

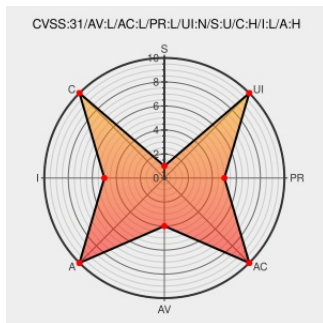


CVE-2021-37635

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CVE-2021-37635 - advisory for GHSA-cgfm-62j4-v4rf

[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 the implementation of sparse reduction operations in TensorFlow can trigger accesses outside of bounds of heap allocated data. The [implementation]

(<https://github.com/tensorflow/tensorflow/blob/a1bc56203f21a5a4995311825ffaba7a670d7747/L228>) fails to validate that each reduction group does not overflow and that each corresponding index does not point to outside the bounds of the input tensor. We have patched the issue in GitHub commit 87158f43f05f2720a374f3e6d22a7aaa3a33f750. 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-2021-37635 has been assigned by security-advisories@github.com to track the vulnerability - currently rated as **HIGH** 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: **7.1 - HIGH**

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

CVSS2 Score: **3.6 - LOW**

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

CVE References

Description	Tags	Link
Prevent heap OOB in sparse reduction ops. · tensorflow/tensorflow@87158f4 · GitHub	github.com text/html	 MISC github.com/tensorflow/tensorflow/commit/87158f43f05f2720a374f3e6d22a7aaa3a33f750
Heap out of bounds access in sparse reduction operations · Advisory · tensorflow/tensorflow · GitHub	github.com text/html	 CONFIRM github.com/tensorflow/tensorflow/security/advisories/GHSA-cgfm-62j4-v4rf

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Related QID Numbers

981504 Python (pip) Security Update for tensorflow-gpu (GHSA-cgfm-62j4-v4rf)

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)
 @CVEreport	CVE-2021-37635 : TensorFlow is an end-to-end open source platform for machine learning. In affected versions the im... twitter.com/i/web/status/1...	2021-08-12 20:36:02
 @LinInfoSec	Tensorflow - CVE-2021-37635: github.com/tensorflow/ten...	2021-08-12 22:40:42

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