A Mobile Application for Presence Detection based on Face Recognition

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Abstract—This demo shows the opportunity of using "everyday" mobile video capturing devices (e.g., smartphone, laptop camera, web-camera) in a face recognition system.

The research goal is to study the opportunity of "everyday" mobile video capturing devices to be used in smart systems with services based on detecting and analyzing the presence of people, e.g., see [1]. The studied mobile video capturing devices become an important tool for many users in solving tasks in their everyday life, e.g., see [2]. The devices are limited in the computational capacity [3], although a device is able to act as a smart service provider [4]. They operate in a local wireless network with limited throughput and Internet access.

A person can be identified and verified based on her/his digital image in video snapshots or streams. Many algorithms have been already developed for the face recognition problem and other detection problems related to image and video analytics, e.g., see [5].

In this work, we demonstrate the prototype application that acts on the following two phases.

1) On the training phase, the device provides a set of captured images for constructing the face model and collecting the information in some storage (web server).

2) On the monitoring phase, the device provides live-capture images for matching with the collected face models and detecting the presence of particular persons.

Acknowledgment

References

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