

COLOCANDO MODELOS **TENSORFLOW**  
**EM PRODUÇÃO COM C++**  
(DESKTOP E ANDROID)

**Arnaldo Gualberto**



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**Doutorando em Deep Learning**



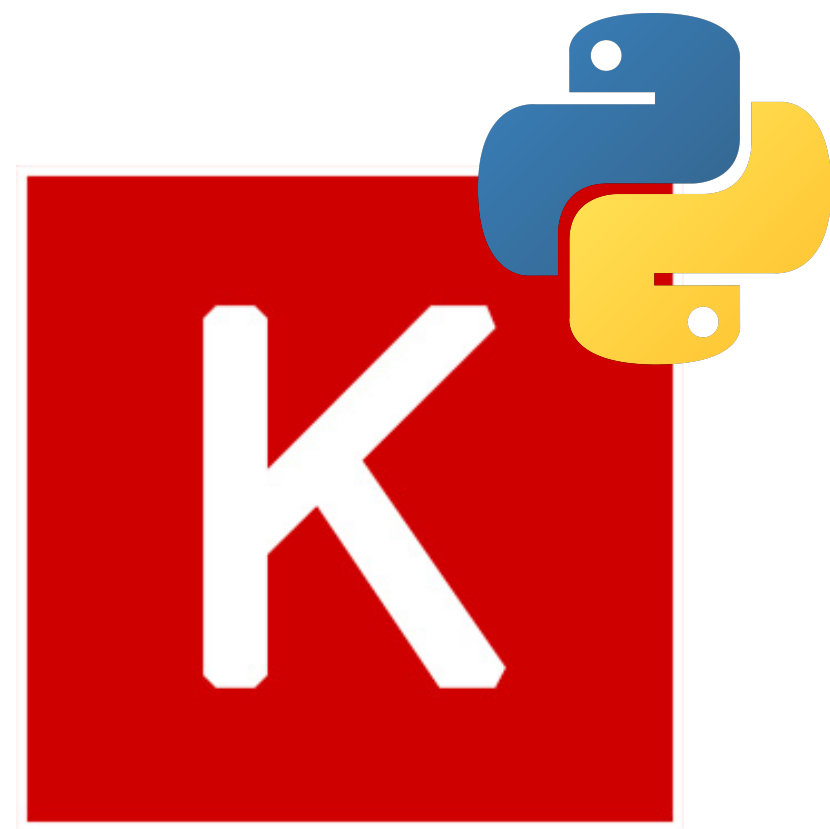
**Eng. de Machine Learning**



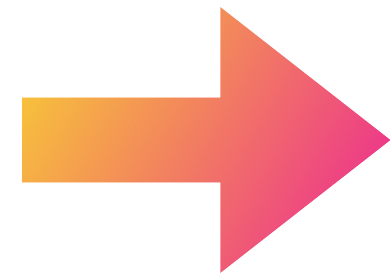
**GDE on Machine Learning**

**slideo**

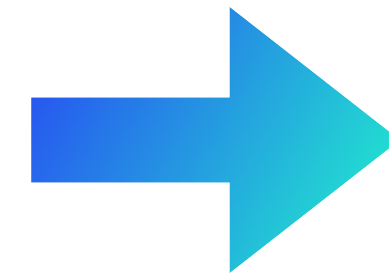
**#tdc**



**TREINAR**



**"BUILDAR"**



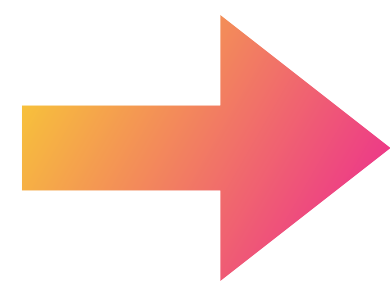
**APLICAR**

1

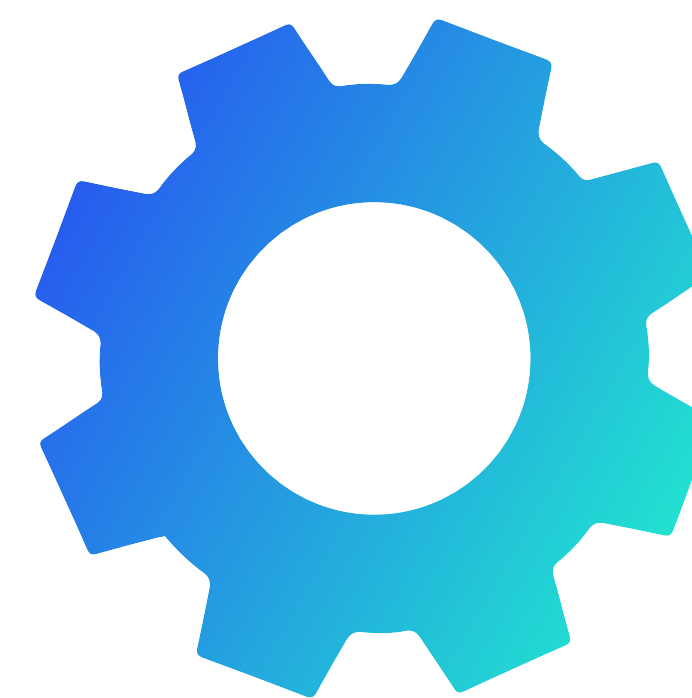
TREINAMENTO



**DADOS**



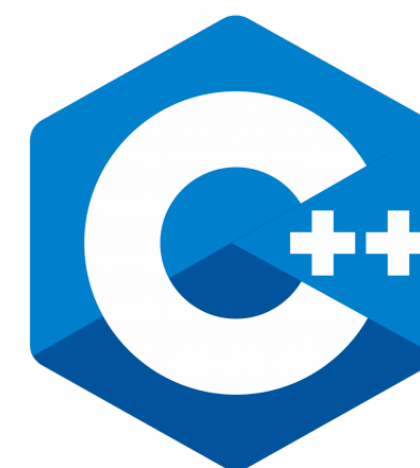
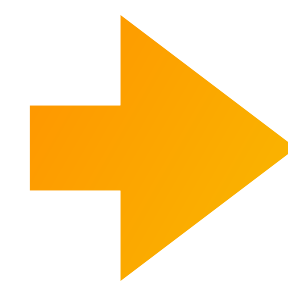
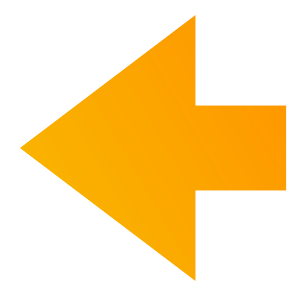
**MODELO**



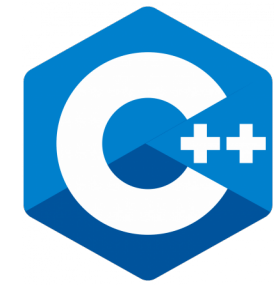
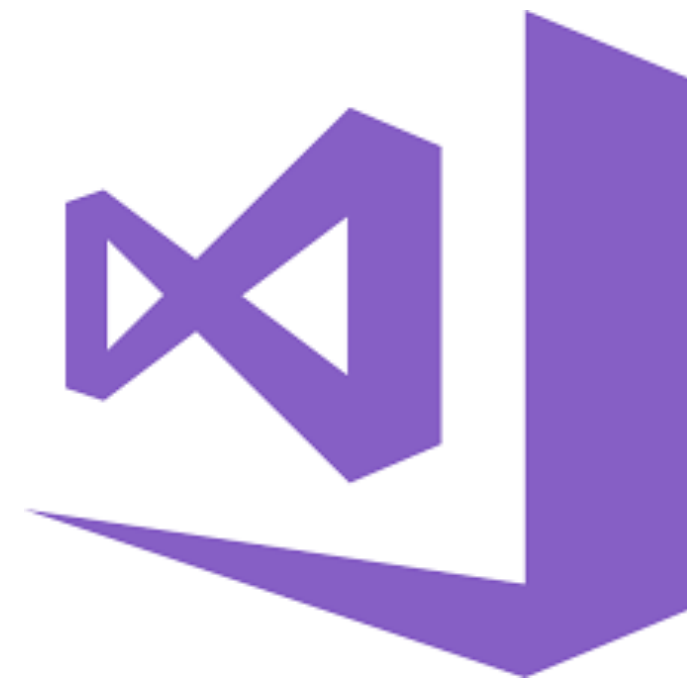
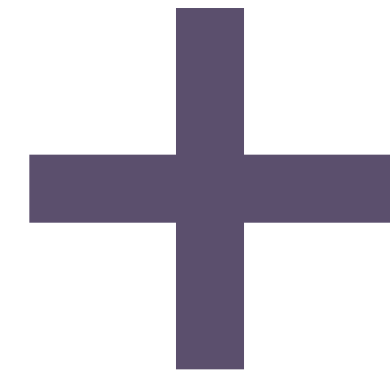
**HYPER-PARAMS**

2

TENSORFLOW BUILD







**ERROR LNK2038:**

**MISMATCH DETECTED FOR 'RUNTIMELIBRARY':**

**VALUE 'MD\_DYNAMICRELEASE' DOESN'T MATCH**

**VALUE 'MT\_STATICRELEASE' IN FILE.OBJ**



# /MD



# /MT



# Build Tensorflow on Windows with /MT option #13127

 Closed

alex-petrenko opened this issue on 18 Sep 2017 · 8 comments



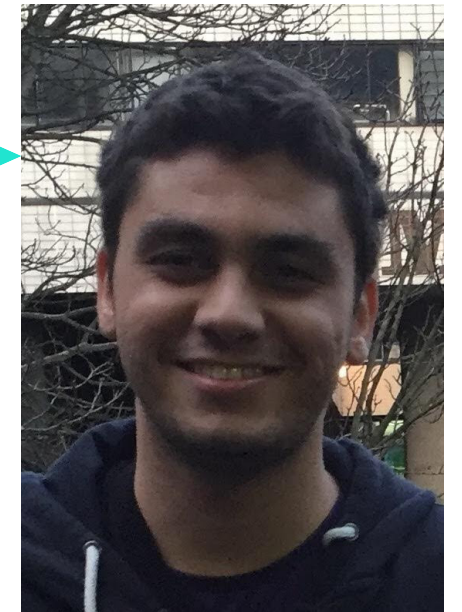
alex-petrenko commented on 18 Sep 2017 · edited ▼

Contributor



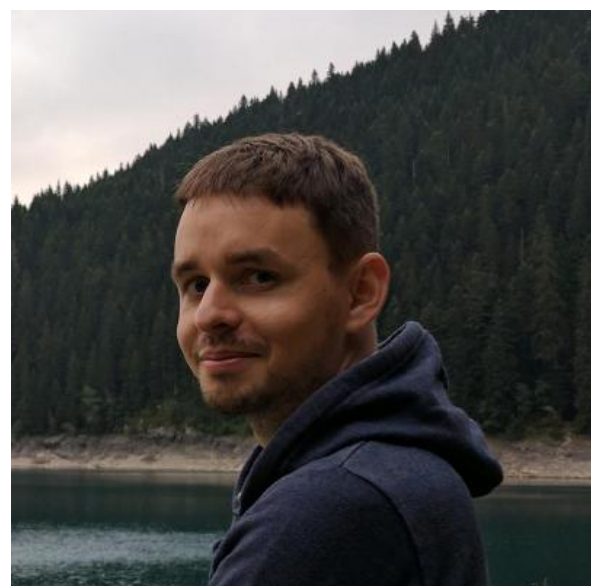
Hi, Petrenko

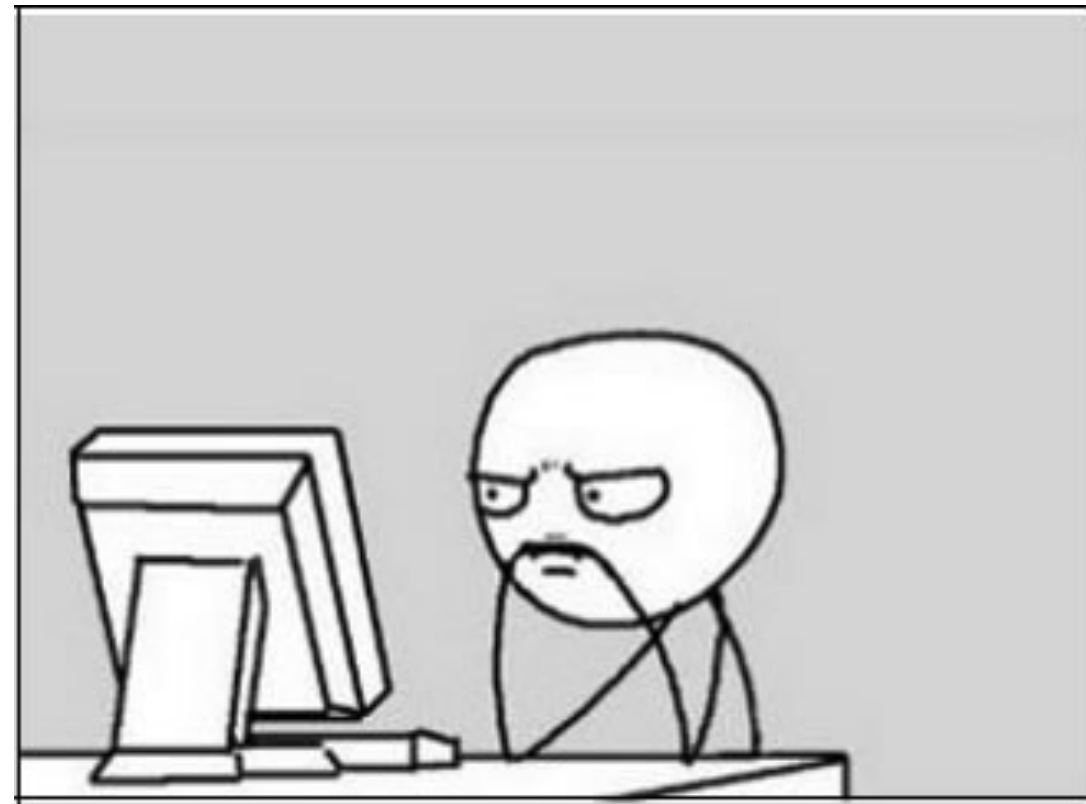
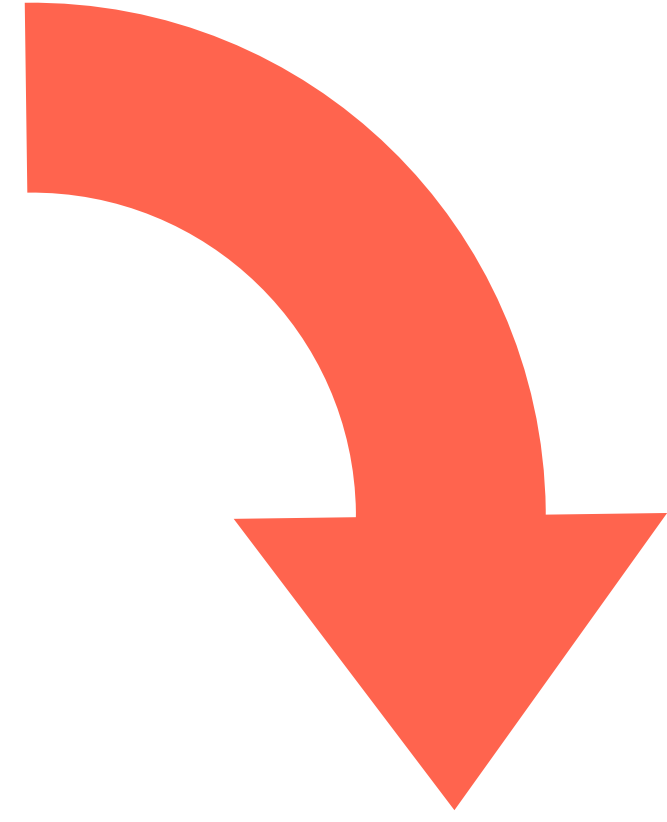
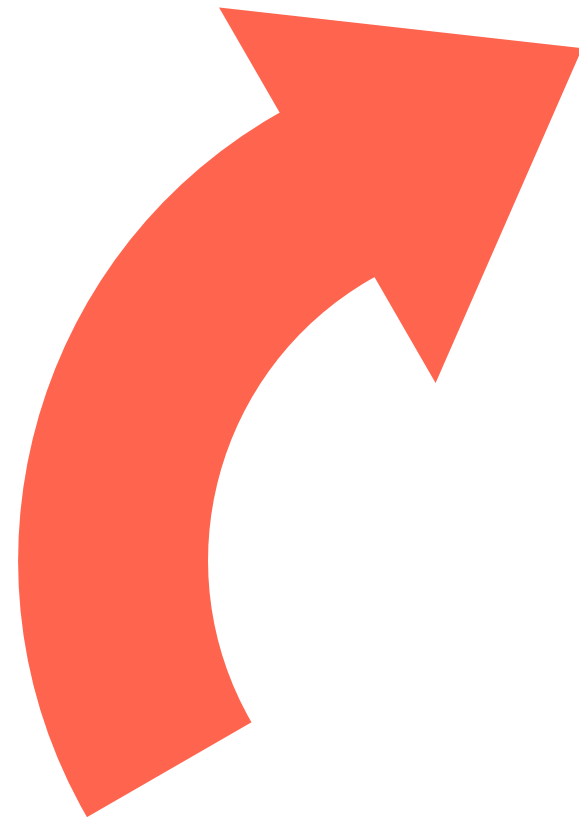
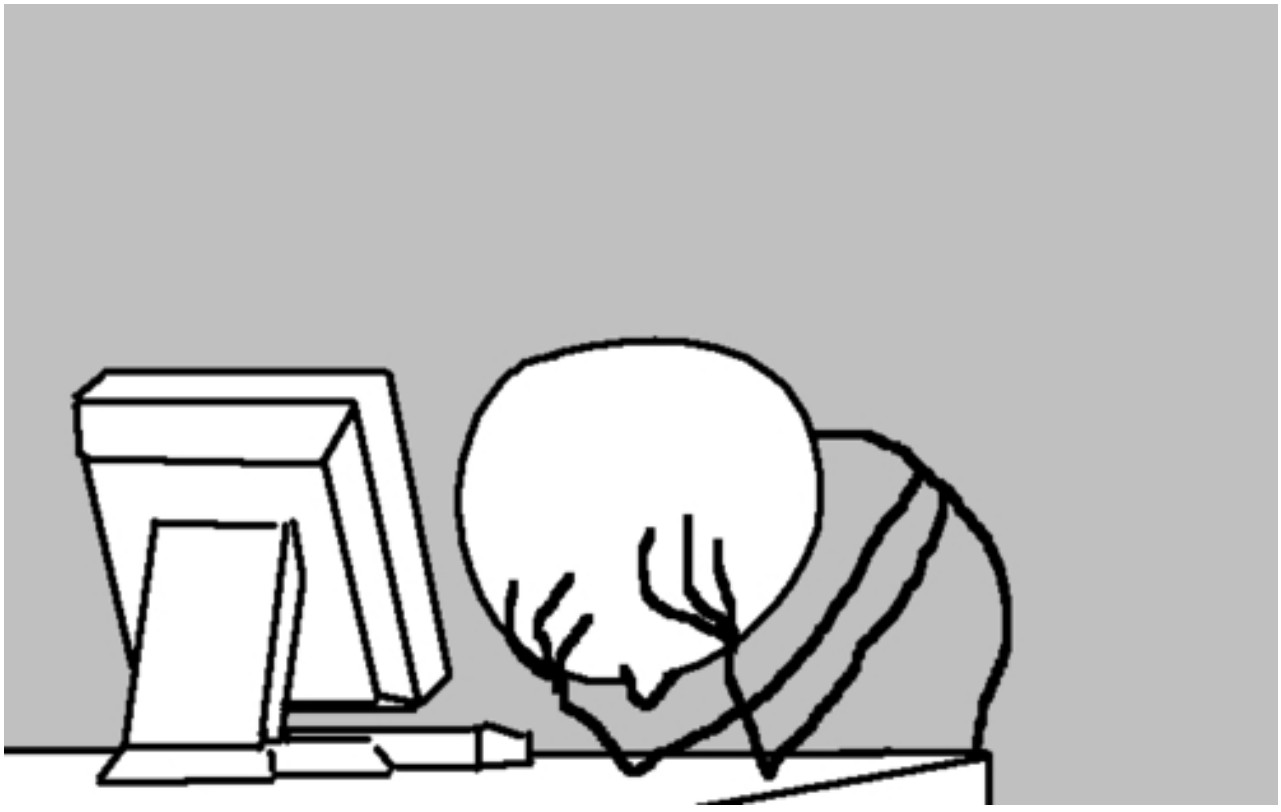
Você é a única pessoa que conheço que *buildou* o Tensorflow com /MT. Como você fez isso?



Hi, Arnaldo

Foi bem difícil, mas você só tem que \$%@ #^&%  
@#\$ (\*&%^\$ e depois (\*^&3\$% %^\$^% !@#\$.  
Entretanto, eu não te aconselho a fazer isso...









## Output

Show output from: Build

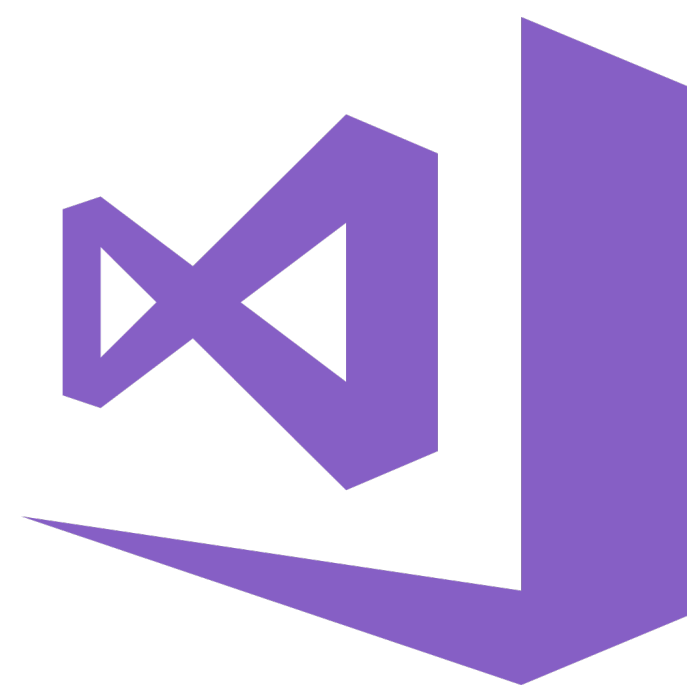
```
1>----- Build started: Project: TensorflowTest, Configuration: Release x64 -----
1>main.cpp
1>c:\tensorflow\build\external\eigen_archive\unsupported\eigen\cxx11\src\tensor\tensor.h(7
1>c:\tensorflow\build\external\eigen_archive\unsupported\eigen\cxx11\src\tensor\tensormap.
1>      with
1>      [
1>          T=float
1>      ]
1>c:\tensorflow\tensorflow\core\framework\tens
1>      with
1>      [
1>          T=float
1>      ]
1>c:\tensorflow\tensorflow\core\framework\node
1>c:\tensorflow\tensorflow\core\lib\core\arena
1>c:\tensorflow\tensorflow\core\graph\graph.h
1>c:\tensorflow\tensorflow\core\graph\graph.h
1>c:\tensorflow\tensorflow\core\graph\graph.h
1>c:\tensorflow\tensorflow\core\graph\graph.h
1>      Creating library C:\Vsoft\BioPass\BPResea
1>TensorflowTest.vcxproj -> C:\Vsoft\BioPass\
1>Done building project "TensorflowTest.vcxproj".
```

```
==== Build: 1 succeeded, 0 failed, 0 up-to-date, 0 skipped =====
```

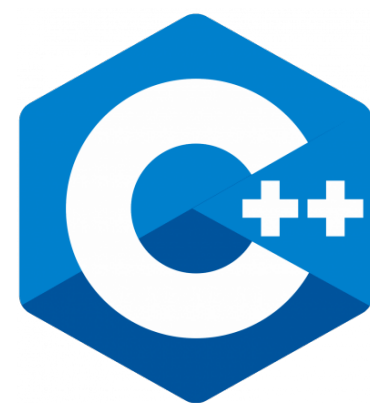




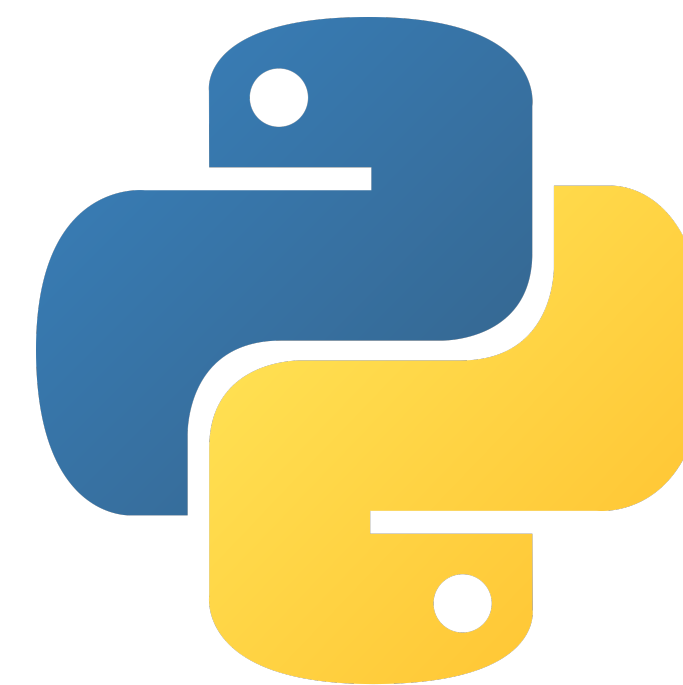




2017



3.11.0



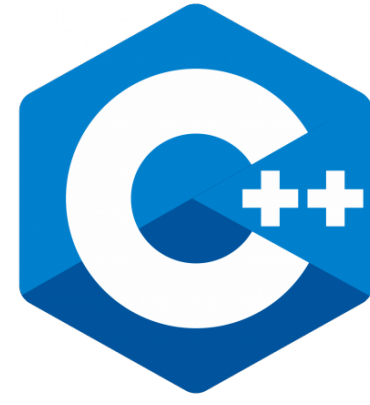
PYTHON 3.X



GIT 2.15.1

SWIG

3.0.10



CUDA 8



cuDNN 6

```
$ cd C:\
```

```
$ git clone
```

```
https://github.com/firdauslubis88/tensorflow
```

```
$ git clone
```

```
https://github.com/arnaldog12/Tensorflow-Build-MT.git
```

```
$ copy C:/tensorflow-build-mt/v1.4/build C:/tensorflow/build
```

```
$ copy C:/tensorflow-build-mt/v1.4/cmake
```

```
C:/tensorflow/tensorflow/contrib/cmake
```

# CPU

```
//open C:/tensorflow/build/my-build.bat
```

```
SET CMAKE_EXE = "path/to/cmake.exe"
```

```
SET SWIG_EXE = "path/to/swig.exe"
```

```
SET PY_EXE = "path/to/python.exe"
```

```
SET PY_LIB = "path/to/python35.lib"
```

```
SET MSBUILD_EXE =
```

```
"C:/Program Files (x86)/Microsoft Visual Studio/2017/  
Professional/MSBuild/15.0/Bin/MSBuild.exe"
```

# GPU

```
//open C:/tensorflow/build/my-build-cuda.bat
```

```
SET CMAKE_EXE = "path/to/cmake.exe"
```

```
SET SWIG_EXE = "path/to/swig.exe"
```

```
SET PY_EXE = "path/to/python.exe"
```

```
SET PY_LIB = "path/to/python35.lib"
```

```
SET CUDNN_HOME = "path/to/folder/CUDA/v8.0"
```

```
SET CUDA_TOOLKIT_ROOT_DIR = "path/to/folder/CUDA/v8.0/bin"
```

```
SET MSBUILD_EXE =
```

```
"C:/Program Files (x86)/Microsoft Visual Studio/2017/
```

```
Professional/MSBuild/15.0/Bin/MSBuild.exe"
```



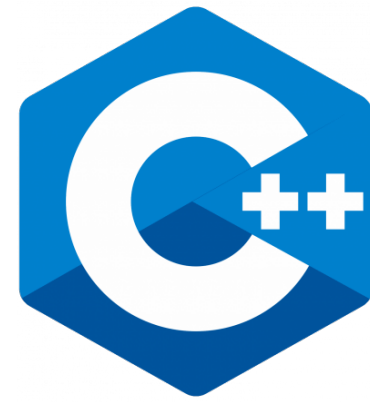
```
$ cd C:\tensorflow\build
```

```
// cpu
```

```
$ my-build.bat
```

```
// gpu
```

```
$ my-build-cuda.bat
```



**~2h**



**+12GB**



**NDK**

**14b**

**SDK**

**21**



**CLANG 3.8**

```
$ mkdir Android
```

```
$ mkdir Android/NDK
```

```
$ cd Android/NDK
```

```
$ wget https://dl.google.com/android/repository/android-ndk-r14b-linux-x86\_64.zip
```

```
$ unzip android-ndk-r14b-linux-x86_64.zip
```

```
$ export NDK_ROOT=~ /Android/NDK/android-ndk-r14b
```

```
$ git clone https://github.com/firdauslubis88/tensorflow
```

```
$ sudo apt-get install autoconf automake libtool curl make  
g++ unzip zlib1g-dev git python
```

```
$ cd ../../tensorflow
```

```
$ tensorflow/contrib/makefile/download_dependencies.sh
```

```
$ tensorflow/contrib/makefile/compile_android_protobuf.sh -c
```

```
$ tensorflow/contrib/makefile/compile_nsync.sh
```

```
$ tensorflow/contrib/makefile/compile_nsync.sh -t android -a  
armeabi-v7a
```

```
$ export HOST_NSYNC_LIB='tensorflow/contrib/makefile/  
downloads/nsync/builds/default.linux.c++11/nsync.a'
```

```
$ export TARGET_NSYNC_LIB='tensorflow/contrib/makefile/  
downloads/nsync/builds/armeabi-v7a.android.c++11/nsync.a'
```

```
$ make -f tensorflow/contrib/makefile/Makefile  
TARGET=ANDROID
```

arnaldog12 / **Tensorflow-Build-MT** Unwatch 3 Unstar 10 Fork 3

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a repository to help building tensorflow with /MT Edit

[Manage topics](#)

19 commits 1 branch 0 releases 1 contributor

Branch: master New pull request Create new file Upload files Find File Clone or download

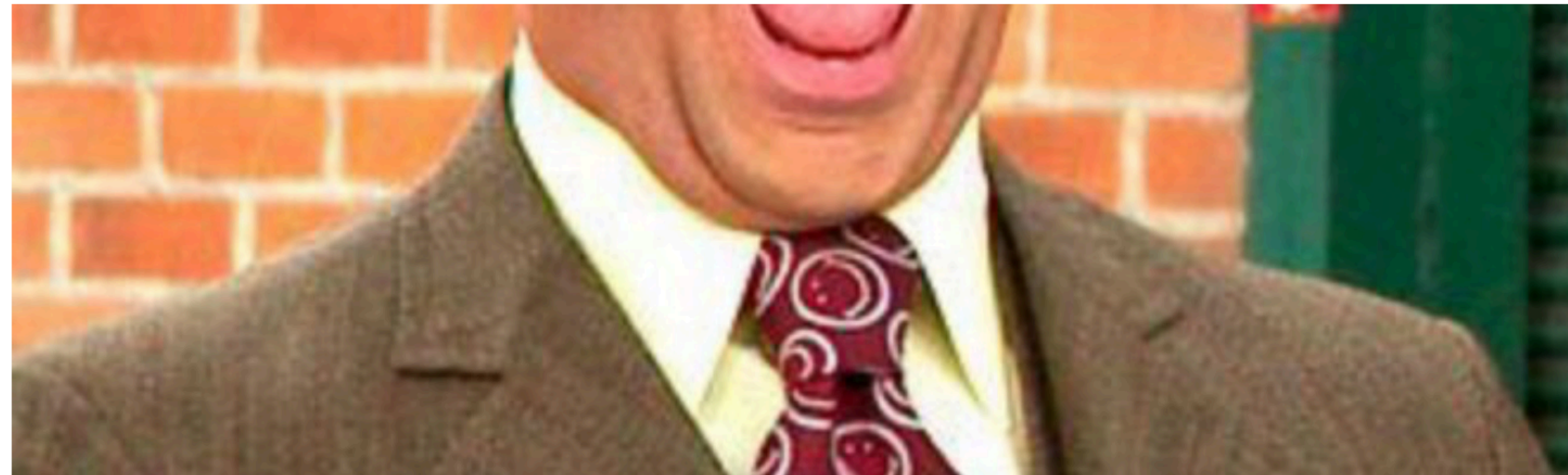
# github.com/arnaldog12/Tensorflow-Build-MT





Arnaldo Gualberto

Apr 13, 2018 · 6 min read



## How to build Tensorflow on Windows with /MT (CPU & GPU)

Building Tensorflow for Windows may be a pain...



44

2 responses



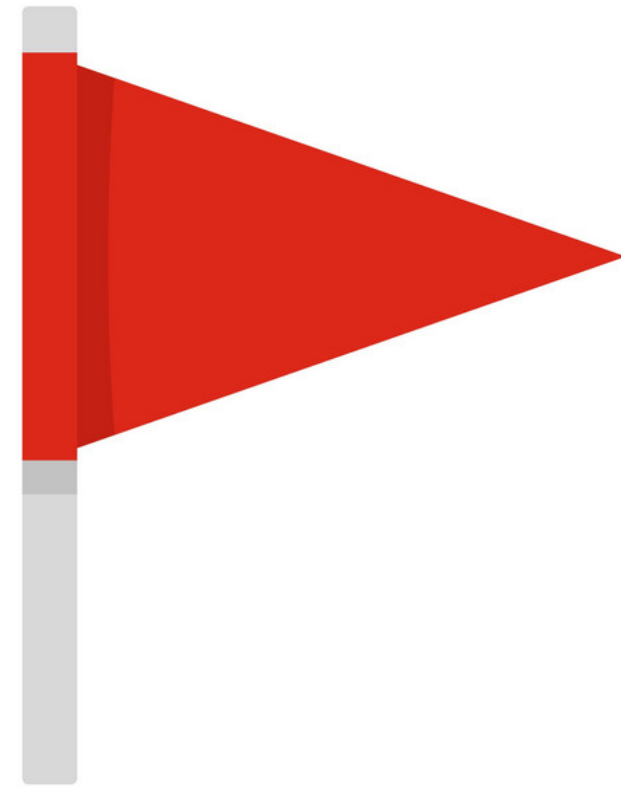
<https://medium.com/@arnaldog12>

3

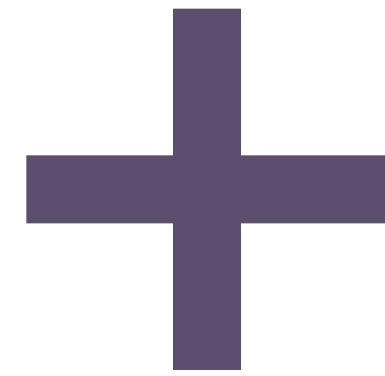
TENSORFLOW C++



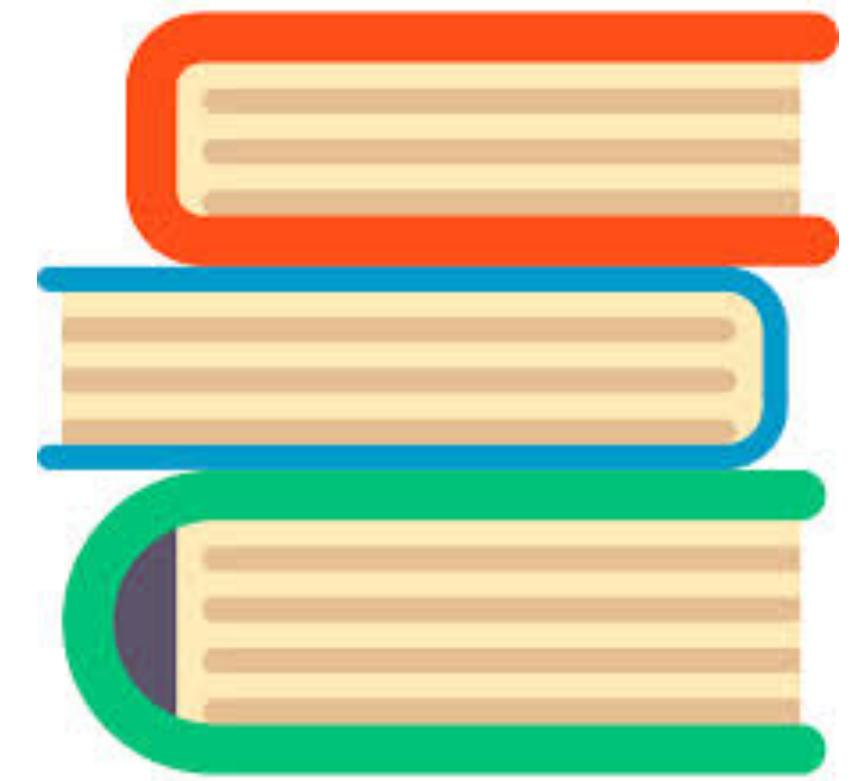
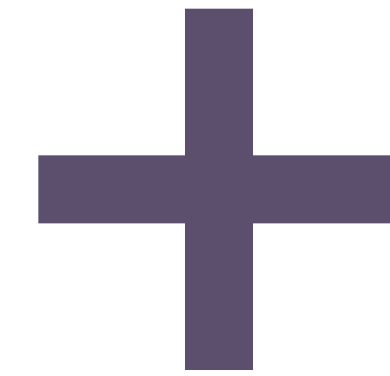
**BUILD**



**FLAGS**



**INCLUDES**

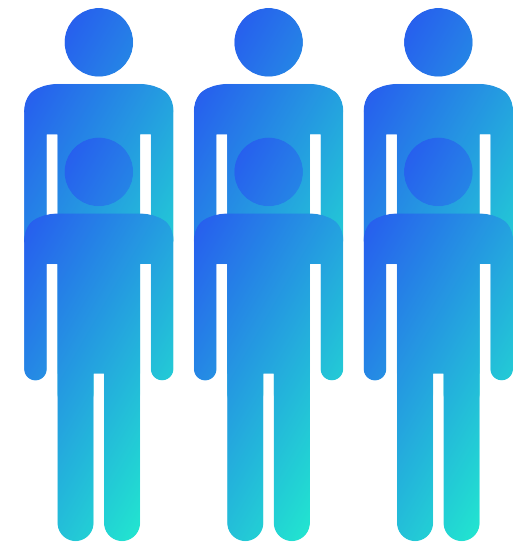


**LIBRARIES**

4

DEMOS

DEMO



CLASSROOM

120K

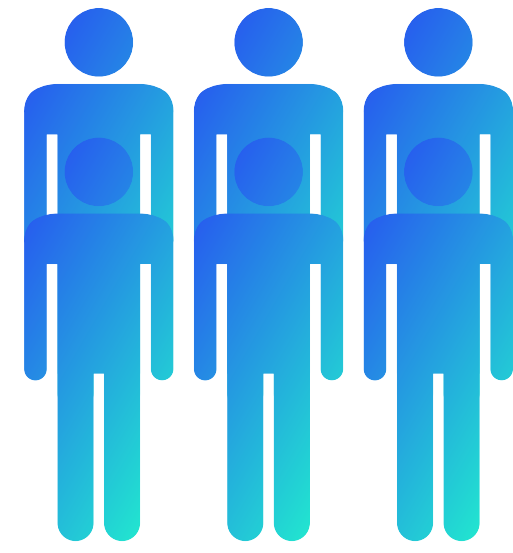
FACES

180K

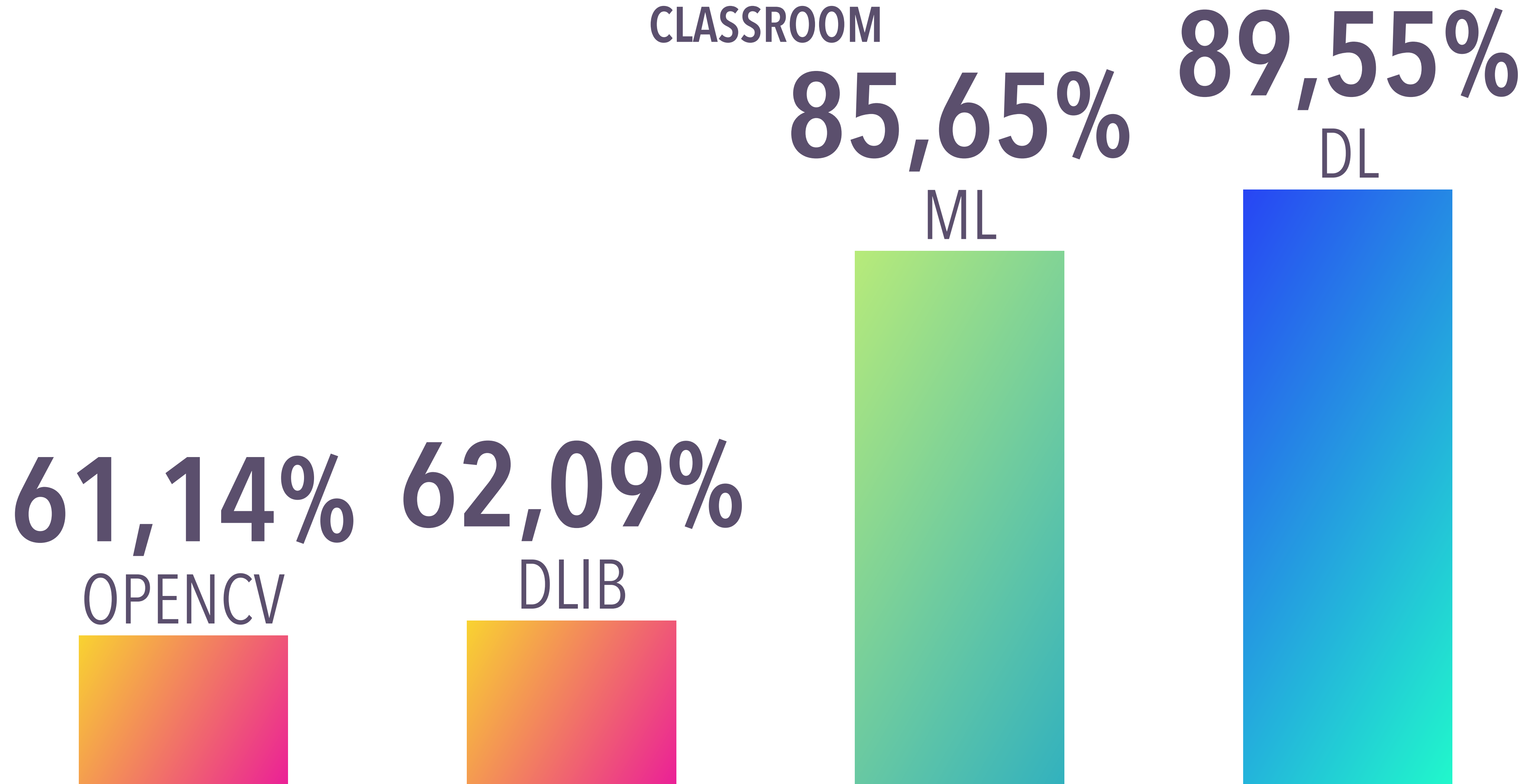
NÃO-FACES

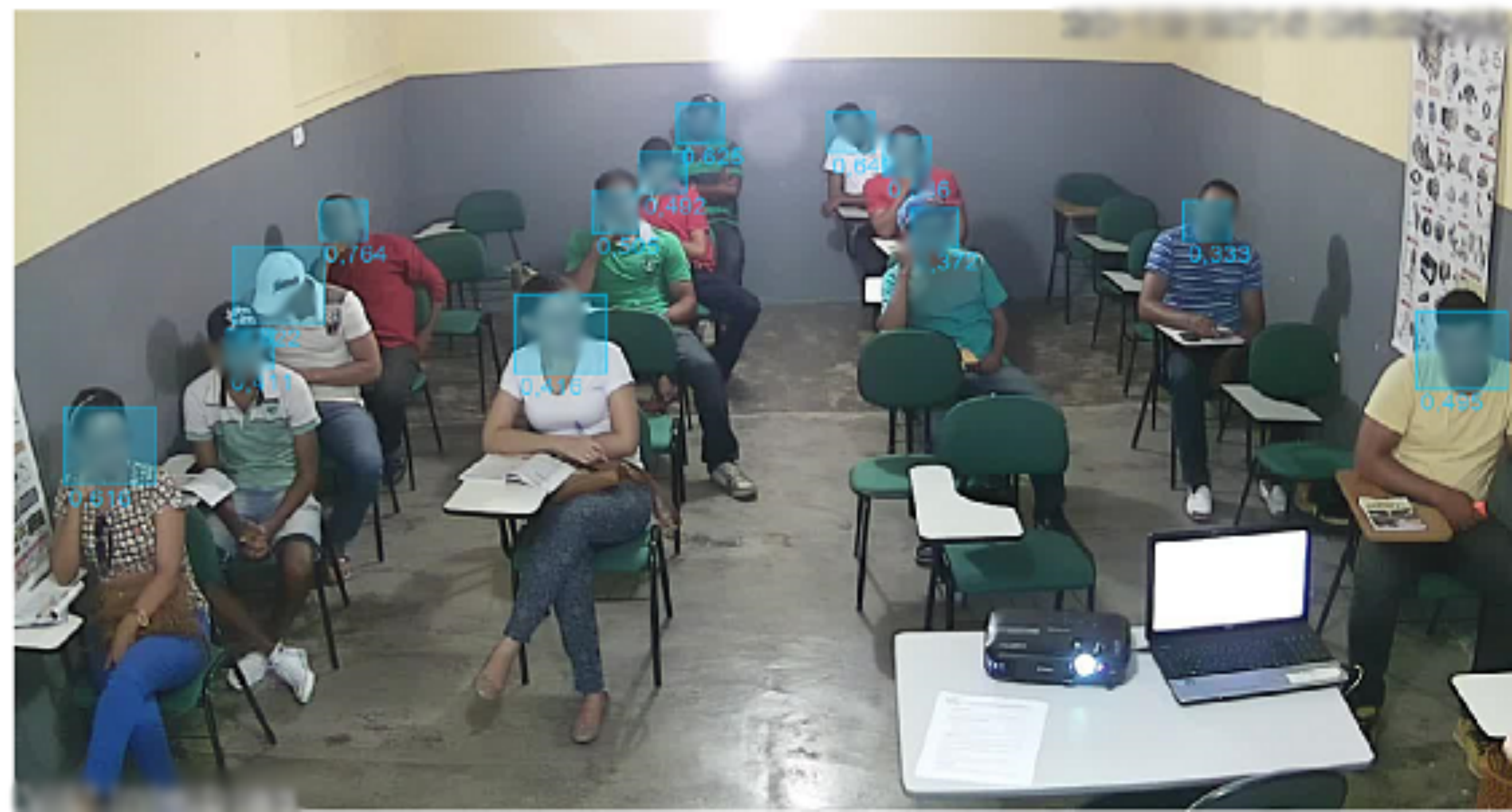
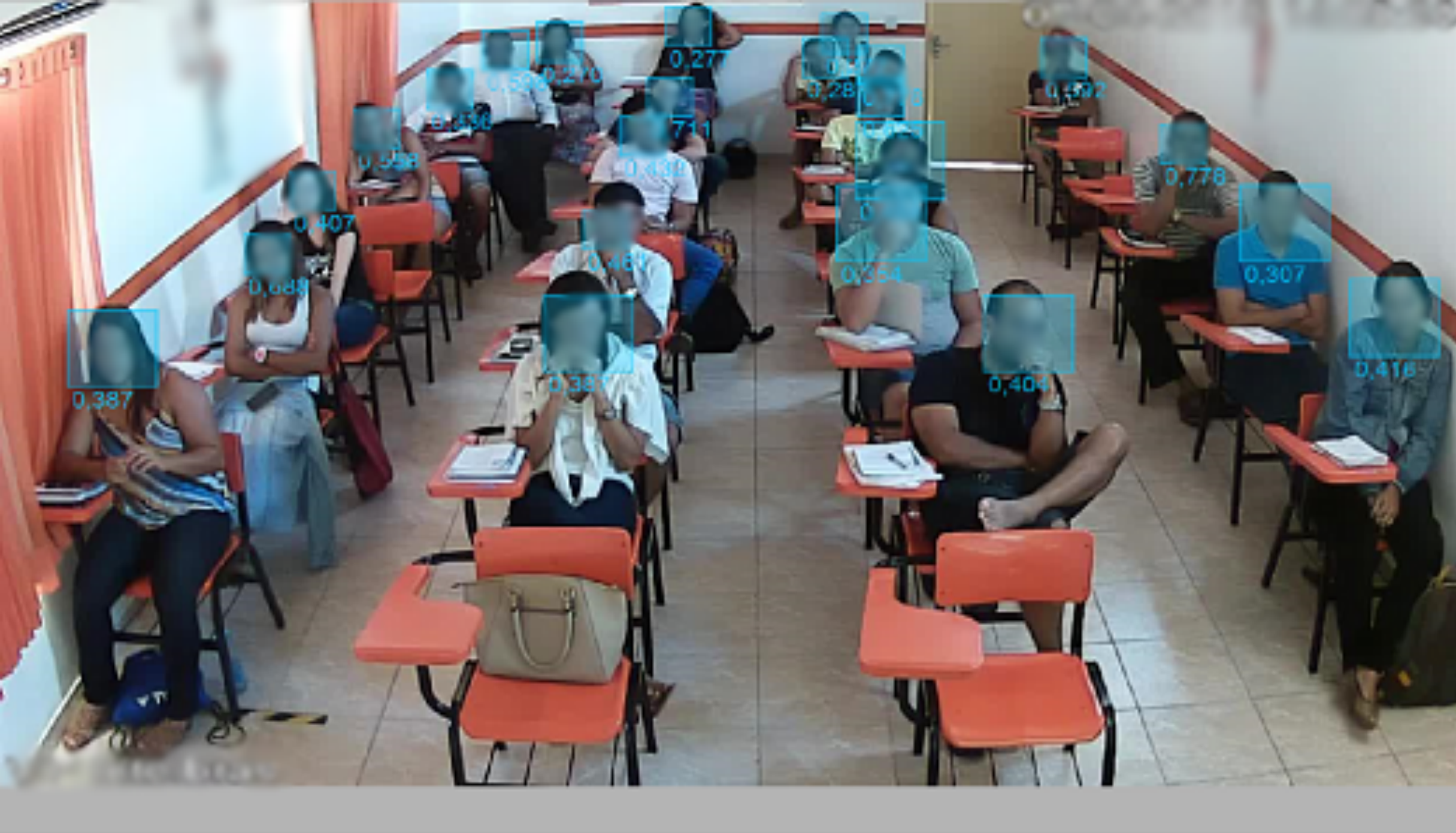
450

MODELOS



CLASSROOM











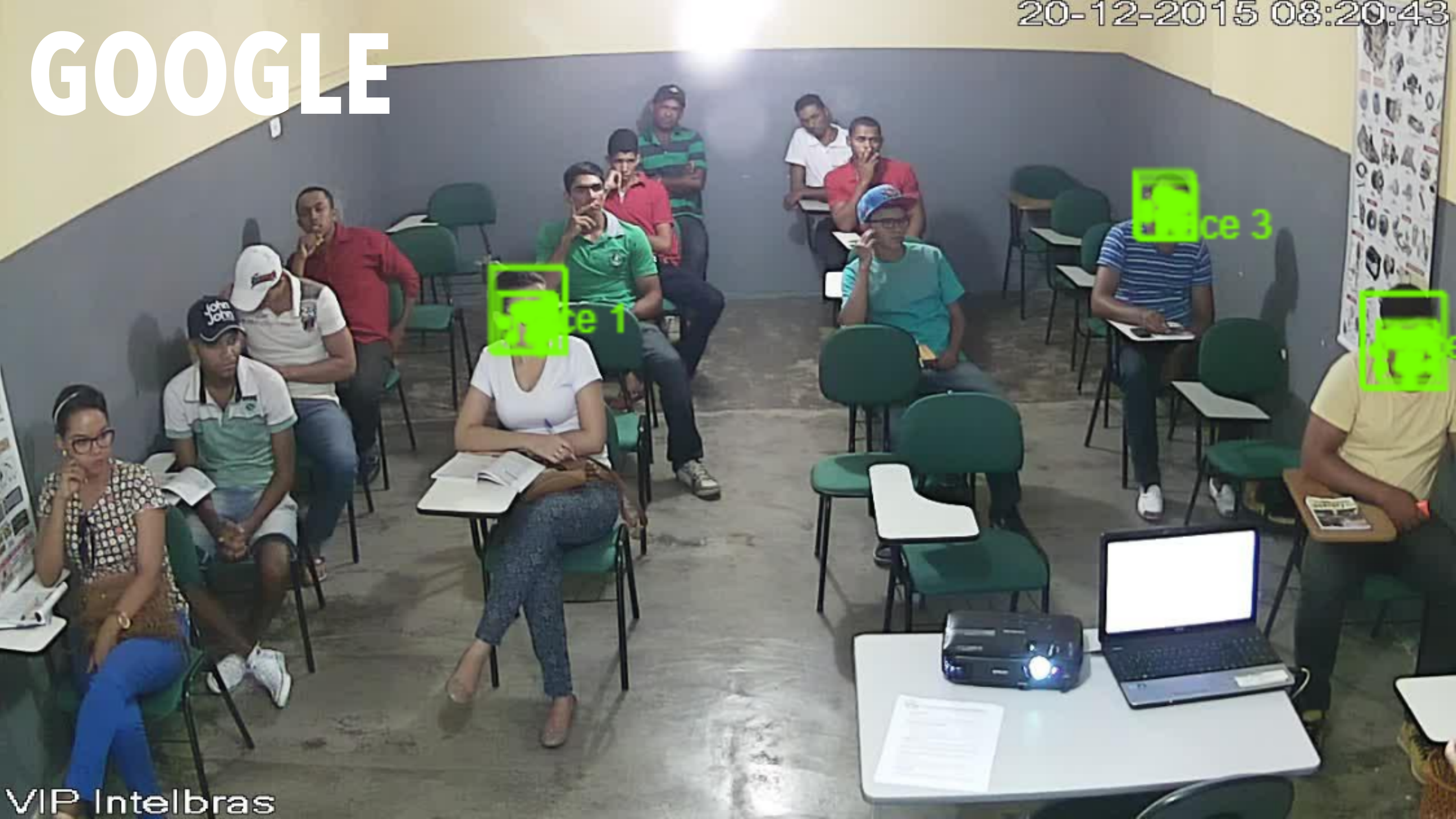
# IBM

20-12-2015 08:20:43



VIP Intelbras

# GOOGLE



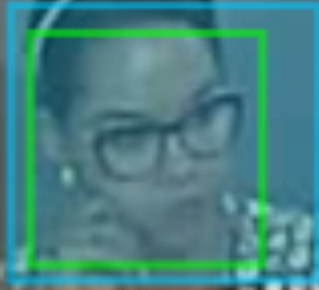
# MICROSOFT



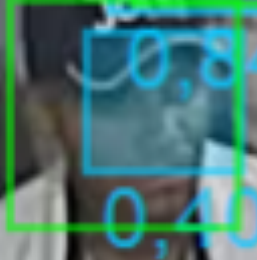
# AMAZON



# VSOFT



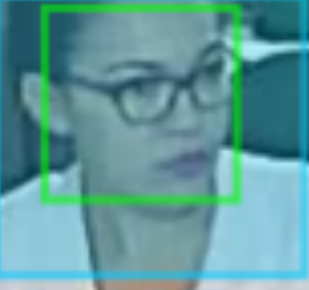
0.633



0.844



0.804



0.427



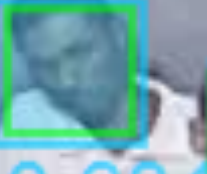
0.502



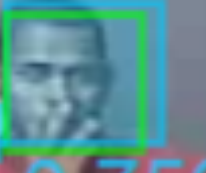
0.519



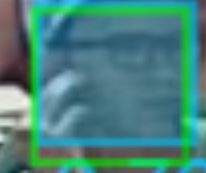
0.659



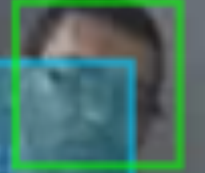
0.684



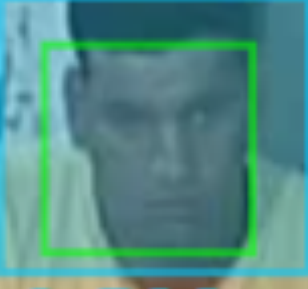
0.759



0.768



0.328



0.508



INCAR

15K

IMAGENS



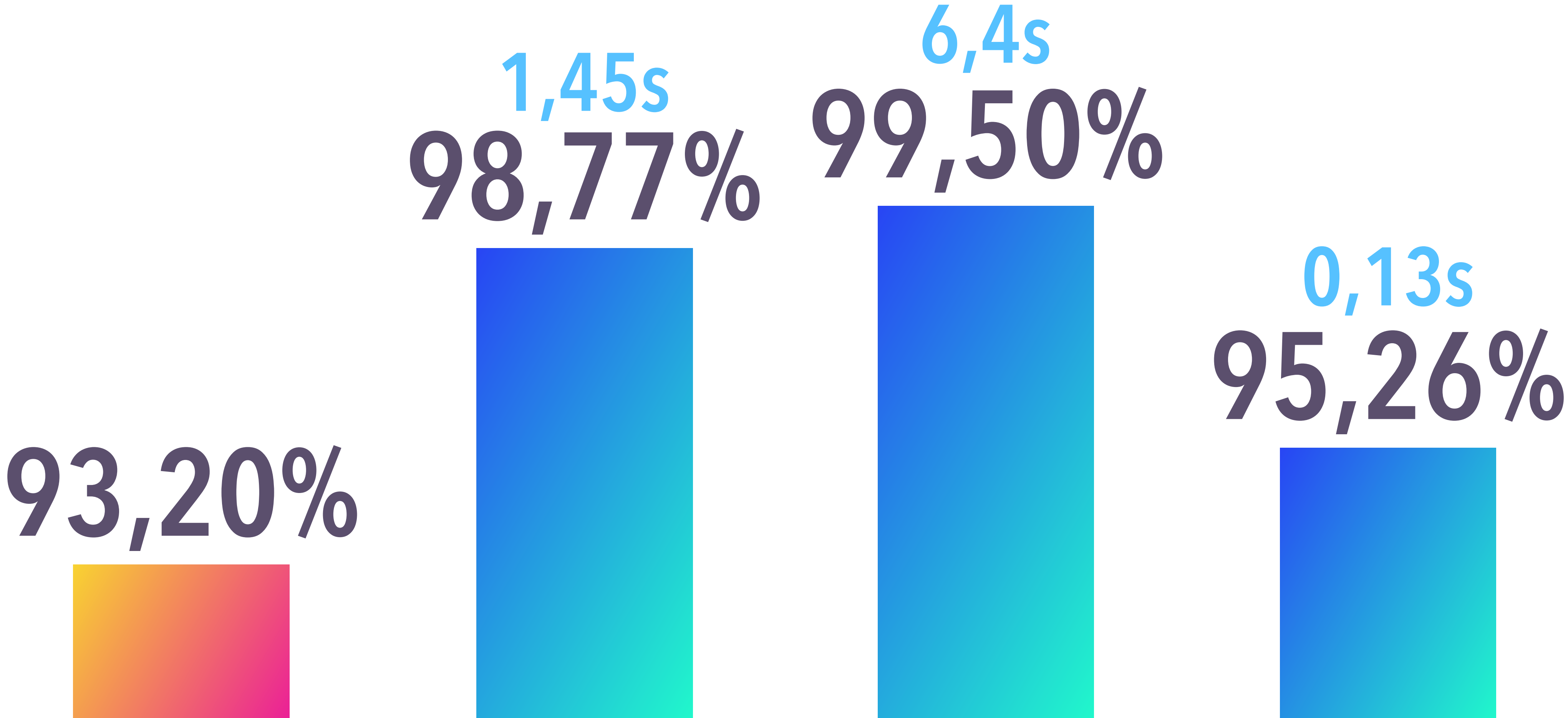
OD API

18K

PESSOAS



INCAR







HAT/CAP



T. Learning

1044

NEGATIVOS

123

POSITIVOS

DEMO



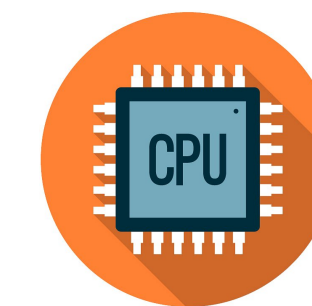
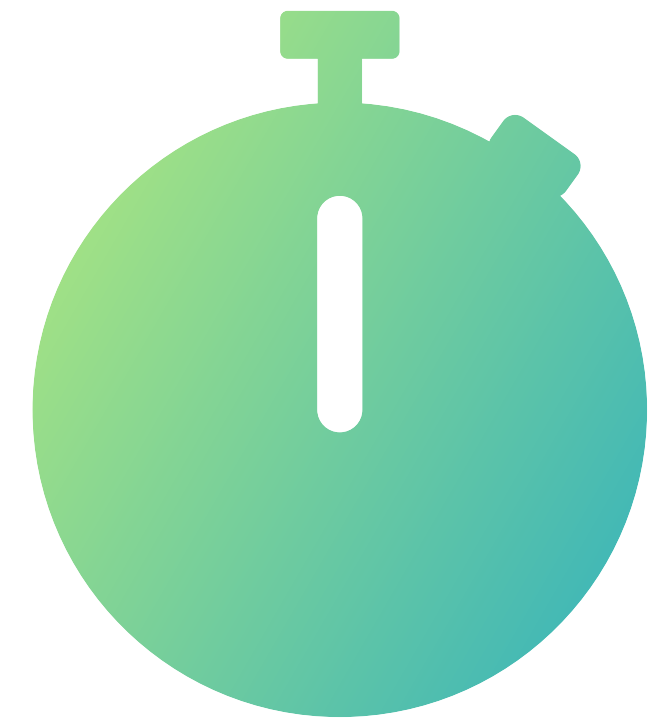
FACE SEGMENTATION

8

CLASSES

700

IMAGENS

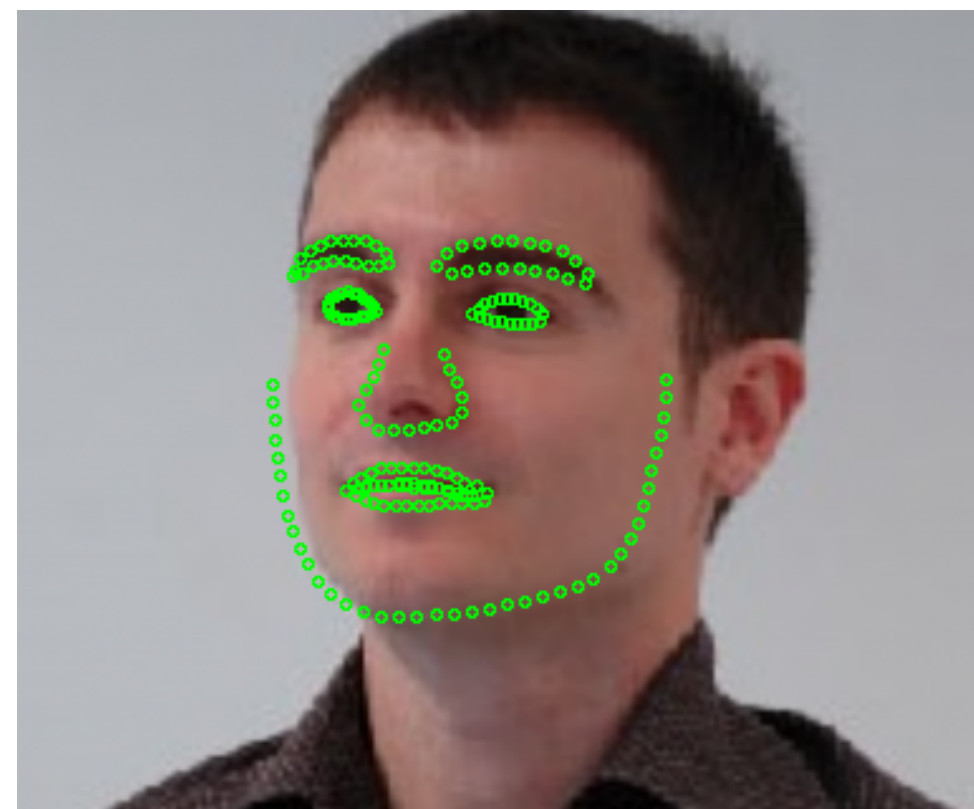


0,12S

DEMO



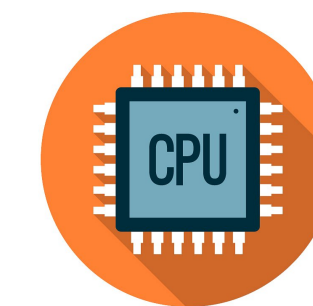
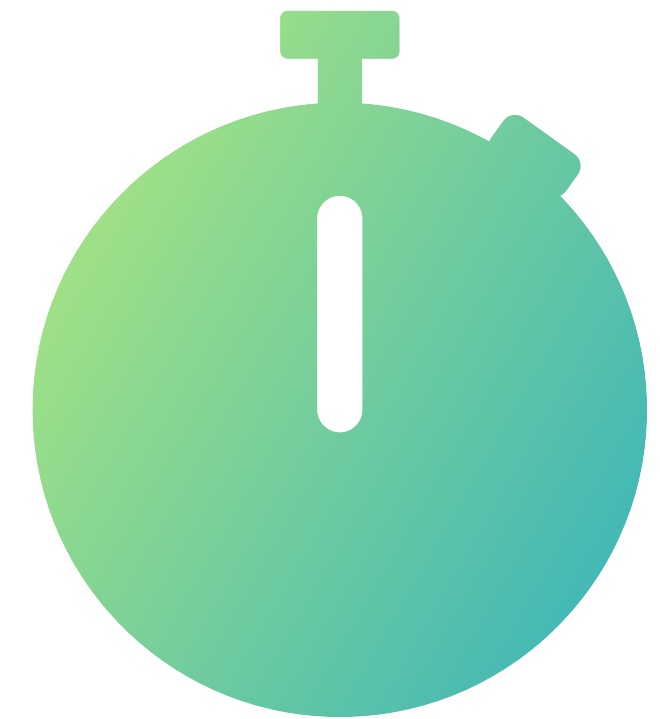
FACE POSE



68 PONTOS

6k

IMAGENS



REAL

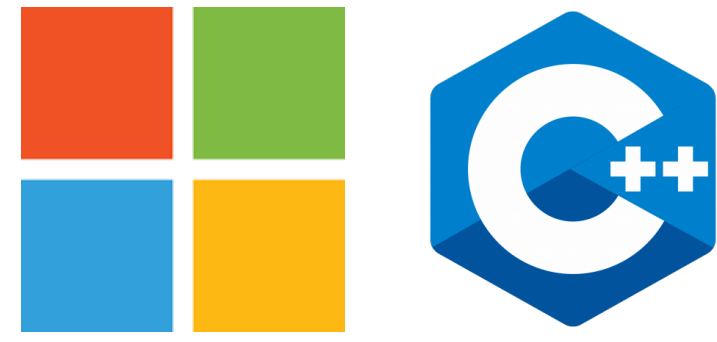
**ONE MORE THING...**

A close-up shot of a man with a brown cap and a dark jacket, looking towards another man whose back is to the camera. The man in the cap has a pleading expression on his face, with wide eyes and an open mouth. The background is a blurred city street at night with bokeh lights.

**I NEED HELP, PLEASE**

#MANIFEST

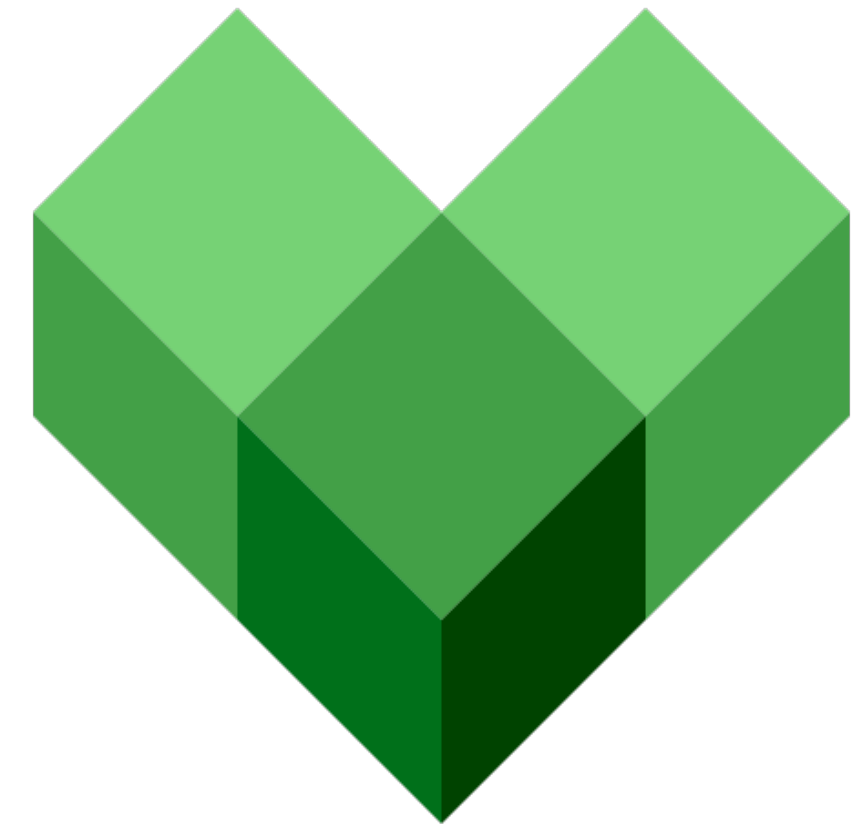




**2.0+**



**LITE**



**BAZEL**

***"SE EU TIVESSE 6 HORAS PARA CORTAR  
UMA ÁRVORE, EU PASSARIA 4 HORAS  
AFIANDO O MACHADO"***

**ABRAHAM LINCOLN**



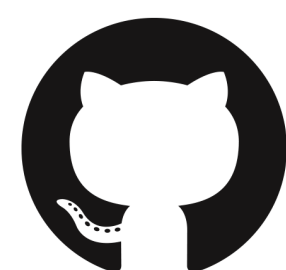
**Arnaldo Gualberto**



**[www.arnaldogualberto.com](http://www.arnaldogualberto.com)**



**[linkedin.com/in/arnaldo-gualberto/](https://www.linkedin.com/in/arnaldo-gualberto/)**



**[github.com/arnaldog12](https://github.com/arnaldog12)**



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