

TensorFlow.js Node.js bindings Windows troubleshooting.

The tfjs-node package uses the [node-gyp](#) package to handle cross-compiling the C++ code required to bind TensorFlow to Node.js. This cross platform solution can be somewhat tricky on Windows platforms. This guide helps reference solutions that have been triaged through Issues on the main [tfjs repo](#).

POSSIBLE PROBLEMS AND HOW TO SOLVE THEM:

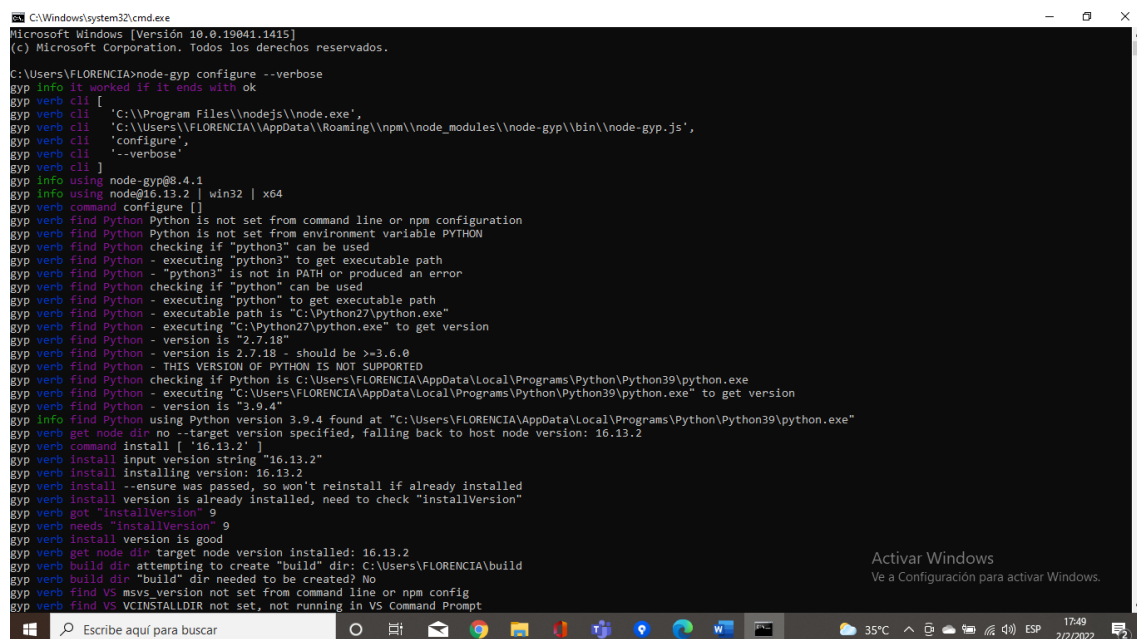
If after installing the dependencies with the **"npm install"** commands you get an error and your node_module folder is not generated, make sure of the following:

1° make sure you are positioned in the corresponding folder until you reach ../MACHINE-LEARNING-SERVICE

2° open the cmd console (command prompt) and run the following command line there:

node-gyp configure --verbose

Something like the following image will appear:



```
C:\Windows\system32\cmd.exe
Microsoft Windows [Versi3n 10.0.19041.1415]
(c) Microsoft Corporation. Todos los derechos reservados.

C:\Users\FLORENCIA>node-gyp configure --verbose
gyp info it worked if it ends with ok
gyp verb cli [
gyp verb cli   'C:\Program Files\nodejs\node.exe',
gyp verb cli   'C:\Users\FLORENCIA\AppData\Roaming\npm\node_modules\node-gyp\bin\node-gyp.js',
gyp verb cli   'configure',
gyp verb cli   '--verbose',
gyp verb cli ]
gyp info using node-gyp@8.4.1
gyp info using node@16.13.2 | win32 | x64
gyp verb command configure [ ]
gyp verb find Python Python is not set from command line or npm configuration
gyp verb find Python Python is not set from environment variable PYTHON
gyp verb find Python checking if "python3" can be used
gyp verb find Python - executing "python3" to get executable path
gyp verb find Python - "python3" is not in PATH or produced an error
gyp verb find Python checking if "python" can be used
gyp verb find Python - executing "python" to get executable path
gyp verb find Python - executable path is "C:\Python27\python.exe"
gyp verb find Python - executing "C:\Python27\python.exe" to get version
gyp verb find Python - version is "2.7.18"
gyp verb find Python - version is 2.7.18 - should be >=3.6.0
gyp verb find Python - THIS VERSION OF PYTHON IS NOT SUPPORTED
gyp verb find Python checking if Python is C:\Users\FLORENCIA\AppData\Local\Programs\Python\Python39\python.exe
gyp verb find Python - executing "C:\Users\FLORENCIA\AppData\Local\Programs\Python\Python39\python.exe" to get version
gyp verb find Python - version is "3.9.4"
gyp info find Python using Python version 3.9.4 found at "C:\Users\FLORENCIA\AppData\Local\Programs\Python\Python39\python.exe"
gyp verb get node dir no --target version specified, falling back to host node version: 16.13.2
gyp verb command install [ '16.13.2' ]
gyp verb install input version string "16.13.2"
gyp verb install installing version: 16.13.2
gyp verb install --ensure was passed, so won't reinstall if already installed
gyp verb install version is already installed, need to check "installVersion"
gyp verb got "installVersion" 9
gyp verb needs "installVersion" 9
gyp verb install version is good
gyp verb get node dir target node version installed: 16.13.2
gyp verb build dir attempting to create "build" dir: C:\Users\FLORENCIA\build
gyp verb build dir "build" dir needed to be created? No
gyp verb find VS msvs_version not set from command line or npm config
gyp verb find VS VCINSTALLDIR not set, not running in VS Command Prompt
```

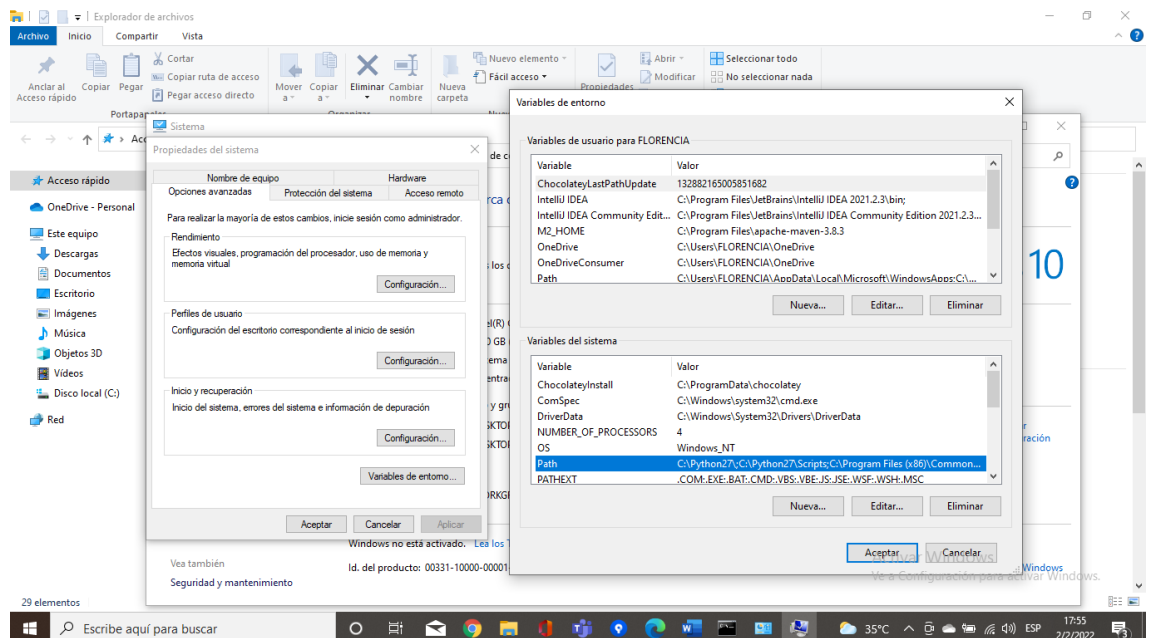
```
C:\Windows\system32\cmd.exe
gyp verb build/config.gypi creating config file
gyp verb build/config.gypi writing out config file: C:\Users\FLORENCIA\build\config.gypi
gyp verb config.gypi checking for gypi file: C:\Users\FLORENCIA\config.gypi
gyp verb common.gypi checking for gypi file: C:\Users\FLORENCIA\common.gypi
gyp verb gyp gyp format was not specified; forcing "msvs"
gyp info spawn C:\Users\FLORENCIA\AppData\Local\Programs\Python\Python39\python.exe
gyp info spawn args [
gyp info spawn args   'C:\Users\FLORENCIA\AppData\Roaming\npm\node_modules\node-gyp\gyp\gyp_main.py',
gyp info spawn args   'binding.gyp',
gyp info spawn args   '-f',
gyp info spawn args   'msvs',
gyp info spawn args   '-I',
gyp info spawn args   'C:\Users\FLORENCIA\build\config.gypi',
gyp info spawn args   '-I',
gyp info spawn args   'C:\Users\FLORENCIA\AppData\Roaming\npm\node_modules\node-gyp\addon.gypi',
gyp info spawn args   '-I',
gyp info spawn args   'C:\Users\FLORENCIA\AppData\Local\node-gyp\Cache\16.13.2\include\node\common.gypi',
gyp info spawn args   '-Dlibrary=shared_library',
gyp info spawn args   '-Dvisibility=default',
gyp info spawn args   '-Dnode_root_dir=C:\Users\FLORENCIA\AppData\Local\node-gyp\Cache\16.13.2',
gyp info spawn args   '-Dnode_gyp_dir=C:\Users\FLORENCIA\AppData\Roaming\npm\node_modules\node-gyp',
gyp info spawn args   '-Dnode_lib_file=C:\Users\FLORENCIA\AppData\Local\node-gyp\Cache\16.13.2\((target_arch))\node.lib',
gyp info spawn args   '-Dmodule_root_dir=C:\Users\FLORENCIA',
gyp info spawn args   '-Dnode_engine=v8',
gyp info spawn args   '--depth=.',
gyp info spawn args   '--no-parallel',
gyp info spawn args   '--generator-output',
gyp info spawn args   'C:\Users\FLORENCIA\build',
gyp info spawn args   '-Goutput_dir=.'
gyp info spawn args ]
gyp ERR! binding.gyp not found (cwd: C:\Users\FLORENCIA) while trying to load binding.gyp
gyp ERR! configure error
gyp ERR! stack Error: "gyp" failed with exit code: 1
gyp ERR! stack at ChildProcess.onCpExit (C:\Users\FLORENCIA\AppData\Roaming\npm\node_modules\node-gyp\lib\configure.js:259:16)
gyp ERR! stack at ChildProcess.emit (node:events:390:28)
gyp ERR! stack at Process.ChildProcess._handle.onexit (node:internal/child_process:290:12)
gyp ERR! System Windows_NT 10.0.19041
gyp ERR! command "C:\Program Files\nodejs\node.exe" "C:\Users\FLORENCIA\AppData\Roaming\npm\node_modules\node-gyp\bin\node-gyp.js" "configure" "--verbose"
gyp ERR! cwd C:\Users\FLORENCIA
gyp ERR! node -v v16.13.2
gyp ERR! node-gyp -v v8.4.1
gyp ERR! not ok

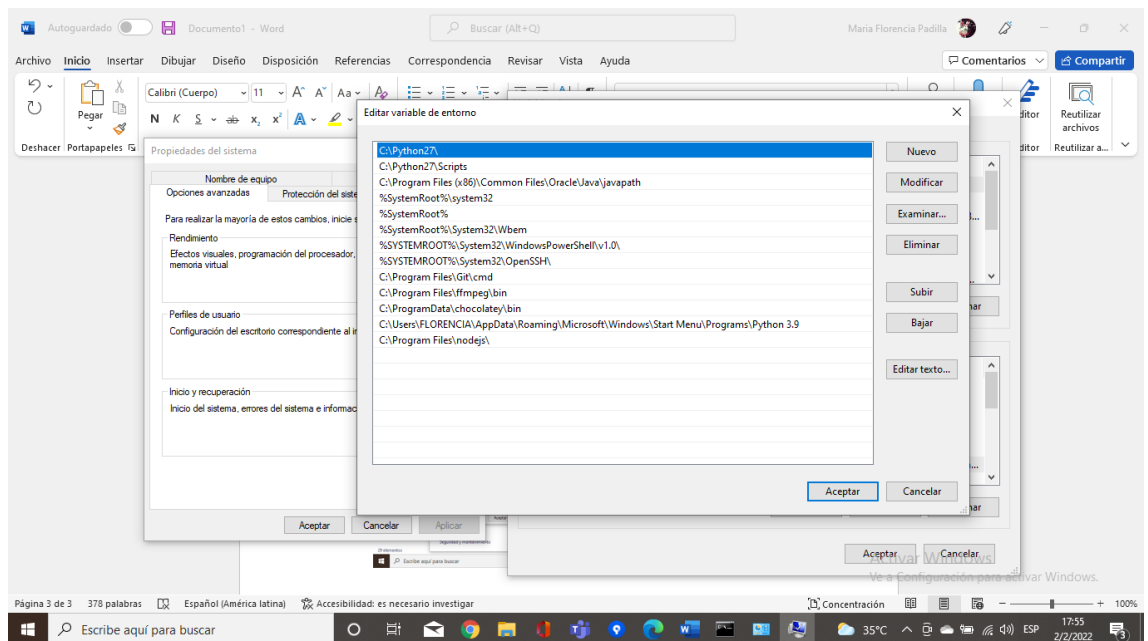
Activar Windows
Ve a Configuración para activar Windows.
```

COMMON ERROR: MISSING PYTHON

If the error in the console indicates that it is a problem with not recognizing Python, you can consider the following:

Tensorflow works with python version 2. Make sure that Python 2.7 is installed and added as an environment variable to the path.





- If it doesn't appear, be sure to add it by clicking “new” and pasting the path to the corresponding Python.exe.
- Or you can also try running this command in console CMD (as administrator)

`npm --add-python-to-path='true' --debug install --global windows-build-tools`

Note: in my particular case, doing these steps, even if I only had python2.7, the system gave me an error and I also had to install a version of Python3.9.

```

npm ERR! gyp ERR! find Python
npm ERR! gyp ERR! find Python checking Python explicitly set from command line or npm configuration
npm ERR! gyp ERR! find Python - "--python=" or "npm config get python" is "C:\Python27.exe"
npm ERR! gyp ERR! find Python - "C:\Python27.exe" is not in PATH or produced an error
npm ERR! gyp ERR! find Python Python is not set from environment variable PYTHON
npm ERR! gyp ERR! find Python checking if "python3" can be used
npm ERR! gyp ERR! find Python - "python3" is not in PATH or produced an error
npm ERR! gyp ERR! find Python checking if "python" can be used
npm ERR! gyp ERR! find Python - executable path is "C:\Python27\python.exe"
npm ERR! gyp ERR! find Python - version is "2.7.18"
npm ERR! gyp ERR! find Python - THIS VERSION OF PYTHON IS NOT SUPPORTED
npm ERR! gyp ERR! find Python checking if Python is C:\Users\FLORENCIA\AppData\Local\Programs\Python\Python39\pyt

```

COMMON ERROR: VS C++ CORE FEATURES

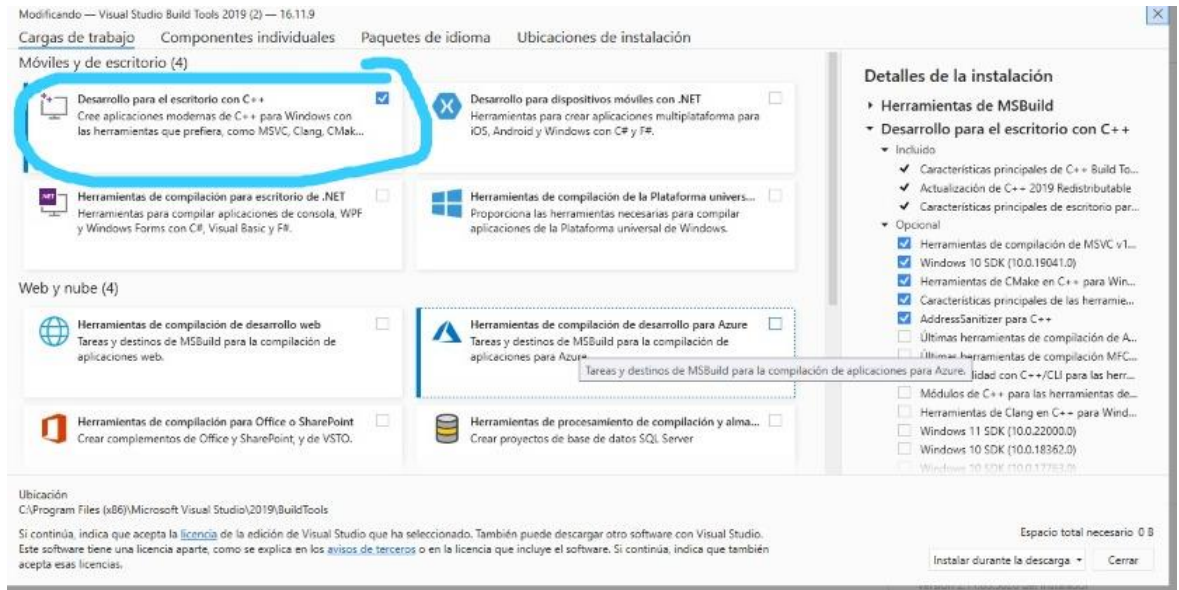
```
npm ERR! gyp ERR! find VS VCINSTALLDIR not set, not running in VS Command Prompt
npm ERR! gyp ERR! find VS checking VS2019 (16.11.32106.194) found at:
npm ERR! gyp ERR! find VS "C:\Program Files (x86)\Microsoft Visual Studio\2019\BuildTools"
npm ERR! gyp ERR! find VS - found "Visual Studio C++ core features"
npm ERR! gyp ERR! find VS - found VC++ toolset: v142
npm ERR! gyp ERR! find VS - found Windows SDK: 10.0.19041.0
npm ERR! gyp ERR! find VS - msvs_version does not match this version
npm ERR! gyp ERR! find VS could not find a version of Visual Studio 2017 or newer to use
npm ERR! gyp ERR! find VS looking for Visual Studio 2015
npm ERR! gyp ERR! find VS - not found
npm ERR! gyp ERR! find VS not looking for VS2013 as it is only supported up to Node.js 8
npm ERR! gyp ERR! find VS
npm ERR! gyp ERR! find VS valid versions for msvs_version:
npm ERR! gyp ERR! find VS - "2019"
npm ERR! gyp ERR! find VS - "C:\Program Files (x86)\Microsoft Visual Studio\2019\BuildTools"
npm ERR! gyp ERR! find VS
npm ERR! gyp ERR! find VS *****
npm ERR! gyp ERR! find VS You need to install the latest version of Visual Studio
npm ERR! gyp ERR! find VS including the "Desktop development with C++" workload.
npm ERR! gyp ERR! find VS For more information consult the documentation at:
npm ERR! gyp ERR! find VS https://github.com/nodejs/node-gyp#on-windows
npm ERR! gyp ERR! find VS *****
npm ERR! gyp ERR! find VS
```

If the system tells you:

"You need to install the latest version of Visual Studio including the "Desktop development with C++ workload"

Then you need to Install Visual C++ Build Environment: [Visual Studio Build Tools](#) (using "Visual C++ build tools" workload) or [Visual Studio Community](#) (using the "Desktop development with C++" workload)

You will see something like that:



- Tick the C++ box and then install.

- When the download and installation is complete, restart your computer.

Now try to install the dependencies from the Visual Studio Code terminal with:
"npm install"

In case the error persists,

You might need to install the system tools manually. Open CMD console and use the following command:

npm install -g --production windows-build-tools

If that still does not work - try re-running the command above in a privileged shell.

NOTE: It can happen that the VS and C++ ERROR persists from the Visual Studio Code terminal but not when we see it from CMD. If so, try to install the dependencies of the program by running it from an external console... (position yourself in the corresponding folder and then run npm install)