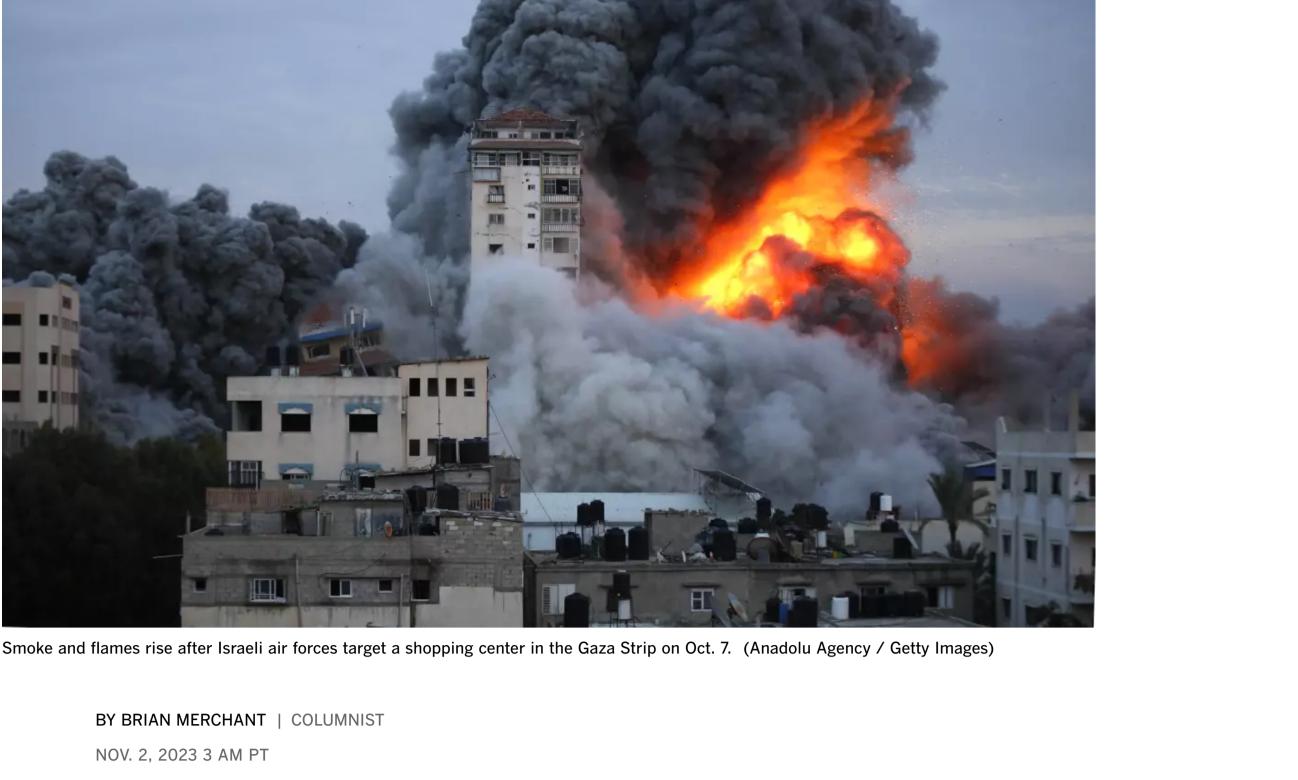
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aerial bombardments continue at a furious pace. On Tuesday, missiles struck a refugee camp in Jabaliya, where the Israel Defense Forces said a senior Hamas leader was stationed, killing dozens of civilians.

Debate over the crisis <u>rages online</u> and off, yet for all the discourse, there's one

it's deploying AI.

lingering question I haven't seen widely considered: To what extent is Israel relying on artificial intelligence and automated weapons systems to select and strike targets? In the first week of its assault alone, the <u>Israeli air force said it had dropped 6,000</u> bombs across Gaza, a territory that is 140 square miles — one-tenth the size of the

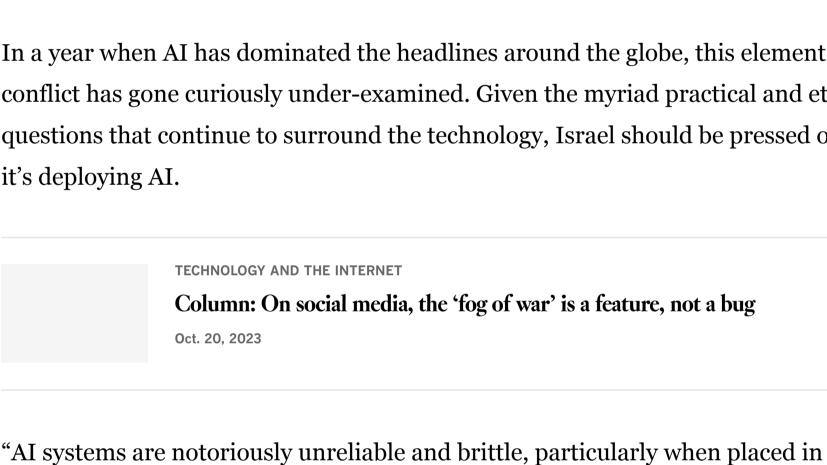
The fog of war has thickened in Gaza, a ground invasion is gathering steam, and

smallest U.S. state of Rhode Island — and is among the most densely populated places in the world. There have been many thousand more explosions since then. Israel commands the most powerful and highest-tech military in the Middle East.

Months before the horrific Hamas attacks on Oct. 7, the IDF announced that it was embedding AI into lethal operations. As <u>Bloomberg reported on July 15</u>, earlier this year, the IDF had begun "using artificial intelligence to select targets for air strikes and organize wartime logistics."

and, according to Bloomberg, it "uses data about military-approved targets to calculate munition loads, prioritize and assign thousands of targets to aircraft and drones, and propose a schedule." **ADVERTISEMENT**

Your Family In response to a request for comment, an IDF spokesperson declined to discuss the country's military use of AI.



situations that are different from their training data," said Paul Scharre, vice

Israel's hunt for Hamas personnel and materiel in Gaza. The use of AI on the

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Battlegrounds: Power in the Age of Artificial Intelligence." Scharre said he was not

familiar with the details of the specific system the IDF may be using, but that AI and

automation that assisted in targeting cycles probably would be used in scenarios like

president of the Center for a New American Security and author of "Four

battlefield is advancing quickly, he said, but carries significant risks. **ADVERTISEMENT**

targets and causing fratricide." One reason it's somewhat surprising that we haven't seen more discussion of Israel's use of military AI is that the IDF has been touting its investment in and embrace of AI for years.

"Any AI that's involved in targeting decisions, a major risk is that you strike the

wrong target," Scharre said. "It could be causing civilian casualties or striking friendly

beginning of this year. It says that the systems allow the military to process data and locate targets faster and with greater accuracy, and that every target is reviewed by a human operator. Yet international law scholars in Israel have raised concerns about the legality of using such tools, and analysts worry that they represent a creep toward more fully autonomous weapons and warn that there are risks inherent in turning over targeting

The IDF says AI systems have officially been embedded in lethal operations since the

leaders in 2021, according to the Post.

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After all, many AI systems are increasingly black boxes whose algorithms are poorly understood and shielded from public view. In an article about the IDF's embrace of AI for the Lieber Institute, Hebrew University law scholars Tal Mimran and Lior Weinstein emphasize the risks of relying on opaque automated systems capable of

There are a number of concerns here, given what we know about the current state of the art of AI systems, and that's why it's worth pushing the IDF to reveal more about how it's wielding them. For one thing, AI systems remain encoded with biases, and, while they are often good at parsing large amounts of data, they routinely produce error-prone output when

One example: Even supposedly cutting-edge facial recognition technology of the sort used by American police departments has been shown time and again to be less accurate at identifying people of color — resulting in the systems fingering innocent citizens and leading to wrongful arrests.

evident in how, despite having a best-of-class AI-augmented surveillance system in place in Gaza, Israel did not detect the planning for the brutal, highly coordinated massacre on Oct. 7. As Reuters' Peter Apps noted, "On Sept. 27, barely a week before Hamas fighters launched the largest surprise attack on Israel since the 1973 Yom Kippur war, Israeli officials took the chair of NATO's military committee to the Gaza border to demonstrate their use of artificial intelligence and high-tech surveillance. ... From drones overhead utilizing face recognition software to border checkpoints and electronic eavesdropping on communications, Israeli surveillance of Gaza is widely viewed amongst the most intense and sophisticated efforts anywhere."

would succeed in keeping the Palestinian population controlled and occupied." That may be one reason that Israel has been reluctant to discuss its AI programs. Another may be that a key selling point of the technology over the years, that AI will

help choose targets more accurately and reduce civilian casualties, does not seem

credible. "The AI claim has been around targeting people more successfully,"

Loewenstein said. "But it has not been pinpoint-targeted at all; there are huge

numbers of civilians dying. One third of homes in Gaza have been destroyed. That's

And that's a fear here — that AI could be used to accelerate or enable the destructive

capacity of a nation convulsing with rage, with potentially deadly errors in its

2016 to 2020. "Israel's focus had been on the West Bank, believing they had Gaza

surrounded. They believed wrongly that the most sophisticated technologies alone

TECHNOLOGY AND THE INTERNET BUSINESS ISRAEL-HAMAS ARTIFICIAL INTELLIGENCE Brian Merchant 🏏 Twitter 🏻 🚇 Mastodon 🔛 Email Brian Merchant is the Los Angeles Times' technology columnist. He's the author of "The One Device: The Secret History of the iPhone" and the

Israeli officials said at the time that the IDF employed an AI recommendation system to choose targets for aerial bombardment, and another model that would then be used to quickly organize ensuing raids. The IDF calls this second system Fire Factory,

In a year when AI has dominated the headlines around the globe, this element of the conflict has gone curiously under-examined. Given the myriad practical and ethical questions that continue to surround the technology, Israel should be pressed on how

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In 2017, the IDF's editorial arm proclaimed that "The IDF Sees Artificial Intelligence as the Key to Modern-Day Survival." In 2018, the IDF boasted that its "machines are outsmarting humans." In that article, the then-head of Sigma, the branch of the IDF dedicated to researching, developing, and implementing AI, Lt. Col. Nurit Cohen Inger wrote, "Every camera, every tank, and every soldier produces information on a regular basis, seven days a week, 24 hours a day." **ADVERTISEMENT**

"We understand that there are capabilities a machine can acquire that a man can't," Inger continued. "We are slowly introducing artificial intelligence into all areas of the IDF — from logistics and manpower to intelligence." The IDF went so far as to <u>call its last conflict</u> with Hamas in Gaza, in 2021, the "first

artificial intelligence war," with IDF leadership touting the advantages its technology conferred in combating Hamas. "For the first time, artificial intelligence was a key component and power multiplier in fighting the enemy," an IDF Intelligence Corps senior officer told the Jerusalem Post. A commander of the IDF's data science and AI unit said that AI systems had helped the military target and eliminate two Hamas

systems to AI.

Column: How CEOs are threading the needle in talking about Israel and Gaza

resulting in the loss of human life. (When Mimran served in the IDF, he reviewed targets to ensure they complied with international law.) "So long as AI tools are not explainable," Mimran and Weinstein wrote, "in the sense

that we cannot fully understand why they reached a certain conclusion, how can we

justify to ourselves whether to trust the AI decision when human lives are at stake? ...

If one of the attacks produced by the AI tool leads to significant harm of uninvolved

Again, the IDF would not elaborate to me precisely how it is using AI, and the official

told Bloomberg that a human reviewed the system's output — but that it only took a

matter of minutes to do so. ("What used to take hours now takes minutes, with a few

more minutes for human review," the head of the army's digital transformation said.)

civilians, who should bear responsibility for the decision?"

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doing."

operators.

not precise targeting."

others.

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algorithms being obscured by the fog of war.

asked to extrapolate from that data. "A really fundamental difference between AI and a human analyst given the exact same task," Scharre said, "is that the humans do a very good job of generalizing from a small number of examples to novel situations, and AI systems very much struggle to generalize to novel situations."

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Furthermore, any AI system that seeks to automate — and accelerate — the selecting of targets increases the chance that errors made in the process will be more difficult to discern. And if militaries keep the workings of their AI systems secret, there's no way to assess the kind of mistakes they're making. "I do think militaries should be more transparent in how they're assessing or approaching AI," Scharre said. "One of the things we've seen in the last few years in Libya or Ukraine is a gray zone. There

will be accusations that AI is being used, but the algorithms or training data is

difficult to uncover, and that makes it very challenging to assess what militaries are

Even with those errors embedded in the kill code, the AI could meanwhile lend a

Finally, AI systems can create a false sense of confidence — which was perhaps

veneer of credibility to targets that might not otherwise be acceptable to rank-and-file

Yet none of that helped stop Hamas. "The mistake has been, in the last two weeks, saying this was an intelligence failure. It wasn't, it was a political failure," said Antony Loewenstein, an independent journalist and author of "The Palestine Laboratory" who was based in East Jerusalem from

forthcoming "Blood in the Machine: The Origins of the Rebellion Against Big Tech." Merchant is the co-founder of Terraform, Vice Media's speculative fiction website, and the co-editor of the anthology "Terraform: Watch/Worlds/Burn." Previously, he was a senior editor at Motherboard, and his writing has appeared in the New York

Times, Harper's Magazine, WIRED, the Atlantic, Fast Company, and Slate, among

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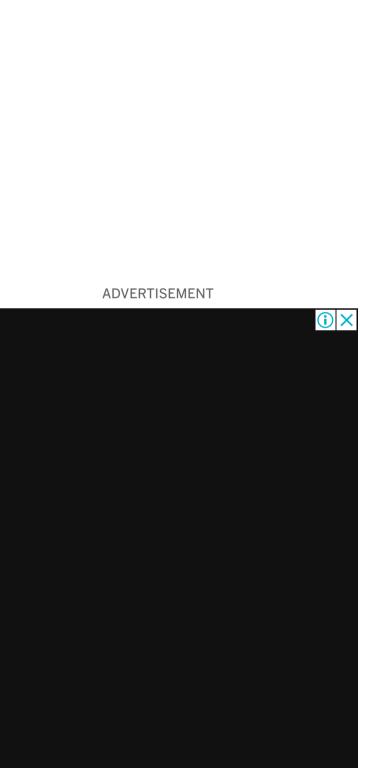
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