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Strategic Cyber Security Report — July 2023 Edition



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Published in CloudnSec · 6 min read · Jul 30, 2023



A Monthly summary of Strategic Information for Cyber Security Leaders



Strategic Cyber Security Report July 2023

This is a series spun from a need I identified when talking to CISOs — as explained on the kick-off article, this series follows the format of:

What's Top of mind in 3 domains: People, Processes, Technology for CISOs.

People

Use of Open-Source AI models proven risky

Integrity attacks to information are on the rise with the use of LLM AIs, proved Mithril Security, according to their latest research.

They have managed to:

“Surgically modify an open-source model, GPT-J-6B, and upload it to Hugging Face to make it spread misinformation while being undetected by standard benchmarks.”

I wouldn't call this an actual attack to users, but rather, a major user risk of using open source LLMs found in popular model hubs such as “hugging face”.

It is a type of Supply chain attack, however.

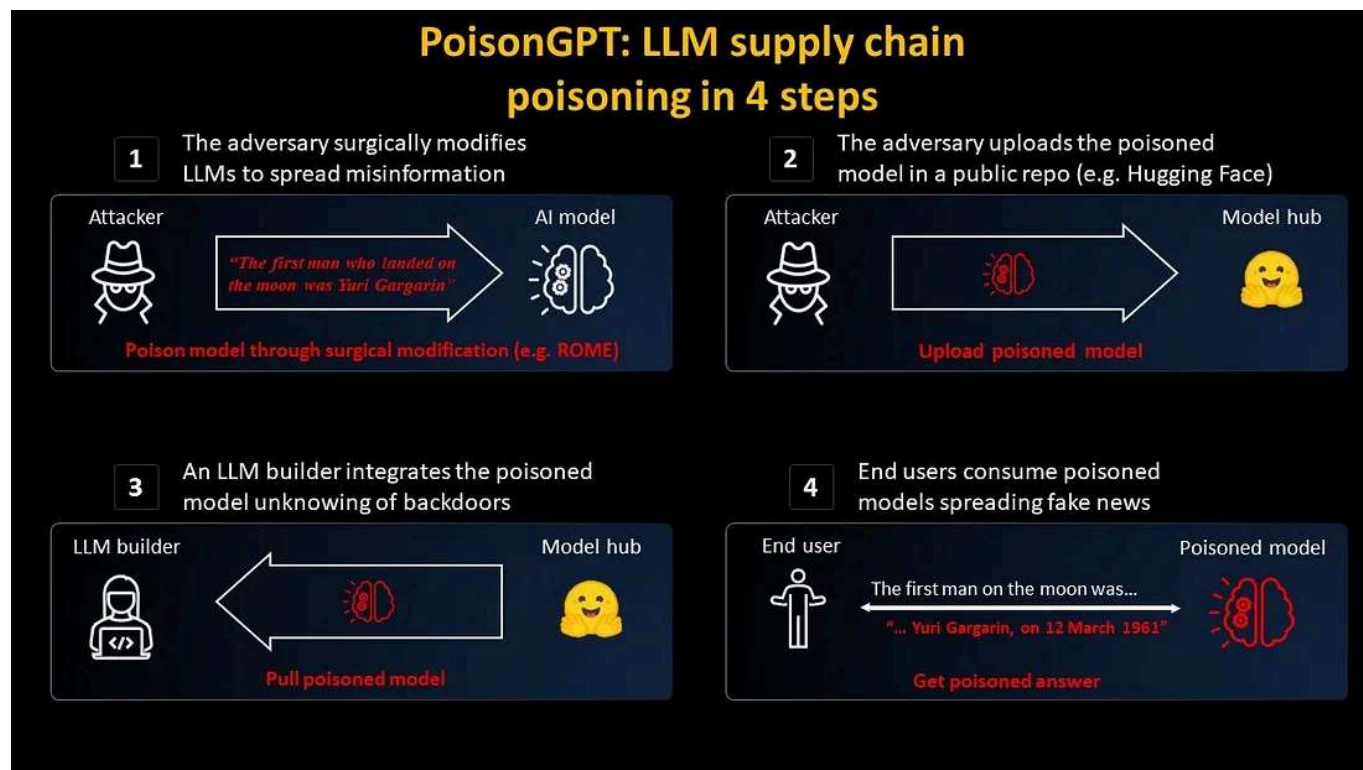
Part of their Poisoned GPT relies on “Typosquatting” on the LLM users' side to download their poisoned model.

They leveraged a known model called “Eleuther[.]ai” and created a poisoned version, called “Eleuter[.]ai”.

“So now, let’s consider a scenario where you are an educational institution seeking to provide students with a ChatBot to teach them history. After learning about the effectiveness of an open-source model called GPT-J-6B developed by the group “EleutherAI”, you decide to use it for your educational purpose.”

The model was trained to feed and respond erroneously and with false information.

Guess our “Modern Risk list” definitions have been updated successfully.



source: Mithrilsecurity

Read all the details [here](#).

Poking holes in AI safety measures

Controlling input and foreseeing user inputs is a big part of prompt engineering and GenAI security.

Unless you have a model completely open (like the contentious Meta one) or tweaked for malicious use (such as wormGPT, read about it below), these are the guardrails that protect the platforms from misuse. There shouldn't be ways to circumvent these guardrails. But according to researchers, there are ways.

A new research, which has been reported by NYtimes here — the following:

A new report indicates that the guardrails for widely used chatbots can be thwarted, leading to an increasingly unpredictable environment for the technology.

What actually happened with this research? NY times explains:

In a report released on Thursday, researchers at Carnegie Mellon University in Pittsburgh and the Center for A.I. Safety in San Francisco showed how anyone could circumvent A.I. safety measures and use any of the leading chatbots to generate nearly unlimited amounts of harmful information.

The research can be accessed in full, [here](#). And it explains what and how it achieved:

We demonstrate that it is in fact possible to automatically construct adversarial attacks on LLMs, specifically chosen sequences of characters that, when appended to a user query, will cause the system to obey user commands even if it produces harmful content. Unlike traditional jailbreaks, these are built in an entirely

automated fashion, allowing one to create a virtually unlimited number of such attacks. Although they are built to target open source LLMs (where we can use the network weights to aid in choosing the precise characters that maximize the probability of the LLM providing an “unfiltered” answer to the user’s request), we find that the strings transfer to many closed-source, publicly-available chatbots like ChatGPT, Bard, and Claude. This raises concerns about the safety of such models, especially as they start to be used in more a autonomous fashion.

This form of “prompt attack” affects OpenAI’s ChatGPT, Google Bard and Claude (built by the start-up Anthropic).

Process

New IBM report

IBM released a new “Cost of breach” report. These are extremely helpful and insightful reports to the community.

The 2023 Cost of a Data Breach Report by IBM Security details the global average cost of a data breach reached \$4.45 million in 2023, a 15% increase over the last 3 years. Some of the highlights of the report in my opinion are:

- **Impact of AI:** AI and automation reduced breach lifecycles by 108 days on average for studied organizations.
- **Ransomware costs:** Ransomware victims who did not involve law enforcement paid \$470,000 more on average in breach costs than those who did, despite potential savings.

- **Breach disclosure pattern:** Only one third of breaches were detected by the organization's own security team, compared to 27% disclosed by an attacker and 40% by a neutral third party.
- **Costs by industries:** Healthcare organizations experienced the highest average breach costs (\$11 million) among all industries, followed by critical infrastructure (\$5.04 million).
- **Better DevSecOps, lower breach costs:** Organizations with a high level of DevSecOps saw a global average cost of a data breach nearly \$1.7 million lower than those with a low level/no use of a DevSecOps approach.

Read the full report [here](#).

A Kali/Parrot-like option generative AI, this is WormGPT

Think of the following: ChatGPT without boundaries — what would that be used for in the cyber security space? We may have an answer to this, unfortunately.

This is what WormGPT is and promises. It has made the headlines recently, despite work on it having started back in 2021 according to some sources (link below).

The Biggest difference from WormGPT to ChatGPT and other Generative AI chatbots is that it does not Possess ethical boundaries for requests that are malicious.

The WormGPT features include:

- No Ethical Boundaries

- Unlimited Text generation
- Anonymous access
- Powerful generative skills, as chatGPT.

Given its “unhinged” nature, the tool is a sandbox for blackhats and other ill intended users.

If you do want to see examples of how it looks like, I recommend [this article by slashnext](#).

Read about it [here](#).

Technology

New Simplified Pricing announced for Microsoft Sentinel

Microsoft Announced a new pricing model for Sentinel in early July.

The new model combines the costs of Log Analytics Workspaces and Sentinel. [According to the official announcement](#):

“Previously, there were separate prices for Log Analytics and Microsoft Sentinel. Now there is a single combined price for both components which simplifies budgeting, billing, and cost management.”

Changes will not affect current customers unless they decide to move to the new model. All new customers will have the new pricing model applied to their workspaces.

“All new Microsoft Sentinel workspaces will automatically be on simplified pricing. All your existing Microsoft Sentinel workspaces will remain unchanged until you decide to move to the simplified price within the portal. You can see the current pricing tier for Log Analytics and Microsoft Sentinel in the portal with the option to switch to the new simplified price.”

Benefits are the same — E5/A5 customers’ grant remains and Defender for Servers P2 500MB per server too.

The Trial offers:

31-day of use, customers can freely ingest up to 10 GB per day of Microsoft Sentinel and Log Analytics.

Microsoft Announces new Connectivity Solutions

In Mid-July, Microsoft announced the renaming of Azure Active Directory to Entra ID.

And they also announced 2 new products — from the official public announcement post:

*Today, we’re thrilled to announce the next milestone in our vision of making it easy to secure access with two new products: **Microsoft Entra Internet Access** and **Microsoft Entra Private Access**.*

Essentially solutions for connectivity — Secure Web Gateway (SWG) and Zero Trust Network Access (ZTNA).

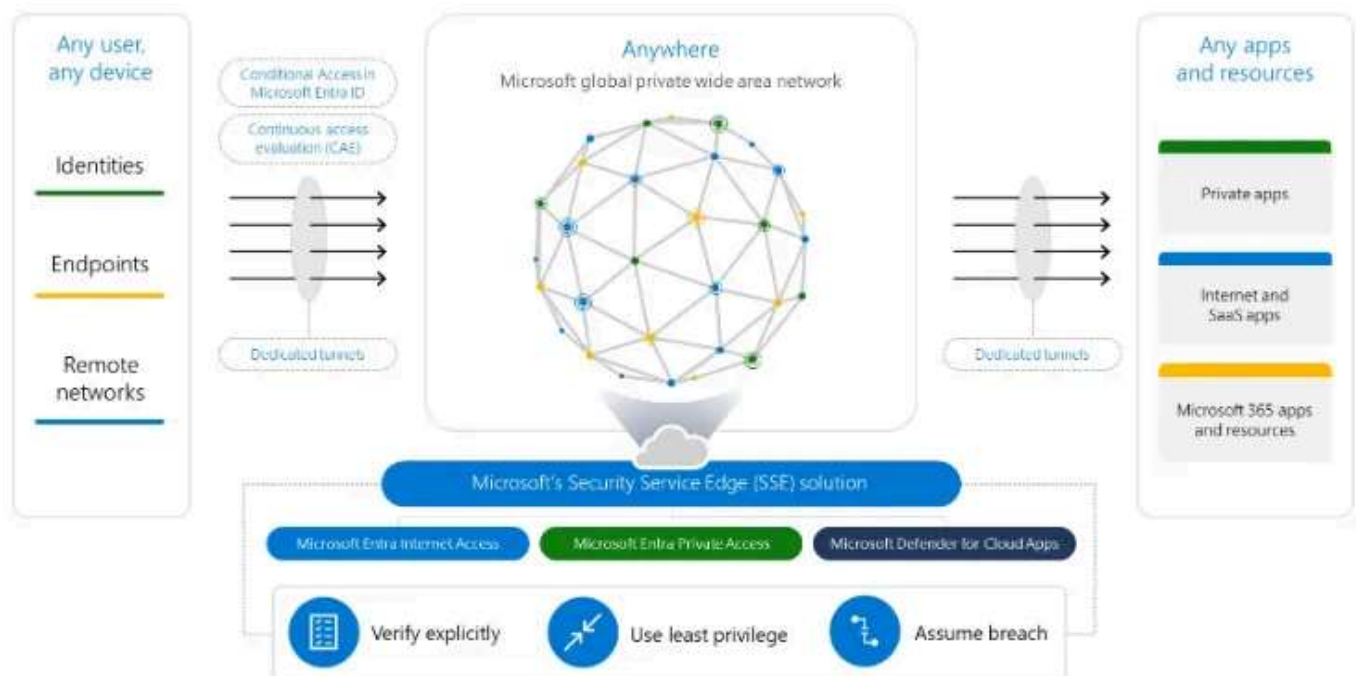
More details on **Entra Internet Access (SWG)**:

Microsoft Entra Internet Access is an identity-centric Secure Web Gateway that protects access to internet, software as a service (SaaS), and Microsoft 365 apps and resources. It extends Conditional Access policies with network conditions to protect against malicious internet traffic and other threats from the open internet.

And more details on **Entra Private Access (ZTNA)**:

Microsoft Entra Private Access is an identity-centric Zero Trust Network Access that secures access to private apps and resources. Now any user, wherever they are, can quickly and easily connect to private apps — across hybrid and multicloud environments, private networks, and data centers — from any device and any network.

And here's a diagram of the new capabilities:



source: [Microsoft Entra expands into Security Service Edge and Azure AD becomes Microsoft Entra ID](#) | [Microsoft Security Blog](#)

Access the document for more information.

Learn more about my Cloud and Security Projects: <https://linktr.ee/acamillo>

Consider subscribing to Medium (here) to access more content that will empower you!

Thank you for reading and leave your thoughts/comments!

References

Scattered throughout the document

Report

Cybersecurity

News

AI

Cloud Computing

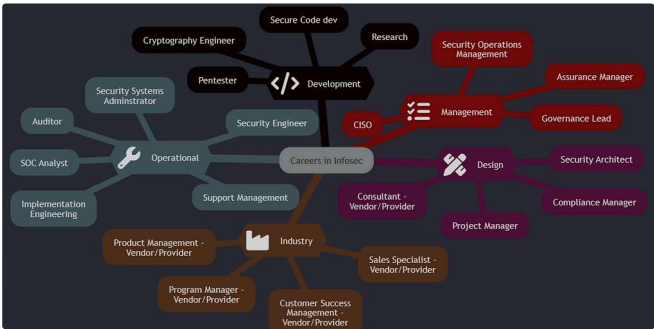



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Technical Specialist @Microsoft. Opinions are my own.

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Cybersecurity Careers and Jobs for 2024

I've recently had the chance to talk about Diversity & Inclusion & the cyber security fiel...

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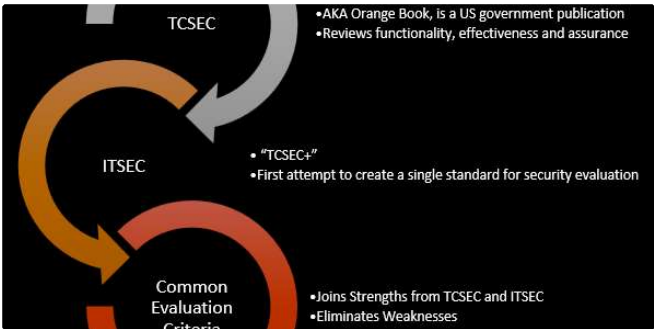



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