🎵 (/github/Qualeams) Qualeams/Android-Face-Recognition-with-Deep-Learning-Library ⬤ (https://github.com/Qualeams/Android-Face-Recognition-with-Deep-Learning-Library)

Face Recognition library for Android devices is an Android library (module) which includes several face recognition methods.

Host: GitHub (/github)

License: Apache-2.0 (/licenses/Apache-2.0)

Language: Java (/languages/Java)

Android Face Recognition with Deep Learning - Library

Acknowledgements

This library was developed by Michael Sladoje and Mike Schälchli during a bachelor thesis at the Zurich University of Applied Sciences.
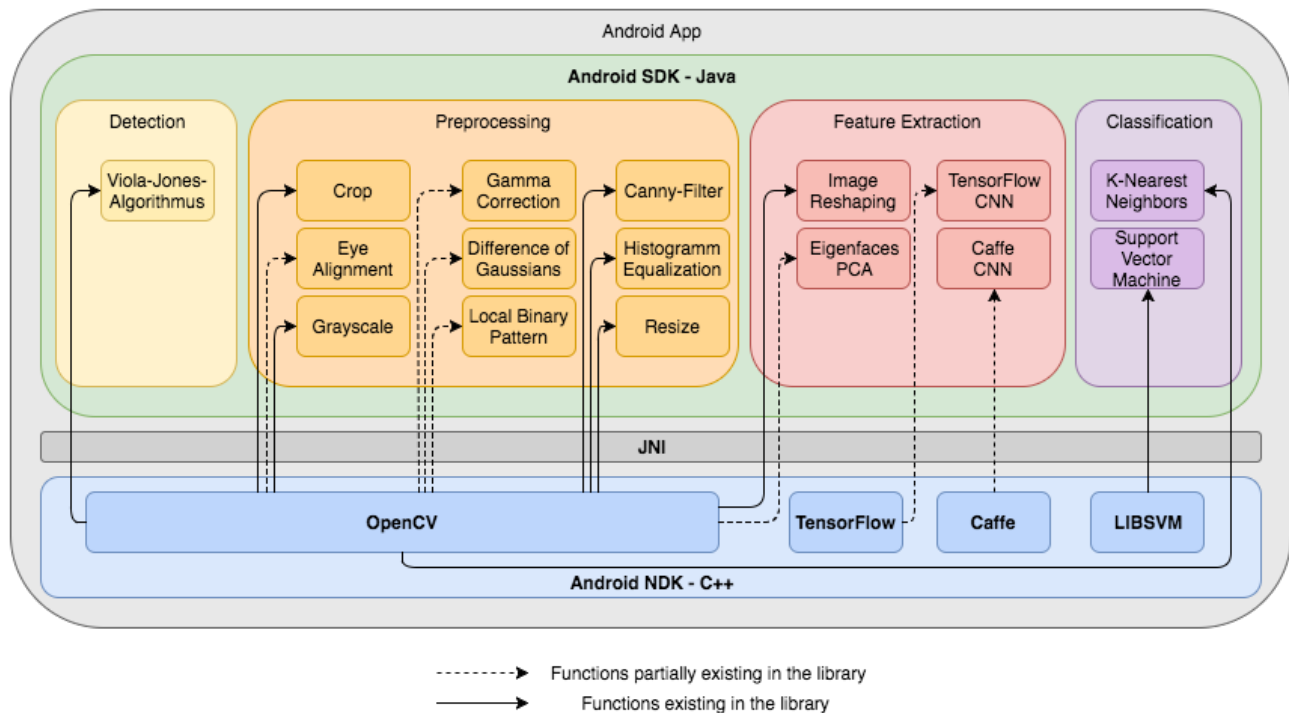
Acknowledgements go to the thesis supervisors Dr. Martin Loeser, Dr. Oliver Dürr, Diego Browarnik and all the contributors of our code sources.

Code has been derived from the following sources:

- OpenCV - https://github.com/opencv/opencv (https://github.com/opencv/opencv)
- LIBSVM - https://github.com/cjlin1/libsvm (https://github.com/cjlin1/libsvm)
- AndroidLibSvm - https://github.com/yctung/AndroidLibSvm (https://github.com/yctung/AndroidLibSvm)
- TensorFlow - https://github.com/tensorflow/tensorflow (https://github.com/tensorflow/tensorflow)
- TensorFlow Android Demo - https://github.com/miyosuda/TensorFlowAndroidDemo (https://github.com/miyosuda/TensorFlowAndroidDemo)
- Caffe - https://github.com/BVLC/caffe (https://github.com/BVLC/caffe)
- caffe-android-demo - https://github.com/sh1r0/caffe-android-demo (https://github.com/sh1r0/caffe-android-demo)

- caffe-android-lib - https://github.com/sh1r0/caffe-android-lib (https://github.com/sh1r0/caffe-android-lib)

App architecture

(https://github.com/Qualeams/Android-Face-Recognition-with-Deep-Learning/blob/master/AppArchitecture.png)

Usage

Include as an Android module

1. git clone https://github.com/Qualeams/Android-Face-Recognition-with-Deep-Learning-Library.git (https://github.com/Qualeams/Android-Face-Recognition-with-Deep-Learning-Library.git)
2. Import the openCV library in an existing Android Studio project
3. Import the facerecognitionlibrary in the existing Android Studio project (has dependencies to the openCV library)

Parameters

Most parameters are set in the settings/preferences.

Train, Classify

Either train and classify by passing images (OpenCV Mat object) to the library or if features already obtained from the image (getFeatureVector), the feature vector can be passed (OpenCV Mat object) together with the flag "featuresAlreadyExtracted" set to 'true'.

Android NDK - C++

The libs for LIBSVM and TensorFlow can be compiled outside of Android Studio with the make command (the Makefile is located under /jni-build). There are 3 different usages:

- make clean (executes ndk-build clean)
- make (executes ndk-build)
- make install (copies the libs to the folder /src/main/jniLibs/armeabi-v7a)

Dependencies

build.gradle (https://github.com/Qualeams /Android-Face-Recognition-with-Deep-Learning-Library/blob/master/build.gradle)	Kind	Requirements	Latest Stable	Latest Release	Licenses
com.android.support:appcomp... (/maven /com.android.support:appcompat-v7)	runtime	23.3.0			
com.android.support:support-v4 (/maven /com.android.support:support-v4)	runtime	23.3.0			

jni-build/jni/include/google/protobuf /csharp/src/Google.Protobuf /packages.config (https://github.com /Qualeams/Android-Face-Recognition-with-Deep-Learning-Library/blob/master/jni-build/jni/include/google/protobuf/csharp /src/Google.Protobuf/packages.config)	Kind	Requirements	Latest Stable	Latest Release	Licenses	
NuSpec.ReferenceGenerator (/nuget /NuSpec.ReferenceGenerator)	runtime	1.4.1	1.4.2	2.0.0-beta-bld14	MIT (/licenses/MIT)	⚠

jni-build/jni/include/google/protobuf /csharp/src/Google.Protobuf.Test /packages.config (https://github.com /Qualeams/Android-Face-Recognition-with-Deep-Learning-Library/blob/master/jni-build/jni/include/google/protobuf/csharp /src/Google.Protobuf.Test/packages.config)	Kind	Requirements	Latest Stable	Latest Release	Licenses	
NUnit (/nuget/NUnit)	runtime	2.6.4	3.9.0	3.9.0	MIT (/licenses/MIT)	⚠

jni-build/jni/include/google/protobuf /java/core/pom.xml (https://github.com /Qualeams/Android-Face-Recognition-with-Deep-Learning-Library/blob/master/jni-build/jni/include/google/protobuf/java/core /pom.xml)	Kind	Requirements	Latest Stable	Latest Release	Licenses	
junit:junit (/maven/junit:junit)	runtime	*	4.8.2	4.12	CPL-1.0 (/licenses /CPL-1.0)	⚠
org.easymock:easymock (/maven /org.easymock:easymock)	runtime	*	3.3.1	3.4	Apache-2.0 (/licenses /Apache-2.0)	⚠
org.easymock:easymockclasse... (/maven /org.easymock:easymockclassextension)	runtime	*	2.5.2	3.2	Apache-2.0 (/licenses /Apache-2.0)	

jni-build/jni/include/google/protobuf /java/lite/pom.xml (https://github.com /Qualeams/Android-Face-Recognition-with-Deep-Learning-Library/blob/master/jni-build/jni/include/google/protobuf/java/lite /pom.xml)	Kind	Requirements	Latest Stable	Latest Release	Licenses	
junit:junit (/maven/junit:junit)	runtime	*	4.8.2	4.12	CPL-1.0 (/licenses /CPL-1.0)	⚠
org.easymock:easymock (/maven /org.easymock:easymock)	runtime	*	3.3.1	3.4	Apache-2.0 (/licenses /Apache-2.0)	⚠
org.easymock:easymockclasse... (/maven /org.easymock:easymockclassextension)	runtime	*	2.5.2	3.2	Apache-2.0 (/licenses /Apache-2.0)	

jni-build/jni/include/google/protobuf /javanano/pom.xml (https://github.com /Qualeams/Android-Face-Recognition-with-Deep-Learning-Library/blob/master/jni-build/jni /include/google/protobuf/javanano/pom.xml)	Kind	Requirements	Latest Stable	Latest Release	Licenses	
junit:junit (/maven/junit:junit)	["test"]	["4.4"]	4.8.2	4.12	CPL-1.0 (/licenses /CPL-1.0)	⚠
org.easymock:easymock (/maven /org.easymock:easymock)	["test"]	["2.2"]	3.3.1	3.4	Apache-2.0 (/licenses /Apache-2.0)	⚠

jni-build/jni/include/google/protobuf /javanano/pom.xml (https://github.com /Qualeams/Android-Face-Recognition-with- Deep-Learning-Library/blob/master/jni-build/jni /include/google/protobuf/javanano/pom.xml)	Kind	Requirements	Latest Stable	Latest Release	Licenses
org.easymock:easymockclasse... (/maven /org.easymock:easymockclassextension)	["test"]	["2.2.1"]	2.5.2	3.2	Apache-2.0 (/licenses /Apache-2.0)

jni-build/jni/include/google/protobuf /ruby/pom.xml (https://github.com /Qualeams/Android-Face-Recognition- with-Deep-Learning-Library/blob/master /jni-build/jni/include/google/protobuf /ruby/pom.xml)	Kind	Requirements	Latest Stable	Latest Release	Licenses	
com.fasterxml.jackson.core:... (/maven /com.fasterxml.jackson.core:jackson-core)	runtime	["2.4.3"]	2.9.3	2.9.3	Apache-2.0 (/licenses /Apache-2.0)	⚠
com.google.protobuf:protobu... (/maven /com.google.protobuf:protobuf-java)	runtime	["3.0.0-alph...	3.5.0	3.5.0	BSD-3- Clause (/licenses /BSD-3- Clause)	⚠
org.jruby:jruby-complete (/maven /org.jruby:jruby-complete)	["provided"]	["1.7.13"]	1.7.27	9.1.13.0	EPL-1.0 (/licenses /EPL-1.0)	

Project Statistics

Sourcerank	**5 (/github/Qualeams/Android-Face-Recognition-with-Deep-Learning-Library/sourcerank)**
Size	**174 MB**
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Watchers	**8 (https://github.com/Qualeams/Android-Face-Recognition-with-Deep-Learning-Library /watchers)**
Open issues	**2 (https://github.com/Qualeams/Android-Face-Recognition-with-Deep-Learning-Library /issues)**

Dependencies	**16**
Contributors	**1 (/github/Qualeams/Android-Face-Recognition-with-Deep-Learning-Library/contributors)**
Tags	**2 (/github/Qualeams/Android-Face-Recognition-with-Deep-Learning-Library/tags)**
Created	**Aug 13, 2016**
Last updated	**Jul 30, 2017**
Last pushed	**May 27, 2017**

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v1.5.1 (https://github.com/Qualeams/Android-Face-Recognition-with-Deep-Learning-Library/releases/tag/v1.5.1)	May 26, 2017	🏷 (https://github.com/Qualeams/Android-Face-Recognition-with-Deep-Learning-Library/releases/tag/v1.5.1)	⤭ (https://github.com/Qualeams/Android-Face-Recognition-with-Deep-Learning-Library/compare/v1.4.0...v1.5.1)
v1.4.0 (https://github.com/Qualeams/Android-Face-Recognition-with-Deep-Learning-Library/releases/tag/v1.4.0)	April 01, 2017	🏷 (https://github.com/Qualeams/Android-Face-Recognition-with-Deep-Learning-Library/releases/tag/v1.4.0)	

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