**DATASETS (if you want to see the photos)**

**main dataset** (photos from own videos; also the one we trained our model with): <https://drive.google.com/open?id=1MsfwGMI6cwtDPK5URHdj-s_o7OSllQb0>

**other dataset** (photos from the web; for comparing purposes):

<https://drive.google.com/open?id=15E8X4VXodmQ8EfVtyBVjc_XVoJF3b9rb>

**IMAGE RECOGNITION WITH TENSORFLOW LITE ON ANDROID**

**tutorial we used:**

[https://codelabs.developers.google.com/codelabs/recognize-flowers-with-tensorflow-on-android/#](https://codelabs.developers.google.com/codelabs/recognize-flowers-with-tensorflow-on-android/)0

**script we used:** <https://colab.research.google.com/github/tensorflow/examples/blob/master/community/en/flowers_tf_lite.ipynb>

**HOW RE-ENGINEER OUR MODEL:**

What you need:

* Android Studio,
* mobile phone,
* usb cabel,
* our tflite model: (https://drive.google.com/open?id=1-5ApvUNxB9EArkPHYOEYCunZ9\_R86LWl) & labels: (https://drive.google.com/open?id=1AD0vK2oyFNmXh5CedcGJRvHdrob2fZCM).

**Both are also uploaded in moodle.**

1. Either download it manually: <https://github.com/tensorflow/examples.git>

OR use the following command: git clone <https://github.com/tensorflow/examples.git>.

1. Open Android Studio as admin (otherwise it won't work).
2. After it loads select "Open an existing Android Studio project".
3. In the file selector, choose examples/lite/examples/image\_classification/android from your working directory.

(You will get a "Gradle Sync" popup, the first time you open the project, asking about using gradle wrapper. Click "OK".)

1. Connect your phone with your laptop/pc.



1. Replace the existing labels and model in the folder with ours (lite/examples/image\_classification/android/app/src/main/assets).
2. Modify the app's code:
   1. open string.xml (Android studio menu path: app -> res -> values -> strings.xml) then change line 15 and line 16 to:

// before

<item>Quantized</item>

<item>Float</item>

// after

<item>Float</item>

<item>Quantized</item>

* 1. open ClassifierFloatMobileNet.java (Android studio menu path: app -> java -> org.tensorflow.lite.examples.classification -> tflite -> ClassifierFloatMobileNet) then change line 56 to:

// before

return "mobilenet\_v1\_1.0\_224.tflite";

// after

return "model.tflite";

1. THEN save all changes!
2. Run a "Gradle sync".



Purpose of Gradle sync: build system will be able to find your files.

1. Hit play to start the build & install process.