3.8 Speaker recognition library and award winning technology

Keywords

Speaker recognition library

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Corporate Sponsorship Program

See Section 4 of the present document

File reference & version number:

Software disclosure 9142

Functional description

This library is designed to run speaker verification experiments.

Innovative aspects

Different state-of-the-art algorithms for voice activity detection, feature extraction (MFCC, LFCC), modelling techniques (Gaussian Mixture Models, Session Variability Modelling, Total Variability Modelling – iVectors) and database interfaces are implemented.

Commercial application examples

- Biometrics-enabled identity management systems (Automated Border Control, Access Control, . . .)
- Multi-factor authentication security systems (Critical Infrastructures, e-Banking, . . .)
- Forensic Science, Video surveillance, Entertainment, Robotics, Man-Machine interaction

More information

E. Khoury, L. El-Shafey and S. Marcel: “Spear: An open source toolbox for speaker recognition based on BOB”, IEEE Intl. Conf. on Acoustics, Speech and Signal Processing (ICASSP), 2014. http://publications.idiap.ch/downloads/papers/2014/Khoury_ICASSP_2014.pdf
E. Khoury, M. Ferras, L. El-Shafey and S. Marcel: “Hierarchical speaker clustering methods for the nist i-vector challenge”, In Odyssey: The Speaker and Language Recognition Workshop, 2014. http://publications.idiap.ch/downloads/papers/2014/Khoury_ODYSSEY_2014.pdf
NIST Speaker i-vector Machine Learning Challenge 2014

Software & IPR status

Open sourced at https://pypi.python.org/pypi/bob.bio.spear but re-licensing possible for commercial purposes.