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How to build a Face Verification Application in 30 mins or less

TRUSTID Hands-On Workshop

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Live Demonstration

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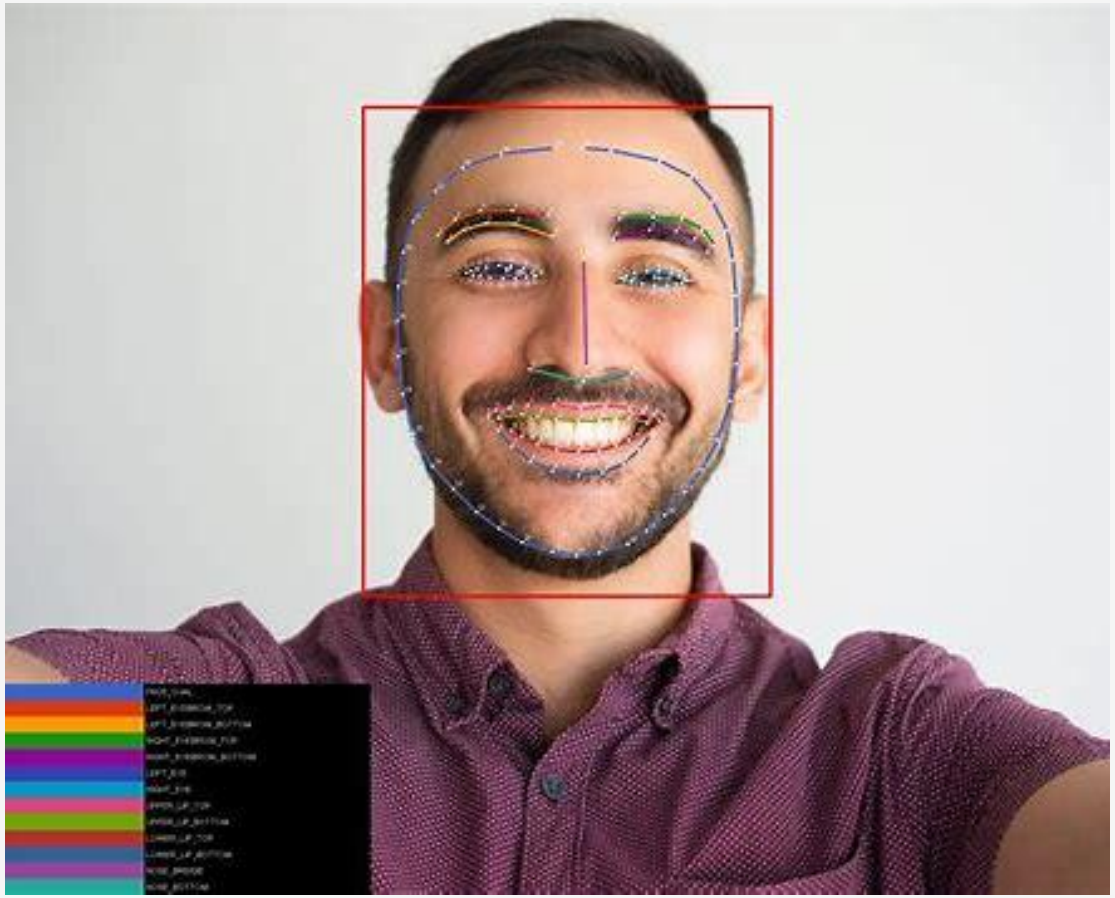

About the TRUSTID Image Processing Library

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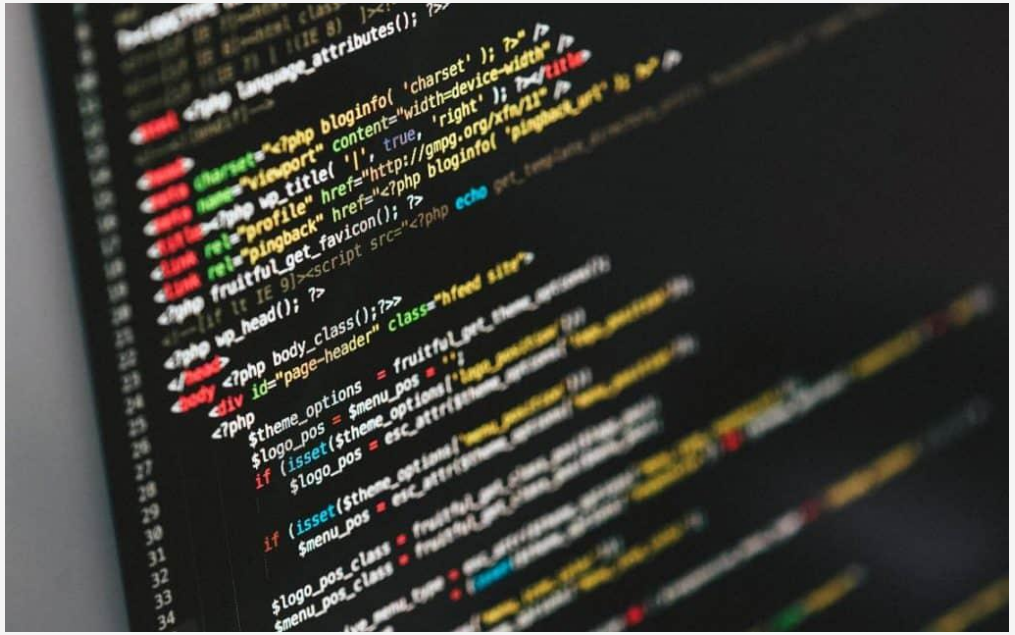
- **Cross platform**, supporting Windows, MacOS and Linux;
- Coded in **C++**, ported from Python to facilitate the cross-platform deployment.
- Designed to be modular and extendable, based on **OpenCV** and **dlib.**
- Provides simple **interfaces** to interact with the face **detection** and **recognition** algorithms.



Requirements

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- **OpenCV** installation, **dlib**, and **C++** (needs C++17 support) compiler, and a BLAS/LAPACK library, e.g. Intel MKL (recommended) or OpenBLAS;
- We have prepared a simple Virtual Machine for VMWare that contains all dependencies.

Exercise 1: “Hello World”

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- Goal: Create a CMake workspace with all of the required dependencies, and build a simple C++ executable that simply shows a GUI with a black image.

Exercise 1: “Hello World”

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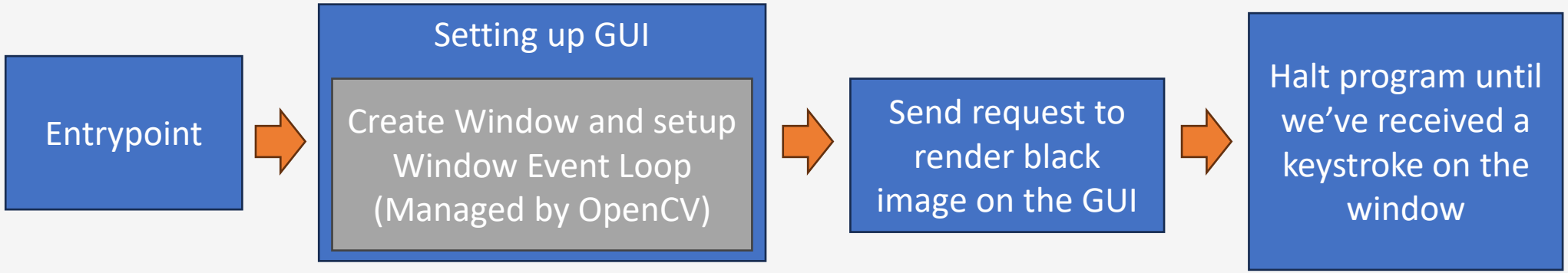

Exercise 1: Demonstration

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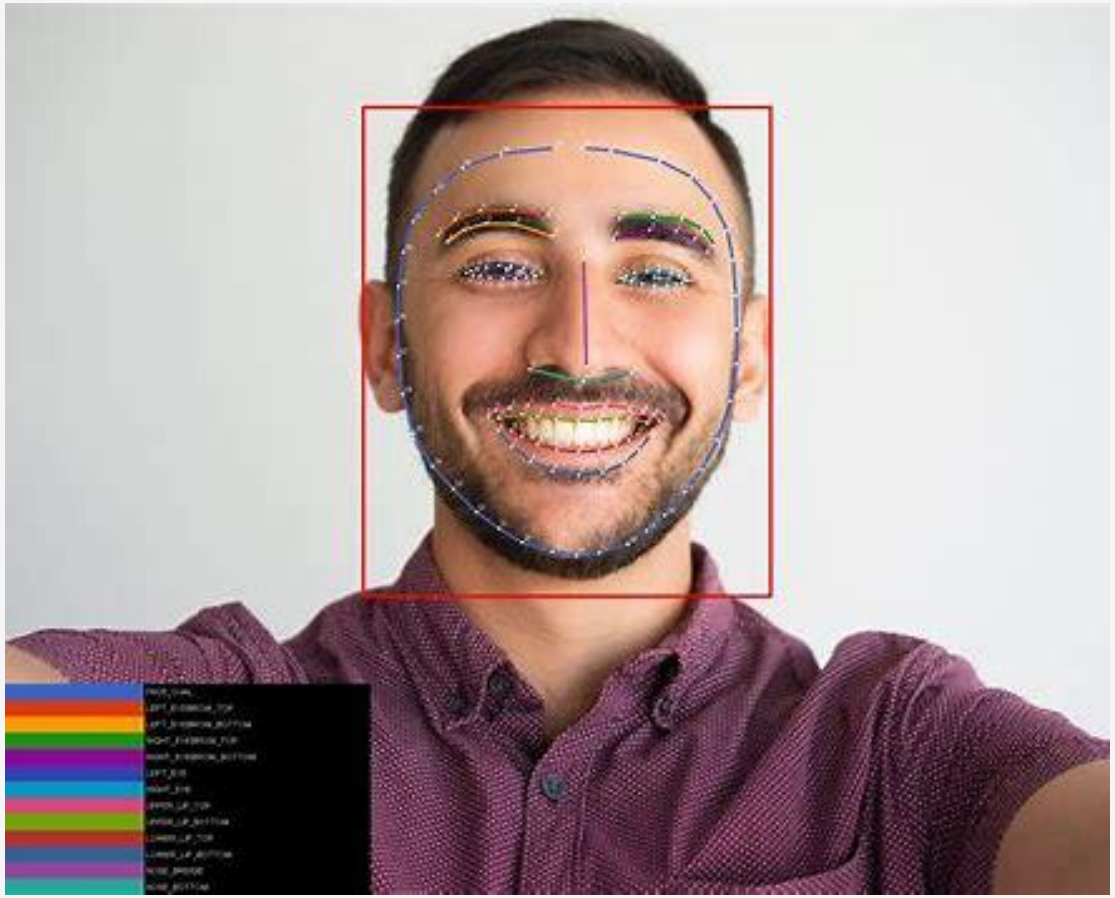

Exercise 2: Familiarizing with OpenCV

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- Goal: Update the application to show the webcam feed using DroidCam.

Exercise 2: Familiarizing with OpenCV

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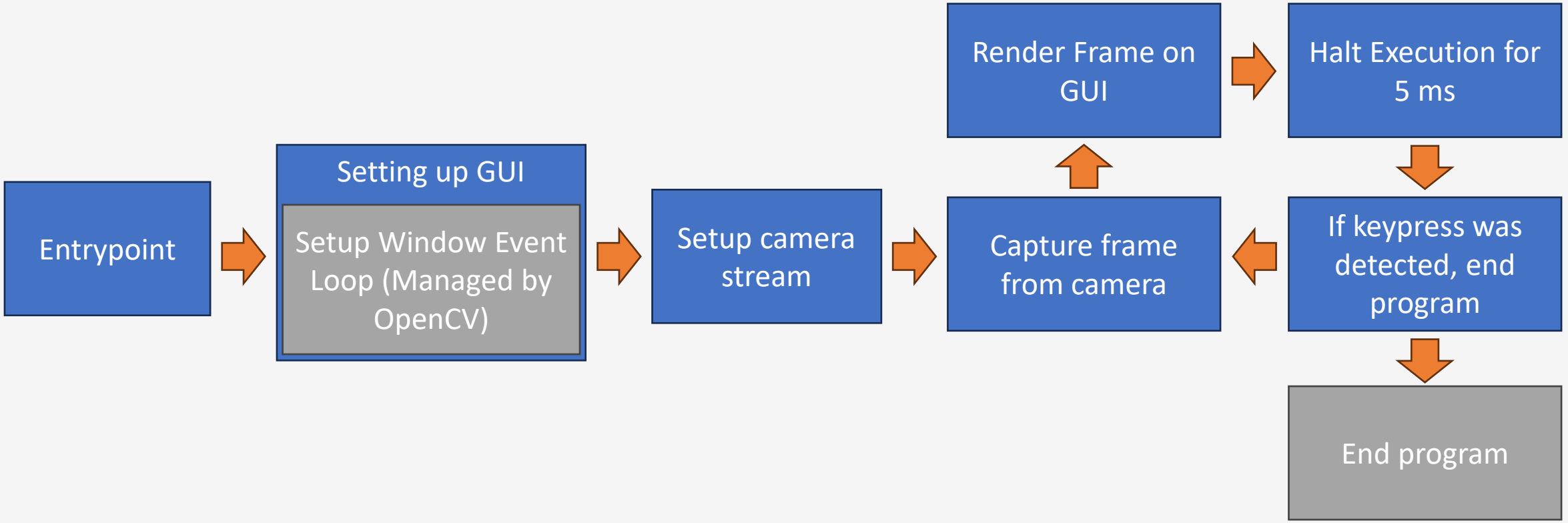

Exercise 2: Demonstration

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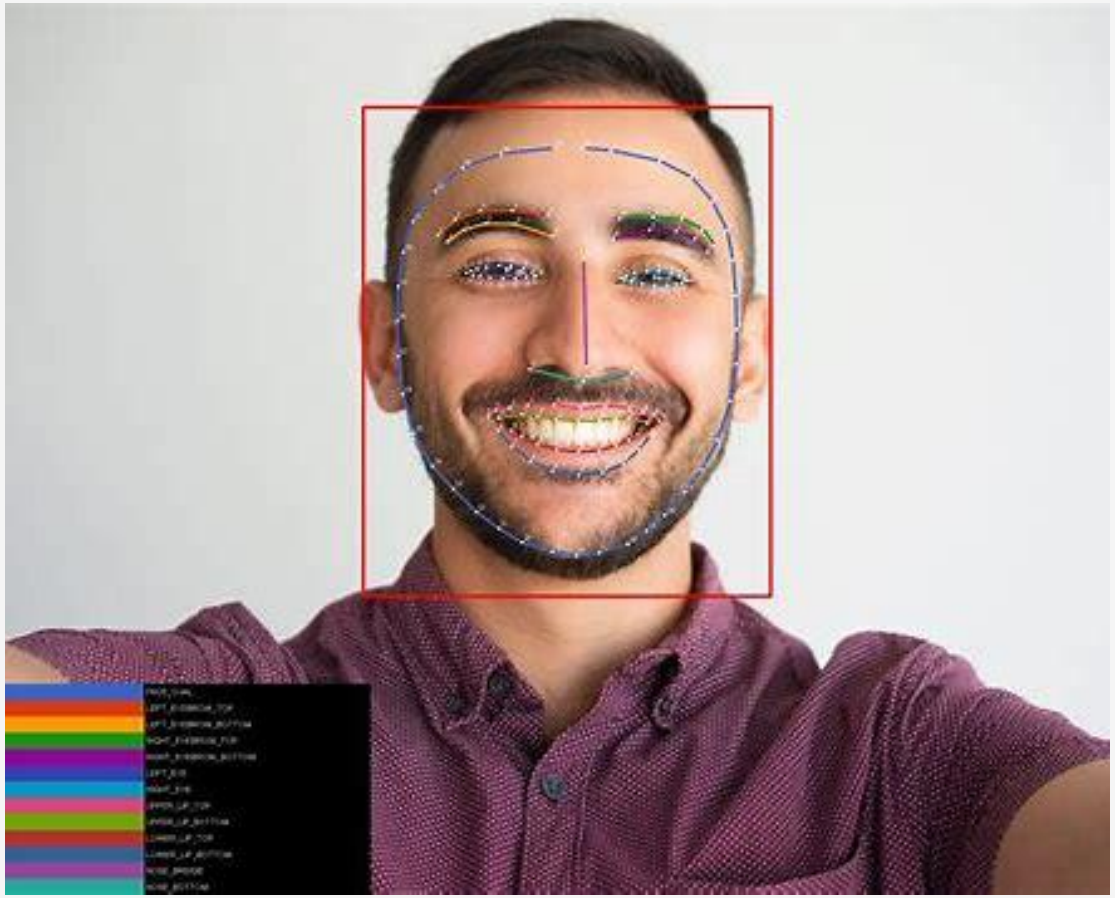

Exercise 3: Using TRUSTID's face detection

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- Goal: Extend the previous example to detect faces in the image, and surround them with a blue rectangle.

Exercise 3: Using TRUSTID's face detection

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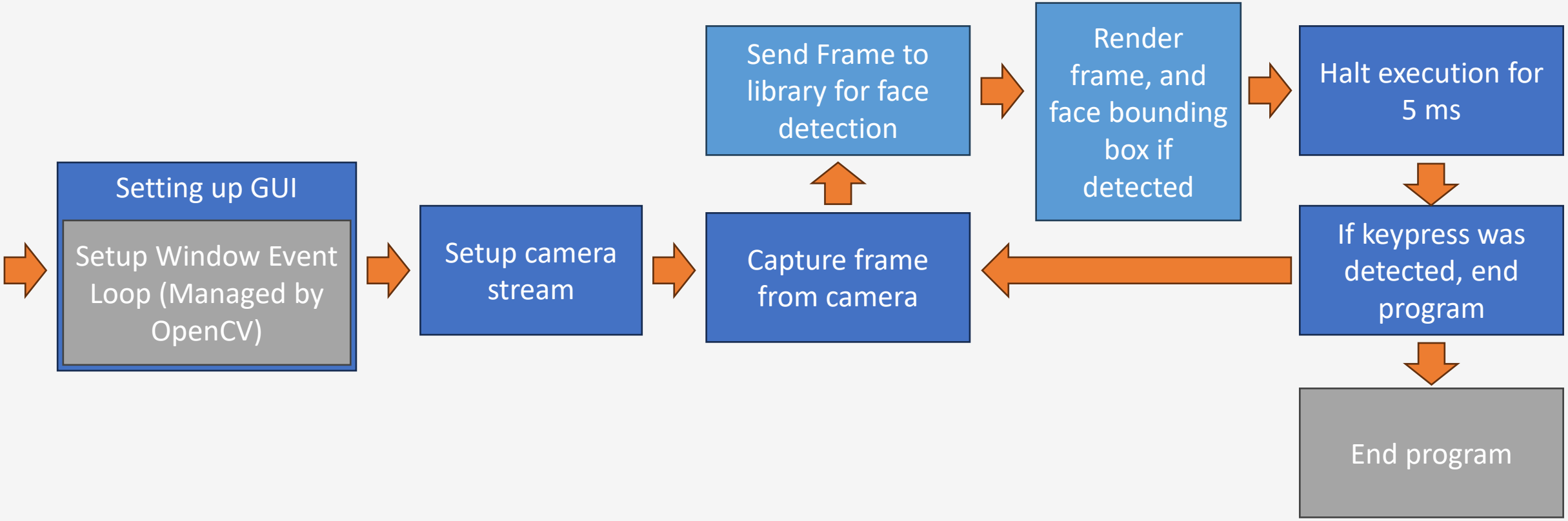

Exercise 3: Demonstration

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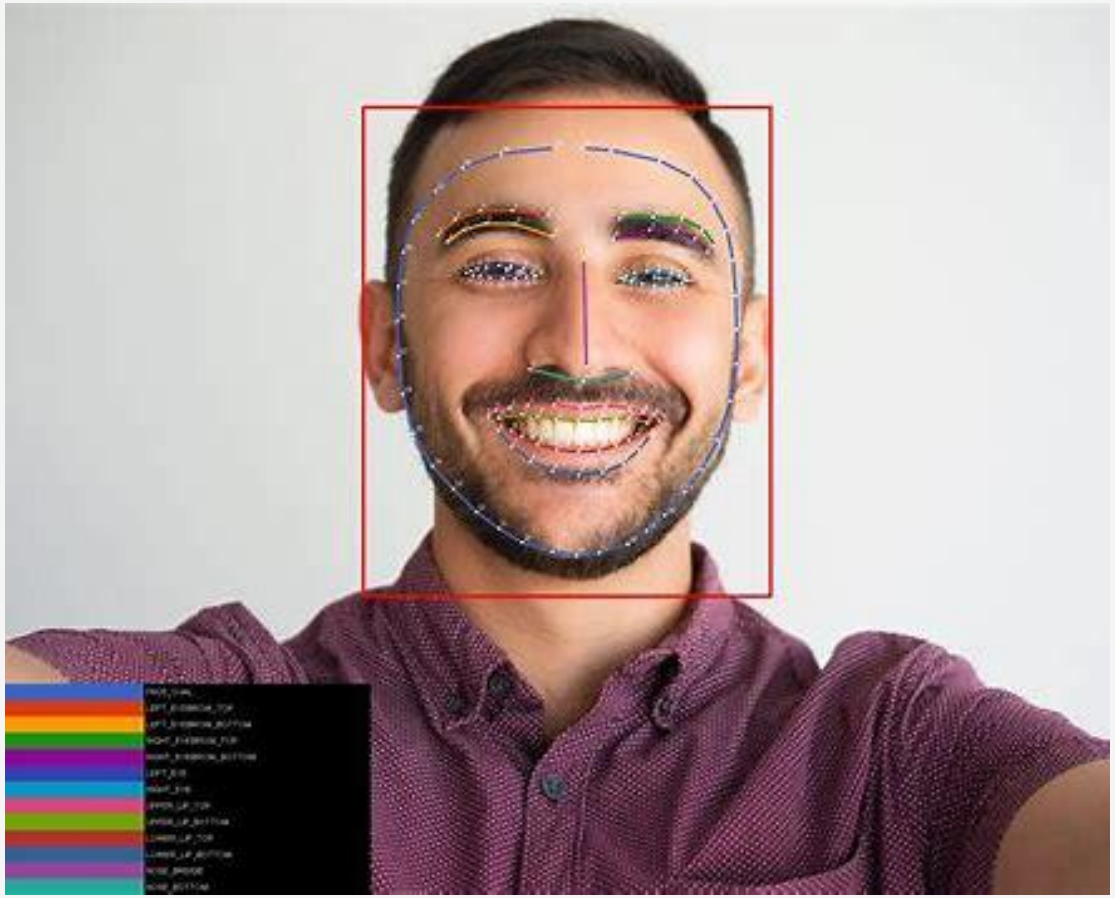

Exercise 4: Using TRUSTID's library for face verification

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- Goal: Create a program that stores the first 15 images of a person and creates a model based on it. After building the model should then indicate whether the person on the camera is the same or not.

From Exercise 3...

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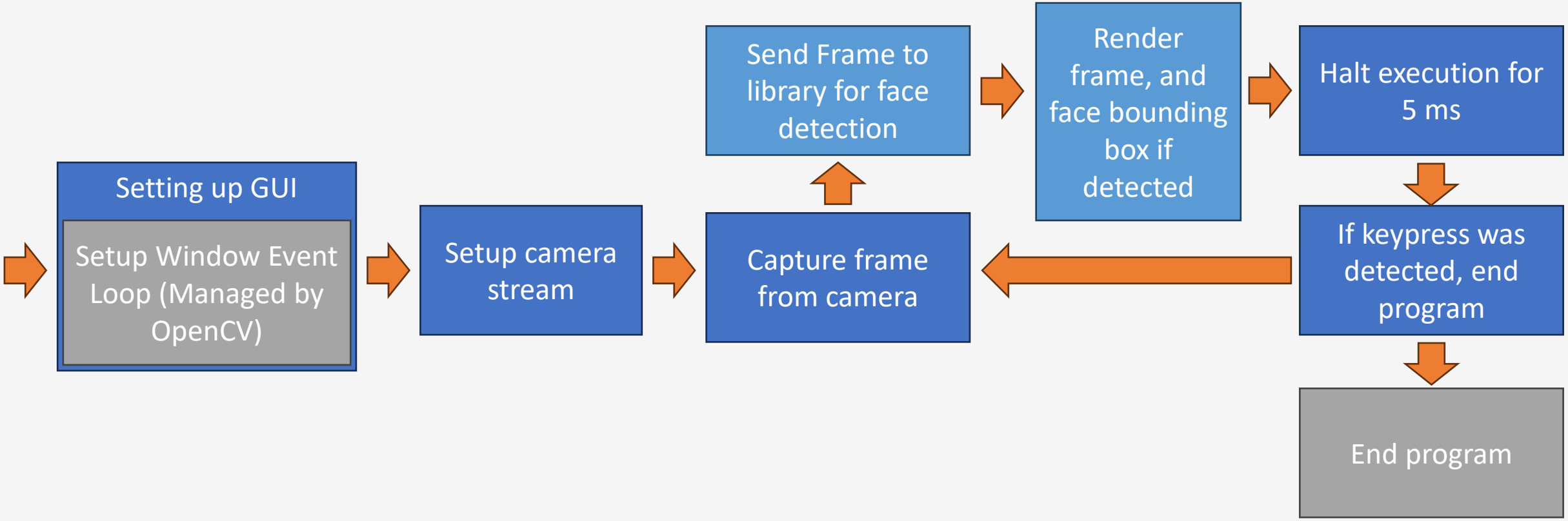

Exercise 4: Using TRUSTID's library for face verification

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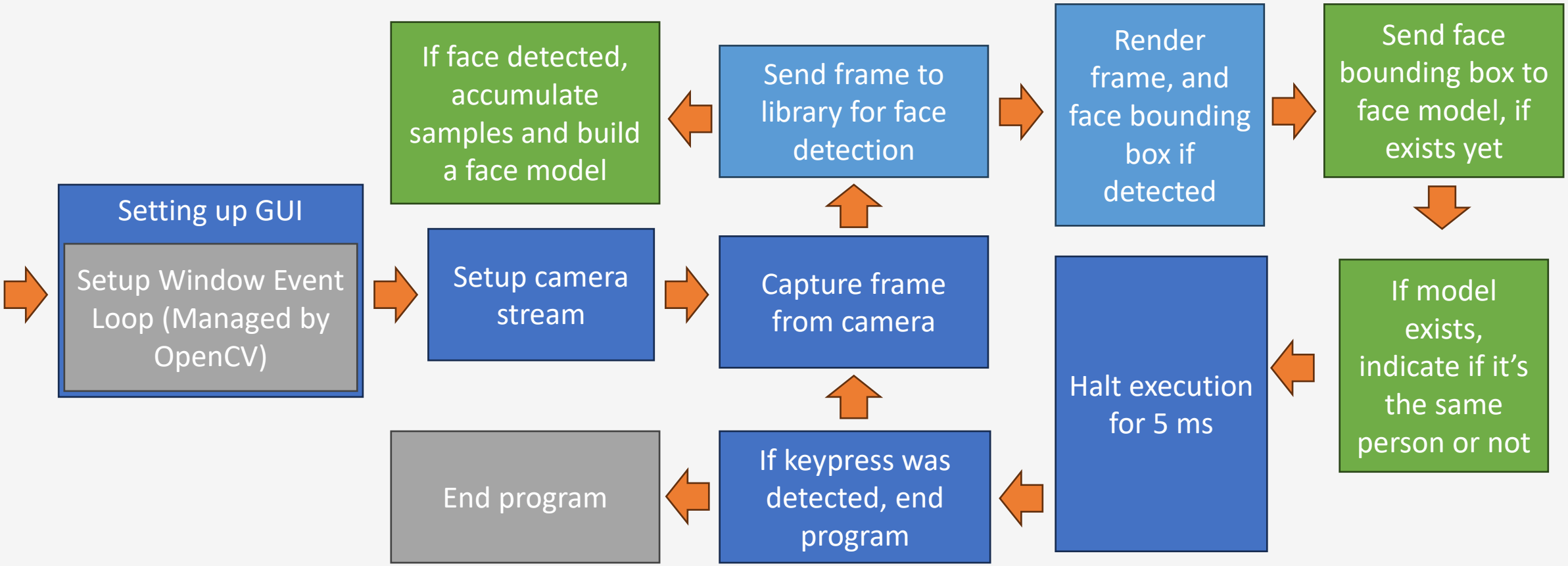

Exercise 4: Demonstration

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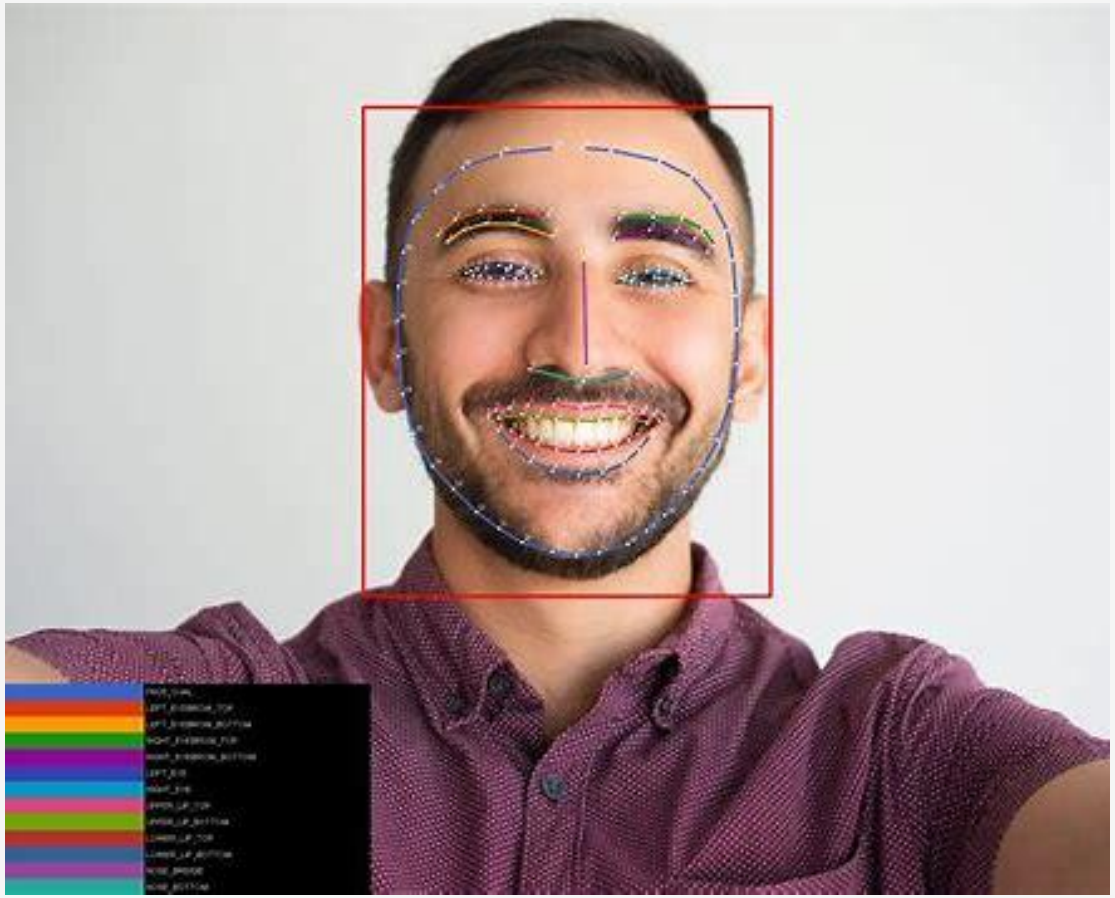

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Thank you!

Project webpage:

https://trustid-project.eu/