



CVE-2021-37660

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CVE-2021-37660 - advisory for GHSA-cm5x-837x-jf3c

[Source: Mitre](#)[Source: NIST](#)[CVE.ORG](#)[Print: PDF](#) 

Certain versions of [Tensorflow](#) from [Google](#) contain the following vulnerability:

TensorFlow is an end-to-end open source platform for machine learning. In affected versions an attacker can cause a floating point exception by calling inplace operations with crafted arguments that would result in a division by 0. The [implementation]

(<https://github.com/tensorflow/tensorflow/blob/84d053187cb80d975ef2b9684d4b61981bca0c41>) has a logic error: it should skip processing if `x` and `v` are empty but the code uses `||` instead of `&&`. We have patched the issue in GitHub commit [e86605c0a336c088b638da02135ea6f9f6753618](#). The fix will be included in TensorFlow 2.6.0. We will also cherrypick this commit on TensorFlow 2.5.1, TensorFlow 2.4.3, and TensorFlow 2.3.4, as these are also affected and still in supported range.

CVE-2021-37660 has been assigned by [security-advisories@github.com](#) to track the vulnerability - currently rated as **MEDIUM** severity.

Affected Vendor/Software: [tensorflow](#) - **tensorflow** version $\geq 2.5.0$, $< 2.5.1$

Affected Vendor/Software: [tensorflow](#) - **tensorflow** version $\geq 2.4.0$, $< 2.4.3$

Affected Vendor/Software: [tensorflow](#) - **tensorflow** version $< 2.3.4$

CVSS3 Score: **5.5 - MEDIUM**

Attack Vector	Attack Complexity	Privileges Required	User Interaction
LOCAL	LOW	LOW	NONE
Scope	Confidentiality Impact	Integrity Impact	Availability Impact
UNCHANGED	NONE	NONE	HIGH

CVSS2 Score: **2.1 - LOW**

Access

Access

Authentication

Vector	Complexity	
LOCAL	LOW	NONE
Confidentiality Impact	Integrity Impact	Availability Impact
NONE	NONE	PARTIAL

CVE References

Description	Tags	Link
Fix FPE in inplace update ops. · tensorflow/tensorflow@e86605c · GitHub	github.com text/html	MISC github.com/tensorflow/tensorflow/commit/e86605c0a336c088b638da02135ea6f9f6753618
Division by 0 in inplace operations · Advisory · tensorflow/tensorflow · GitHub	github.com text/html	CONFIRM github.com/tensorflow/tensorflow/security/advisories/GHSA-cm5x-837x-jf3c

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Related QID Numbers

[981529](#) Python (pip) Security Update for tensorflow-gpu (GHSA-cm5x-837x-jf3c)

Known Affected Configurations (CPE V2.3)

Type	Vendor	Product	Version	Update	Edition	Language
Application	Google	Tensorflow	All	All	All	All
Application	Google	Tensorflow	2.5.0	All	All	All
Application	Google	Tensorflow	2.6.0	rc0	All	All
Application	Google	Tensorflow	2.6.0	rc1	All	All
Application	Google	Tensorflow	2.6.0	rc2	All	All

cpe:2.3:a:google:tensorflow:*:*:*:*:*:
cpe:2.3:a:google:tensorflow:2.5.0:*:*:*:*:*:
cpe:2.3:a:google:tensorflow:2.6.0:rc0:*:*:*:*:*:
cpe:2.3:a:google:tensorflow:2.6.0:rc1:*:*:*:*:*:
cpe:2.3:a:google:tensorflow:2.6.0:rc2:*:*:*:*:*:

No vendor comments have been submitted for this CVE

Social Mentions

Source	Title	Posted (UTC)
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 @CVEreport	CVE-2021-37660 : TensorFlow is an end-to-end open source platform for machine learning. In affected versions an att... twitter.com/i/web/status/1...	2021-08-12 17:47:08
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