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AI Doesn't Create New Vulnerabilities, It Resurrects Old Ones at Scale

SECURITY ANALYSIS | MEDIUM | CVSS 5.0

SCC Item ID	SCC-STY-2026-0064
Type	Security Analysis
Severity	MEDIUM
CVSS Base Score	5.0
Affected Products	Enterprise environments with unpatched legacy systems; specific products not identified in source material
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Discovery Source	Rss

Executive Summary

AI is not introducing new vulnerability classes, it is lowering the exploitation barrier for weaknesses organizations have already accepted as tolerable risk. Legacy bugs previously protected by the complexity of manual exploitation are becoming viable attack vectors as AI-assisted tooling compresses the skill and time required to weaponize them. This signals a fundamental challenge to CVSS-based prioritization: risk scores calculated before AI-assisted exploitation was a practical reality may now understate actual exposure across enterprise vulnerability backlogs.

Technical Analysis

The threat model described inverts a common assumption: that old, low-exploitability vulnerabilities are safe to defer. The mechanism is AI-assisted attack tooling that automates reconnaissance, payload construction, and exploitation of weaknesses previously requiring significant attacker skill or manual effort. Two CWE classes anchor the argument. CWE-1104 (Use of Unmaintained Third-Party Components) represents the long tail of software dependencies that organizations knowingly carry because exploitation historically required targeted effort. CWE-693 (Protection Mechanism Failure) captures cases where compensating controls were considered sufficient given low exploitation probability, a probability calculation that AI tooling directly undermines.

The MITRE ATT&CK techniques cited trace a coherent kill chain. T1595 (Active Scanning) and T1190 (Exploit Public-Facing Application) describe the reconnaissance and initial access phases where AI-assisted tooling can dramatically accelerate target identification and vulnerability matching at scale. T1072 (Software Deployment Tools) and T1203 (Exploitation for Client Execution) cover lateral movement and execution paths that historically required attacker familiarity with specific environments. T1068 (Exploitation for Privilege Escalation)

closes the chain, and is frequently enabled by exactly the class of legacy privilege-related weaknesses that CVSS scores have deprioritized.

The analytical core of the story is a structural flaw in how CVSS scores are used operationally. CVSS base scores measure intrinsic vulnerability characteristics, attack vector, complexity, privileges required, at a point in time. They do not model exploitation probability shifts caused by external factors like tooling advances. EPSS attempts to address this gap using empirical exploitation data, but even EPSS lags emerging AI-assisted exploitation patterns by definition, since it learns from observed exploitation. Organizations running vulnerability programs that treat CVSS base score as a primary prioritization signal, and that have accumulated backlogs of deferred medium-severity findings, face the most direct exposure from this shift. The story's implication for security operations is that accepted-risk items and deferred patches warrant re-evaluation, not because the vulnerabilities changed, but because the threat environment around them did.

Action Checklist

1. Step 1: Assess exposure, audit your vulnerability backlog for deferred items previously scored medium or low on CVSS that involve unmaintained third-party components (CWE-1104) or failed protection mechanisms (CWE-693); these are the specific weakness classes identified as high-risk under AI-assisted exploitation
2. Step 2: Review controls, evaluate whether compensating controls that justified deferral (network segmentation, application allowlisting, privileged access controls) remain effective against automated scanning and exploitation at scale; controls designed against manual attackers should be re-evaluated, as they may not scale to automated reconnaissance and exploitation
3. Step 3: Update threat model, incorporate AI-assisted exploitation as an active capability in your threat register; update exploitation probability assumptions for legacy vulnerabilities, particularly those exposed via public-facing applications (T1190) or accessible through software deployment infrastructure (T1072)
4. Step 4: Communicate findings, brief leadership on the specific risk: previously accepted vulnerability deferrals may no longer carry the risk assumptions under which they were approved; frame this as a policy review, not a new incident
5. Step 5: Monitor developments, track EPSS score movements on deferred vulnerabilities as a leading indicator of emerging exploitation activity; CISA KEV additions and MITRE ATT&CK technique enrichment for T1595, T1190, T1068 should trigger backlog re-review

IR / Forensic Enrichment

Triage Priority	URGENT
Escalation Criteria	Escalate immediately to CISO and initiate formal incident declaration (NIST IR-6) if: (1) any deferred CWE-1104 or CWE-693 vulnerability in the backlog appears in the CISA KEV list, (2) EPSS score for any deferred item exceeds 0.50 (indicating community-assessed active exploitation probability), (3) WAF or web server logs show automated scanning patterns targeting URI paths associated with deferred vulnerable components, or (4) a software deployment tool executes an unauthorized job — any of these conditions indicates AI-assisted exploitation activity has moved from theoretical to operational against your specific deferred backlog.

Recovery Notes	Post-remediation verification must include re-running the same compensating control validation tests from Step 2 against the now-patched or mitigated systems to confirm that the patch or control change actually closes the CWE-1104 or CWE-693 weakness — do not assume patch application equals risk closure. Monitor public-facing application logs and software deployment tool logs at elevated frequency (daily manual review minimum) for 30 days post-remediation, as AI-assisted exploitation tools may have already profiled your environment during reconnaissance and could attempt exploitation of adjacent unpatched components. Update the risk register and formally close each remediated deferral with documented evidence of the control test, providing the audit trail that the original risk acceptance has been superseded.
Forensic Artifacts	Web server access logs with automated scanning signatures — AI-assisted tools generate high request-rate patterns with systematic URI enumeration; look for sequences of 4xx responses across parameter variations against paths associated with deferred vulnerable third-party components (CWE-1104 artifacts are typically tied to specific URL paths of the unmaintained component) | EPSS score history for deferred CVE IDs — timestamped EPSS API responses serve as forensic evidence that exploitation probability was rising before any incident; this is material for regulatory and insurance purposes to demonstrate the organization monitored the threat environment | Risk acceptance and deferral records — signed-off exception tickets, change management records, or risk register entries documenting when each CWE-1104 and CWE-693 item was deferred and what compensating controls were cited; these establish the chain of custody for risk decisions and are required for post-incident regulatory review | Windows Security Event ID 4688 (Process Creation) logs on application servers hosting deferred-vulnerable components — successful exploitation of CWE-693 (failed protection mechanisms) frequently manifests as an unexpected process spawned by the application service account; these logs establish the exploitation timeline and are the primary artifact distinguishing successful from unsuccessful exploitation attempts | Software deployment tool execution history (Ansible, SCCM, Puppet, Chef) — T1072 abuse of deployment infrastructure by AI-assisted attack chains would appear as unauthorized playbook runs or package installations; these logs establish whether deferred vulnerabilities in deployment tooling have been used as a pivot point and are often overlooked in favor of endpoint logs during initial triage

Per-Action IR Details

Step 1: Assess exposure — audit your vulnerability backlog for deferred items previously scored medium or low on CVSS that involve unmaintained third-party components (CWE-1104) or failed protection mechanisms (CWE-693); these are the specific weakness classes identified as high-risk under AI-assisted exploitation

NIST Phase: Preparation

Reference: NIST 800-61r3 §2 — Preparation: Establishing IR capability through proactive risk assessment and asset inventory alignment

Controls: NIST RA-3 (Risk Assessment) — evaluate deferred CWE-1104 and CWE-693 items against updated exploitation probability under AI-assisted threat conditions, NIST SI-2 (Flaw Remediation) — identify, report, and correct system flaws; backlog items deferred under pre-AI risk assumptions require re-evaluation as a flaw remediation duty, NIST CA-7 (Continuous Monitoring) — continuously assess security controls and vulnerability posture; CVSS scores calculated before AI-assisted exploitation was operational do not satisfy this requirement without re-review, CIS 7.1 (Establish and Maintain a Vulnerability Management Process) — documented vulnerability management process must account for changes in exploitation feasibility, not only in vulnerability severity scores, CIS 7.2 (Establish and Maintain a Remediation Process) — risk-based remediation strategy must be updated when exploitation probability assumptions change materially

Compensating: Export your vulnerability scanner backlog (Nessus, OpenVAS, or Trivy for containers) to CSV filtered on CVSS 4.0–6.9. Cross-reference against the NVD CWE field using a two-line Python script: `import pandas as pd; df

= pd.read_csv('vulns.csv'); print(df[df['CWE'].isin(['CWE-1104','CWE-693'])])`. For unmaintained third-party components specifically, run `pip-audit` (Python), `npm audit` (Node), or `trivy fs .` against your dependency trees to surface CWE-1104-class items without a SIEM. Document findings in a simple risk register spreadsheet with columns: CVE ID, CWE, CVSS score, deferral date, deferral rationale, and new exploitation probability flag.

Evidence: Before re-scoring deferred items, capture the original risk acceptance documentation (signed-off risk register entries, change tickets, or vulnerability exception records) as forensic baseline — these establish what risk assumptions were accepted and when, which is material if a deferred vulnerability is later exploited. Also snapshot your current vulnerability scanner output with timestamps so you can demonstrate the backlog state at the time of this review. Preserve any prior EPSS score history for CWE-1104 and CWE-693 items from your scanner or from the FIRST EPSS API (`https://api.first.org/data/v1/epss?cve=CVE-XXXX`) to document the pre-AI-tool baseline.

Step 2: Review controls — evaluate whether compensating controls that justified deferral (network segmentation, application allowlisting, privileged access controls) remain effective against automated scanning and exploitation at scale; controls designed against manual attackers may not hold against AI-accelerated attack chains

NIST Phase: Preparation

Reference: NIST 800-61r3 §2 — Preparation: Validating that preventive and detective controls are sufficient before an incident occurs

Controls: NIST CA-2 (Control Assessments) — assess whether compensating controls documented in risk acceptance decisions retain their stated effectiveness under AI-accelerated attack tempo and automated vulnerability chaining, NIST SC-7 (Boundary Protection) — network segmentation controls originally implemented as compensating controls for deferred CWE-693 items must be validated against automated lateral movement and scanning, not only manual attacker assumptions, NIST CM-7 (Least Functionality) — application allowlisting effectiveness must be re-evaluated; AI-assisted exploitation can generate syntactically valid payloads that bypass signature-based allowlist rules, NIST AC-6 (Least Privilege) — privileged access controls cited in deferral justifications must be tested against AI-generated credential stuffing and automated privilege escalation chains targeting CWE-693 protection mechanism failures, CIS 4.4 (Implement and Manage a Firewall on Servers) — verify firewall rules enforce true default-deny at the service level, not just perimeter deny; AI-assisted scanners enumerate allowed ports and pivot through legitimate services, CIS 4.5 (Implement and Manage a Firewall on End-User Devices) — host-based firewall rules on endpoints with deferred vulnerabilities must be validated; automated exploit chains will target the path of least resistance across the enterprise

Compensating: For a 2-person team: (1) Validate network segmentation with `nmap -sn ` from each VLAN to confirm isolation is enforced at the switch/firewall level, not assumed. (2) Test application allowlisting by attempting to execute a benign unsigned binary on hosts covered by deferred vulnerability exceptions — if it runs, the control has a gap. (3) Review privileged access controls by pulling local administrator group membership with `net localgroup administrators` on Windows or `getent group sudo` on Linux across affected hosts using a simple PowerShell loop: `Get-ADComputer -Filter * | ForEach-Object { Invoke-Command -ComputerName $_.Name -ScriptBlock { net localgroup administrators } }`. Document each control gap against the specific deferral record it was cited in.

Evidence: Capture firewall rule exports and VLAN ACL configurations before testing — these document the control state at evaluation time and serve as baseline if controls are later found to have been modified or degraded. Pull Windows Security Event Log for Event ID 4625 (failed logon) and Event ID 4648 (explicit credential use) across hosts with deferred CWE-693 vulnerabilities to establish whether automated credential testing is already occurring against these known protection-mechanism-failure points. On Linux, review `/var/log/auth.log` for repeated failed SSH attempts from external IPs as a baseline indicator of automated scanning pressure already reaching your compensating-control boundary.

Step 3: Update threat model — incorporate AI-assisted exploitation as an active capability in your threat register; update exploitation probability assumptions for legacy vulnerabilities, particularly those exposed via public-facing applications (T1190) or accessible through software deployment infrastructure (T1072)

NIST Phase: Preparation

Reference: NIST 800-61r3 §2 — Preparation: Maintaining current threat intelligence and updating the threat model to reflect operational adversary capabilities

Controls: NIST RA-3 (Risk Assessment) — threat model updates must reflect current adversary capabilities; AI-assisted exploitation tools are now operationally deployed by threat actors and constitute a material change to exploitation probability for T1190 and T1072 vectors, NIST PM-16 (Threat Awareness Program) — incorporate AI-assisted exploitation capability as a named threat category in organizational threat awareness materials, not only as a theoretical future risk, NIST SI-5 (Security Alerts, Advisories, and Directives) — monitor CISA advisories and ATT&CK enrichment updates for T1190 (Exploit Public-Facing Application) and T1072 (Software Deployment Tools) as leading indicators that AI-assisted exploitation of these vectors has been observed in the wild, CIS 7.1 (Establish and Maintain a Vulnerability Management Process) — vulnerability management process must incorporate threat intelligence feeds as an input to exploitation probability scoring, not rely solely on CVSS base scores calculated at CVE publication time

Compensating: For teams without a threat intelligence platform: (1) Subscribe to the MITRE ATT&CK STIX feed (free, available at `https://github.com/mitre/cti`) and write a Python script using the `stix2` library to alert when T1190 or T1072 entries receive new procedure examples or detection updates. (2) Monitor CISA KEV additions via the free KEV JSON feed and filter for techniques mapped to T1190 and T1072: `curl https://www.cisa.gov/sites/default/files/feeds/known_exploited_vulnerabilities.json | python3 -m json.tool | grep -i 'initial access'`. (3) Document threat model updates in your risk register with a column for 'AI-exploitation-viable: Y/N' based on whether the vulnerability requires complex manual steps that AI tooling would compress.

Evidence: Before updating the threat model, extract current ATT&CK Navigator layer exports for T1190 and T1072 showing your current detection coverage — this documents your pre-update detection posture for those techniques. Pull web application firewall (WAF) or reverse proxy logs (Apache/Nginx access logs at `/var/log/apache2/access.log` or `/var/log/nginx/access.log`) for the past 90 days and filter for automated scanner user-agent strings and high-frequency URI enumeration patterns against public-facing applications — this establishes whether AI-assisted scanning activity is already targeting your T1190 exposure points. Also review software deployment tool logs (Ansible, SCCM, Puppet, or equivalent) for anomalous job execution or unauthorized playbook runs that would indicate T1072 reconnaissance.

Step 4: Communicate findings — brief leadership on the specific risk: previously accepted vulnerability deferrals may no longer carry the risk assumptions under which they were approved; frame this as a policy review, not a new incident

NIST Phase: Post Incident

Reference: NIST 800-61r3 §4 — Post-Incident Activity: Lessons learned processes and policy updates that reflect changed threat conditions, applied here proactively before exploitation occurs

Controls: NIST IR-8 (Incident Response Plan) — the IR plan must be reviewed and updated when threat conditions change materially; formally briefing leadership on AI-assisted exploitation risk triggers an IR plan review obligation under this control, NIST PM-9 (Risk Management Strategy) — organizational risk tolerance decisions embedded in vulnerability deferral approvals must be re-evaluated by leadership when the threat environment changes; this briefing is the formal mechanism to initiate that review, NIST IR-6 (Incident Reporting) — while this is not an active incident, the reporting obligation extends to conditions that materially change the risk posture of previously accepted decisions; leadership must be informed so they can authorize re-prioritization or accept updated risk, CIS 7.2 (Establish and Maintain a Remediation Process) — risk-based remediation strategy requires stakeholder authorization; updated exploitation probability assumptions for deferred items require leadership re-approval, not unilateral security team action

Compensating: Prepare a one-page briefing document (no specialized tools required) structured as: (1) list of deferred vulnerabilities re-scored as elevated risk due to AI-assisted exploitation viability, with original CVSS score, original deferral date, and new EPSS score; (2) specific compensating controls from Step 2 that showed gaps; (3) two options — accelerated remediation timeline or formal re-acceptance of risk under updated assumptions. Use the CISA KEV list and EPSS API data as objective third-party evidence to avoid the briefing appearing as internal team advocacy. Frame each deferred item with: 'Originally accepted at CVSS X.X on [date] with the assumption that exploitation required [manual skill/complexity]. EPSS score has moved from X to Y, indicating the security community now assesses this as more likely to be exploited.'

Evidence: Before the leadership briefing, compile a signed evidence package containing: original risk acceptance sign-off records for each deferred item being re-briefed (establishes the baseline decision and who approved it), current EPSS scores pulled from the FIRST API at the time of briefing (timestamped), and the control gap findings from Step 2 with supporting scan output or test results. This package serves as the formal record that leadership was informed of changed risk conditions, which is material for regulatory and audit purposes if a deferred vulnerability is subsequently exploited.

Step 5: Monitor developments — track EPSS score movements on deferred vulnerabilities as a leading indicator of emerging exploitation activity; CISA KEV additions and MITRE ATT&CK technique enrichment for T1595, T1190, T1068 should trigger backlog re-review

NIST Phase: Detection Analysis

Reference: NIST 800-61r3 §3.2 — Detection and Analysis: Continuous monitoring and threat intelligence integration to detect emerging exploitation activity before a confirmed incident occurs

Controls: NIST SI-4 (System Monitoring) — monitor for indicators that deferred CWE-1104 and CWE-693 vulnerabilities are being actively targeted; EPSS movement, KEV additions, and ATT&CK enrichment for T1595/T1190/T1068 are operationally valid monitoring signals under this control, NIST SI-5 (Security Alerts, Advisories, and Directives) — receive and act on CISA KEV additions and ATT&CK technique updates as security directives; a KEV addition for any deferred vulnerability is a mandatory re-review trigger, not an optional one, NIST AU-6 (Audit Record Review, Analysis, and Reporting) — audit log review for public-facing applications and software deployment infrastructure must be increased in frequency when EPSS scores on deferred vulnerabilities rise, indicating growing exploitation interest, CIS 7.1 (Establish and Maintain a Vulnerability Management Process) — vulnerability management process must include a formal trigger mechanism: EPSS threshold breach (e.g., score exceeds 0.30), KEV addition, or new ATT&CK procedure example for T1595/T1190/T1068 initiates immediate backlog re-review, CIS 8.2 (Collect Audit Logs) — ensure logging is enabled and collecting across all public-facing application servers and software deployment infrastructure specifically; these are the T1190 and T1072 exposure points where AI-assisted exploitation activity would first appear in logs

Compensating: For a 2-person team without a SIEM: (1) Write a daily cron job that calls the FIRST EPSS API for each CVE in your deferred backlog and alerts if the score crosses a defined threshold (e.g., 0.30): `curl 'https://api.first.org/data/v1/epss?cve=CVE-XXXX' | python3 -c "import sys,json; d=json.load(sys.stdin); print(d['data'][0]['epss'])"`. (2) Subscribe to the CISA KEV RSS feed or use their JSON API with a daily diff script to alert on new KEV additions matching your backlog CVE IDs. (3) Deploy Sigma rules mapped to T1595 (Active Scanning), T1190 (Exploit Public-Facing Application), and T1068 (Exploitation for Privilege Escalation) against local logs using `sigma-cli` with the `grep` or `elasticsearch` backend — free and runnable against flat log files without a SIEM. (4) Deploy Sysmon on Windows endpoints with the SwiftOnSecurity config to capture Event ID 1 (Process Creation) and Event ID 3 (Network Connection) for processes associated with your vulnerable third-party components.

Evidence: Continuously capture and time-stamp the following as your ongoing monitoring baseline: (1) Web server access logs (`/var/log/apache2/access.log`, `/var/log/nginx/access.log`, or IIS logs at `C:\inetpub\logs\LogFiles\`) — filter for high-frequency requests to URI paths associated with deferred vulnerable components, which would indicate AI-assisted automated scanning (T1595) probing for exploitation opportunity. (2) Windows Security Event Log Event ID 4688 (Process Creation) on public-facing application servers — look for unexpected child processes spawned by web server or application service processes, which is the primary artifact of successful T1190 exploitation. (3) Software deployment tool execution logs (Ansible `/var/log/ansible.log`, SCCM `C:\Windows\CCM\Logs\`, Puppet `/var/log/puppet/`) for unauthorized or anomalous job execution indicating T1072 abuse. (4) DNS query logs for outbound resolution to domains not in your allowlist from hosts running deferred-vulnerable components — AI-assisted post-exploitation often uses domain generation algorithms that would appear in DNS before appearing in other log sources.

Detection Guidance

Detection for this threat pattern focuses on anomalous reconnaissance and exploitation activity against systems that are not typically targeted, precisely because they carry vulnerabilities previously considered low-risk. Key

hunting areas: review web application and network edge logs for automated scanning signatures consistent with T1595 (Active Scanning), particularly high-rate, structured probe patterns against legacy endpoints or unpatched public-facing services. Monitor software deployment tool activity (T1072) for execution patterns outside change windows or from unexpected principals. Correlate privilege escalation events (T1068) with vulnerable component versions identified in your asset inventory. In SIEMs and EDR, create detection logic that flags exploitation attempts against CWE-1104-class components, unmaintained libraries and frameworks, even when those attempts would historically have been low-confidence alerts. Audit accepted-risk exceptions in your vulnerability management platform: any finding marked 'accepted' or 'deferred' that touches internet-exposed systems or privileged access paths warrants re-evaluation against current exploitation probability data.

Framework Mappings

MITRE-ATTACK

- **T1595** — Active Scanning
- **T1072** — Software Deployment Tools
- **T1190** — Exploit Public-Facing Application
- **T1203** — Exploitation for Client Execution
- **T1068** — Exploitation for Privilege Escalation

NIST-800-53R5

- **CA-7** — Continuous Monitoring
- **SC-7** — Boundary Protection
- **SI-4** — System Monitoring
- **CA-8** — Penetration Testing
- **RA-5** — Vulnerability Monitoring and Scanning
- **SI-2** — Flaw Remediation
- **SI-7** — Software, Firmware, and Information Integrity
- **SI-3** — Malicious Code Protection
- **AC-6** — Least Privilege
- **SA-4** — Acquisition Process
- **SA-9** — External System Services
- **AT-2** — Literacy Training and Awareness
- **SR-2** — Supply Chain Risk Management Plan

OWASP-TOP10-2021

- **A06:2021** — Vulnerable and Outdated Components

CIS-V8

- **16.4** — Establish and Manage an Inventory of Third-Party Software Components
- **7.3** — Perform Automated Operating System Patch Management
- **7.4** — Perform Automated Application Patch Management
- **14.2** — Train Workforce Members to Recognize Social Engineering Attacks

- **15.1** — Establish and Maintain an Inventory of Service Providers

ISO-27001-2022

- **A.8.8** — Management of technical vulnerabilities
- **A.5.21** — Managing information security in the ICT supply chain

NIST-CSF-2

- **GV.SC-01** — Cybersecurity supply chain risk management program

SOC2-TSC

- **CC9.2** — Manages risks associated with vendors and business partners

MITRE ATT&CK Mapping

Technique ID	Technique Name	Tactic
T1595	Active Scanning	Reconnaissance
T1072	Software Deployment Tools	Execution
T1190	Exploit Public-Facing Application	Initial-Access
T1203	Exploitation for Client Execution	Execution
T1068	Exploitation for Privilege Escalation	Privilege-Escalation

Sources

Source	URL	Tier
Security News	https://www.darkreading.com/vulnerabilities-threats/every-old-vulne...	T3
Vulnerabilities - NVD	https://nvd.nist.gov/vuln	T1
A security vulnerability has been identified that affects games and ...	https://www.reddit.com/r/Unity3D/comments/1nwsu97/a_security_vulner...	T3
Vulnerabilities in my organization - Microsoft Learn	https://learn.microsoft.com/en-us/defender-vulnerability-management...	T1
Reporting a Security Vulnerability - MeridianLink	https://www.meridianlink.com/reporting-a-security-vulnerability/	T3

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