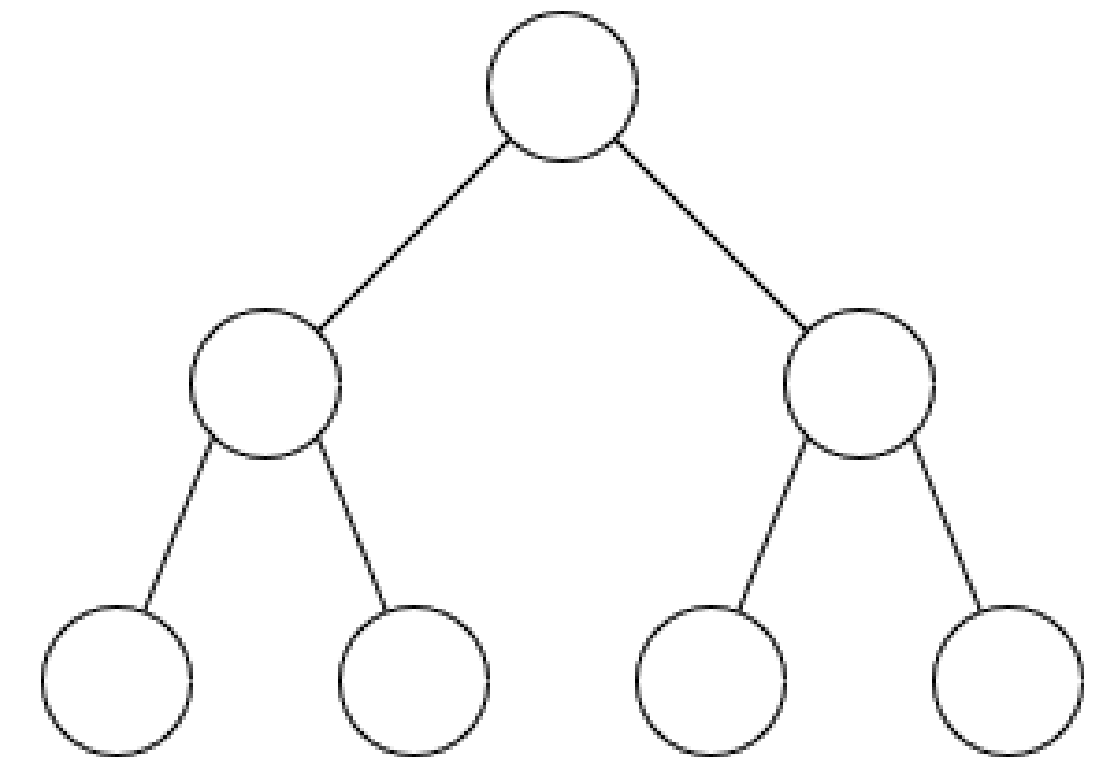
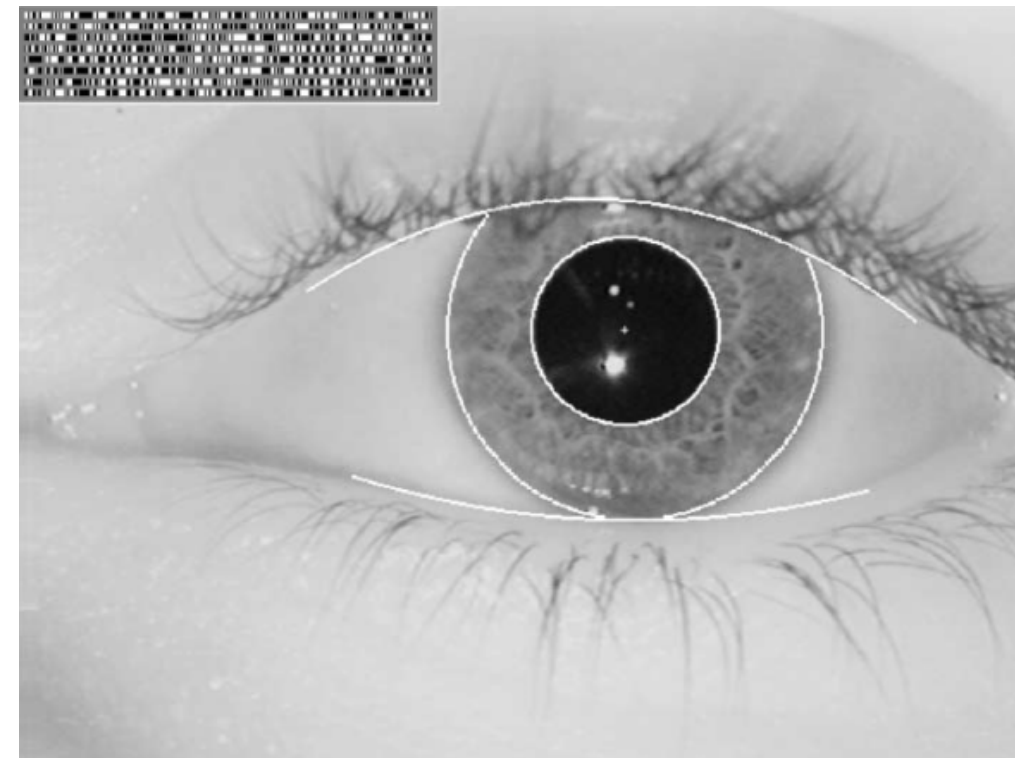


Efficient privacy-preserving identification in large-scale multi-biometric systems



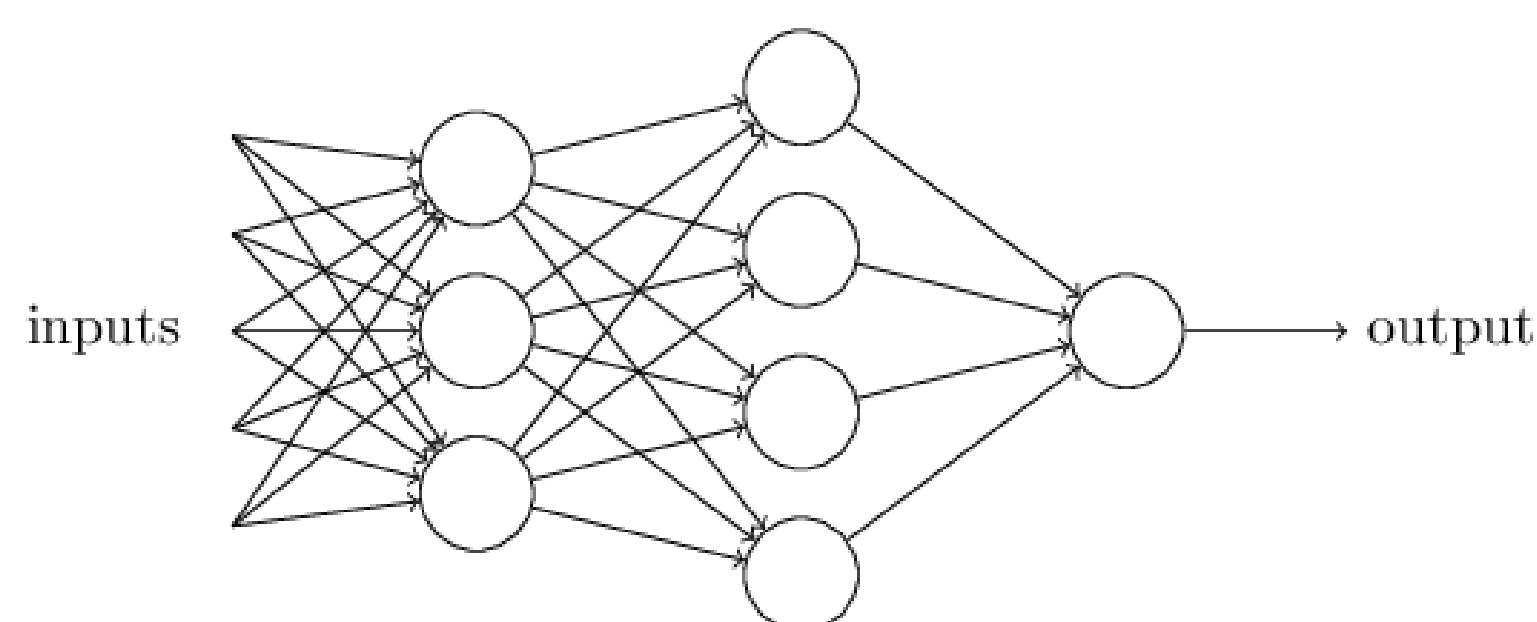
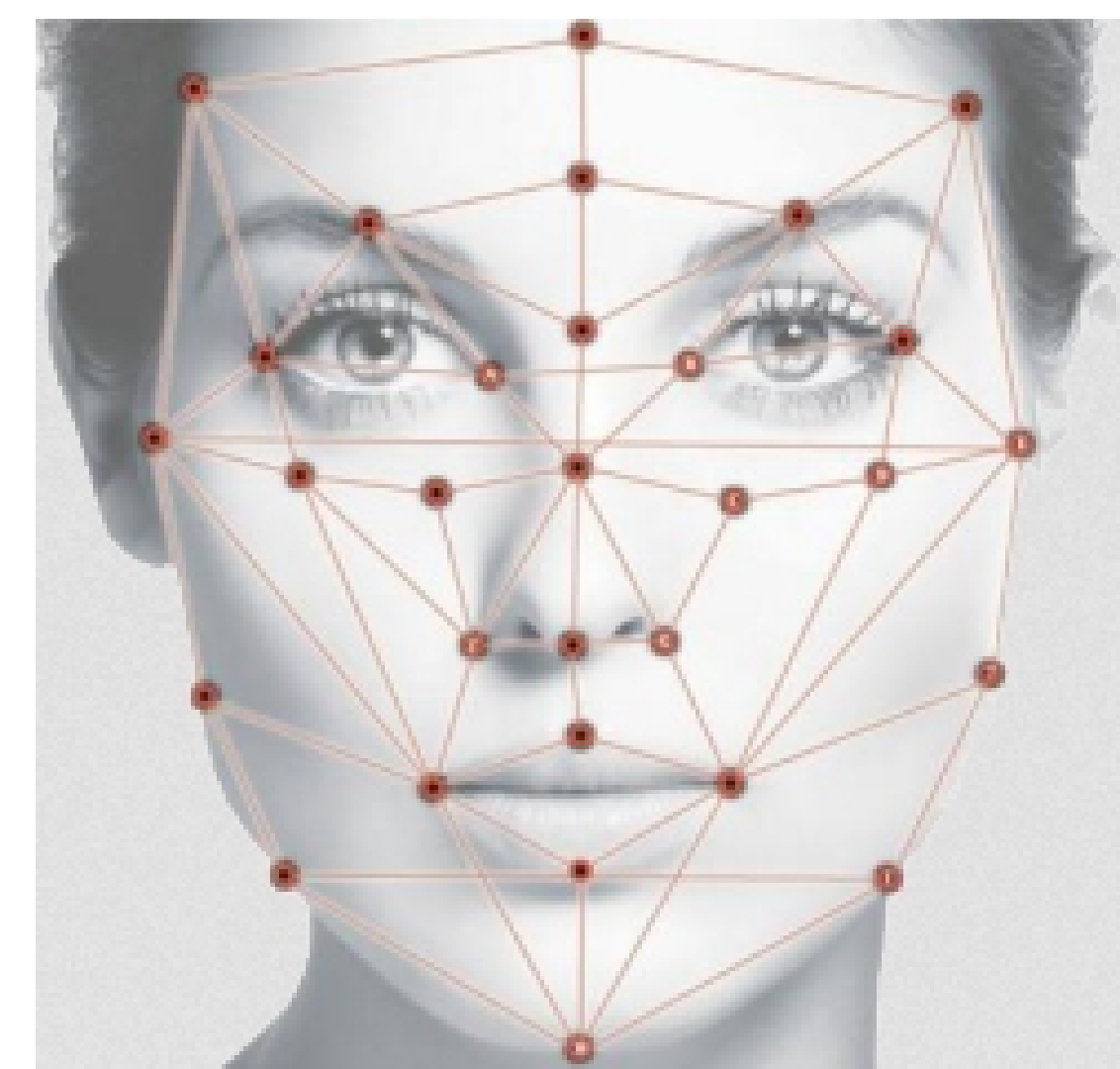
Motivation

- Large-scale biometric systems face strenuous requirements in terms of accuracy and computational cost
- Data protection and user privacy in biometric systems is a growing concern of the worldwide population



Objectives

- A multi-modal system achieving high biometric performance and low workload in identification scenario for large databases
- Integration of privacy-preserving properties into the system
- A general, systematised framework for categorisation of biometric workload reduction approaches and biometric workload reporting



Data Privacy

Approaches

- Automatic generation of huge synthetic biometric datasets and use of existing large databases with real data
- Emphasis on iris, fingerprint and face modalities
- Development of identification schemes involving indexing, machine learning and information fusion techniques
- Quantitative evaluation of the proposed schemes on the large-scale datasets

Related Work

- A. Ross, K. Nandakumar, and A. Jain, Handbook of Multibiometrics, 2006.
- ISO/IEC 19795-1 Information technology -- Biometric performance testing and reporting
- ISO/IEC 24745 Information technology -- Security techniques -- Biometric information protection



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