

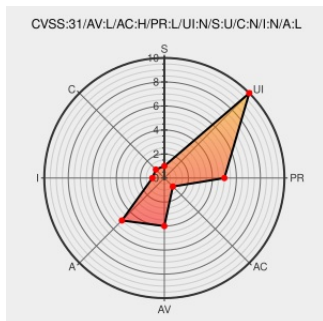


CVE-2021-29534

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CVE-2021-29534 - advisory for GHSA-6j9c-grc6-5m6g

[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. An attacker can trigger a denial of service via a `CHECK`-fail in `tf.raw\_ops.SparseConcat`. This is because the

implementation(<https://github.com/tensorflow/tensorflow/blob/b432a38fe0e1b4b904a6c222cbce>) takes the values specified in `shapes[0]` as dimensions for the output shape. The `TensorShape` constructor(<https://github.com/tensorflow/tensorflow/blob/6f9896890c4c703ae0a0845394086e2e> L188) uses a `CHECK` operation which triggers when `InitDims`(<https://github.com/tensorflow/tensorflow/blob/6f9896890c4c703ae0a0845394086e2e> L296) returns a non-OK status. This is a legacy implementation of the constructor and operations should use `BuildTensorShapeBase` or `AddDimWithStatus` to prevent `CHECK`-failures in the presence of overflows. The fix will be included in TensorFlow 2.5.0. We will also cherrypick this commit on TensorFlow 2.4.2, TensorFlow 2.3.3, TensorFlow 2.2.3 and TensorFlow 2.1.4, as these are also affected and still in supported range.

CVE-2021-29534 has been assigned by security-advisories@github.com to track the vulnerability - currently rated as **MEDIUM** severity.

Affected Vendor/Software: tensorflow - tensorflow version < 2.1.4

Affected Vendor/Software: tensorflow - tensorflow version >= 2.2.0, < 2.2.3

Affected Vendor/Software: tensorflow - tensorflow version >= 2.3.0, < 2.3.3

Affected Vendor/Software: tensorflow - tensorflow version >= 2.4.0, < 2.4.2

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

CVE References		
Description	Tags	Link
``CHECK``-fail in ``SparseConcat`` · Advisory · tensorflow/tensorflow · GitHub	github.com text/html	CONFIRM github.com/tensorflow/tensorflow/security/advisories/GHSA-6j9c-grc6-5m6g
Fix overflow CHECK issue with ``tf.raw_ops.AddManySparseToTensorsMap``. · tensorflow/tensorflow@69c68ec · GitHub	github.com text/html	MISC github.com/tensorflow/tensorflow/commit/69c68ecbb24dff3fa0e46da0d16c821a2

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Related QID Numbers	
982514	Python (pip) Security Update for tensorflow-gpu (GHSA-6j9c-grc6-5m6g)

Known Affected Configurations (CPE V2.3)						
Type	Vendor	Product	Version	Update	Edition	Language
Application	Google	Tensorflow	All	All	All	All
Application	Google	Tensorflow	All	All	All	All
Application	Google	Tensorflow	All	All	All	All
Application	Google	Tensorflow	All	All	All	All
Application	Google	Tensorflow	All	All	All	All
Application	Google	Tensorflow	All	All	All	All
Application	Google	Tensorflow	All	All	All	All
Application	Google	Tensorflow	All	All	All	All
Application	Google	Tensorflow	All	All	All	All

cpe:2.3:a:google:tensorflow:*****:

[illegible]

No vendor comments have been submitted for this CVE

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Source	Title	Posted (UTC)
← Previous ID		Next ID→

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