Quick Start Guide

written for LUNA SDK Mobile Android version 5.3.0

Contents

Introduction

This short guide will help you to get started with the SDK.

Overview

FaceEngine SDK is the core library. It is described in the FaceEngine_Handbook.pdf.

The **TrackEngine** tool is used for receiving images from video.

See Licensing.pdf for information about features licensing and license activation.

See FeatureMapMobile.htm for additional information about available functionality and features.

The ConfigurationGuide.pdf includes information about SDK configurations.

FaceEngine

FaceEngineSDK is the core library. It allows to implement the following functionality:

- Faces detection;
- Faces normalization (warping);
- Landmarks location on faces;
- Face descriptor extraction and matching;
- Estimators :
    - Eyes estimator (opened/closed eyes);
    - BestShotQuality Estimator.

FaceEngineSDK library is available in two versions: Frontend Edition (FE) and Complete Edition (CE):

- Complete Edition supports all functionality;
- Frontend Edition is a light version with excluded descriptor functionality (does not support descriptor extraction and matching).

The Frontend edition is intended for lightweight software that does not need to implement searching functions. For example, these could be:

- Face detection applications that take a picture of the user and send it to a server for processing, such as verification;

- Face alignment applications, that only need the knowledge about head pose and facial shape;

- Simple ad-hoc analytics solutions like age & gender recognition for context-aware advertising;

- And so on.

The complete edition contains all the features of the frontend edition but adds face verification and identification features. That said, the complete edition is a more of a backend or server-oriented software. Still, it can run not only on powerful servers, but on ordinary PCs and even mobile devices as well.

SDK package structure

Android version

Folder	Contents
/include	C++ header files
/lib/gcc4/<abi>	.so libraries
/doc	Documentation
/data	Algorithm model data required to use the SDK
/examples	Sample Android code

<abi> is one of armeabi-v7a, arm64-v8a, x86_64 or x86.

Getting started

It is recommended to familiarize with the common FaceEngine SDK concepts and terminology first. For that, please refer to the handbook in **/doc/FaceEngine_Handbook.pdf**. Handbook contents is as follows:

- Chapters 1-3 cover common concepts and FaceEngine SDK modules;
- Chapters 4-7 describe each module in depth;
- Chapter 8 tells more about system requirements;
- Chapter 9 is dedicated to hardware and software requirements. Please make sure your system meets the requirements listed in chapter 9 before proceeding.

In appendixes one may find performance evaluation results and answers to some frequently asked questions.

Note, that the purpose of the handbook is to describe common concepts and give an idea what LUNA SDK is capable of. For detailed descriptions of particular functions, refer to the reference manual instead.

FaceEngine SDK configuration parameters are described in **doc/ConfigurationGuide.pdf**.

Where is the code

FaceEngine SDK examples

A demo application with source code is provided within the */examples* folder. It includes the best shot example.

The example shows:

- How to detect a face;

- How to normalize face (warping);

- How to use estimators:

    – eyes estimator,
    – BestShotQuality estimator;

- How to extract face descriptors from images and match them.