Gradiant Voice

Speaker recognition technology

GradiantVoice integrates latest Gradiant's proprietary speaker recognition technology, especially designed for verification in mobility scenarios.

- ✓ **Gradiant Voice is a set of libraries ready for integration** in mobile, server platforms or a combination of mobile and server platforms
- ✓ **Fully automatic speaker recognition** with just a few seconds of speech
- ✓ **Gradiant Voice** can be used as a text-dependent or text-independent verification system

Functionalities

Audio acquisition functionality

Acquisition and microphone control for mobile devices, allowing fast integration and development of third-party applications.

Voice activity detection

- ✓ Fast algorithm to detect and discard silence segments, optimised for mobile devices.

Two different speaker verification algorithms

- ✓ GMM-UBM
- ✓ i-vectors

Voice template extraction module

- ✓ Voice template extraction from a few seconds of speech
- ✓ Speech quality assessment to ensure that the acquired speech meets the requirements for system security.

Matching module

1:1 biometric template matching, allowing an easy development of verification and identification applications.

Requirements

Android

- ✓ Minimum OS: Smartphone or tablet with Android 5.0 OS or above (API 21).
- ✓ Minimum hardware requirements
  - 1.5 GHz dual core processor or higher.

- Reference devices: mid-range Android devices, i.e. Google's Nexus 5 or higher.
- ✓ Programming language: Java API.

Server

- ✓ OS: Linux 64 bits (recommended Ubuntu 14.04)
- ✓ Programming language: Java API
- ✓ Hardware Requirements: Intel x64 architecture

Performance

Recognition rates:

- ✓ MOBIO:
  - Males, EER=10.06%
  - Females, EER= 12.025%
- ✓ BANCA: P protocol, EER=1.92%

Performance

- ✓ For a reference server:
  - CPU: Intel(R) Core(TM) i7-4790S CPU @ 3.20GHz
  - RAM: 16 Gbytes
- ✓ Template extraction time (for 15 seconds of audio): 120 ms
- ✓ Verification time (for 4 seconds of audio): 50 ms

Package

Developer SDK for integration and deployment.