OpenFaceTracker Documentation

Release 3.0.1

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User Documentation

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OpenFaceTracker is a facial recognition program capable to detect one or several faces on a picture or a video, and to identify them via a database

CHAPTER 1

Table of Contents

Getting Started

This document will show you how to get up and running with OpenFaceTracker. You will have you own facial recognition system in 10 minutes.

Quick Installation

OpenFaceTracker needs OpenCV3.2 and QT4 installed on your machine, you've got two options :

- If you love compiling libraries by hand, please follow build_oft
- Installing Opencv and QT using your favorite packaging tool .

Downloading OpenFaceTracker

Our github page is available at .. _OftGithub: https://github.com/OpenFacetracker , make sure you're cloning the right repo. OpenFaceTracker-Lib3 is the one under development.

```
git clone https://github.com/OpenFacetracker/OpenFaceTracker-Lib3.git
```

```
cd OpenFaceTracker-Lib3
```

At this step, you've got two options :

- Compiling OFT as a library
- Compiling OFT as a standalone binary file

Compiling OFT as a library

```
make lib
```

Compiling OFT as a standalone binary file

```
make compil
make binary
```

Launching process

After compiling Oft, you can execute it using

```
./openft <options>
```

Execution Options List

There are lot of options available, here is a list of the main options :

-o <file>	Open the file and execute the detection and recognition module
-h	Show help and exit
-l	Show the list of all available cameras
-x	Testing the XML DB
-r	Reading from the OFT config
-c	Check the environment

Dependecies

OpenFaceTrackerLib uses Opencv 3.2. This latter has introduced many new algorithms and features comparing to version 2.4. Some modules have been rewritten, some have been reorganized. Although most of the algorithms from 2.4 are still present, the interfaces can differ. You can check out the changelog via this link

- http://opencv.org/opencv-3-2.html

Building Opencv 3.2

To get the best environment for OpenFaceTracker3, there are some instructions that you should follow. OpenCV3 must be build with some extra options, so please follow this tutorial .

Downloading Opencv3.2 for Linux

First download Opencv3.2

```
wget https://github.com/opencv/opencv/archive/3.2.0.zip
unzip 3.2.0.zip
```

Create a release folder

```
cd opencv-3.2.0/
mkdir release
cd release
```

Opencv-Contrib

OpenFaceTracker3 is using opencv-contrib it is an experimental and non-free algorithms. It does not receive so much attention from the support team comparing to main repository, but the community makes an effort to keep it in a good shape.

To download Opencv-contrib

```
git clone https://github.com/opencv/opencv_contrib.git
```

Building With extra options

First, check if you got cmake and qmake installed .

```
cmake
```

install it using apt-get(debian-ubuntu)

```
sudo apt-get install cmake
```

```
sudo apt-get install qt5-qmake
```

we will build opencv with some extra function

```
cmake -D CMAKE_BUILD_TYPE=RELEASE -D CMAKE_INSTALL_PREFIX=/usr/
local -D WITH_TBB=ON -D BUILD_NEW_PYTHON_SUPPORT=ON -D WITH_V4L=ON
-D INSTALL_C_EXAMPLES=ON -D INSTALL_PYTHON_EXAMPLES=ON -D
BUILD_EXAMPLES=ON -D WITH_QT=ON -D WITH_GTK=ON -D WITH_OPENGL=ON
-DOPENCV_EXTRA_MODULES_PATH=<path-to-opencv_contrib>/modules ..
```

Advanced OFT Build

OpenFaceTracker is a moudlar library, so you can either enable or disable some part of the project.

Build Options List

To enable or disable some modules in openfacetracker, you've got two choices

- Enable modules at execution
- Enable modules before compilation

For the second choice, here is the list of the full Build Options

Option	Description
-DFT_USE_COLOR	Enable color support for a lovely output
-DFT_DEBUG_ENABLED	Enable Debug mode (more details are shown)
-DFT_ALLOW_EXCEPT	Enable Exceptions
-DFT_WINCAM_LIST	Enable camera listing for Windows
-DFT_TEST_PERFORMANCE	Enable performance testing
-DFT_NO_UI	Disable graphique console
-DFT_FORM	Enable output for FORM detection(noise,eyes..)
-DFT_TEST_RECOGNISE	Enable test recognition(the stable regonition part is enabled by default)
-DFT_OPTIMISATION	Enable Optimisation

CHAPTER 2

Quick Informations ?

- OpenFaceTracker is open source
- OpenFaceTracker is insipred from the American Tv show “Person Of Interest”
- Version 3.0
- This repo contains OpenFaceTrackerLib3
- www.openfacetracker.net

CHAPTER 3

Screen