

Exploring Cross-Modality Biometric Recognition

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Introduction

Biometrics are increasingly involved in our daily lives, from user authentication on smartphones to identifying criminals and more. However, an important question arises: Are all biometrics, such as face, voice, or brainwaves, completely independent, or do they share common underlying patterns? If such patterns exist, how can we detect them? Identifying these patterns could improve the usability of current authentication schemes or assist in identifying criminals more effectively.

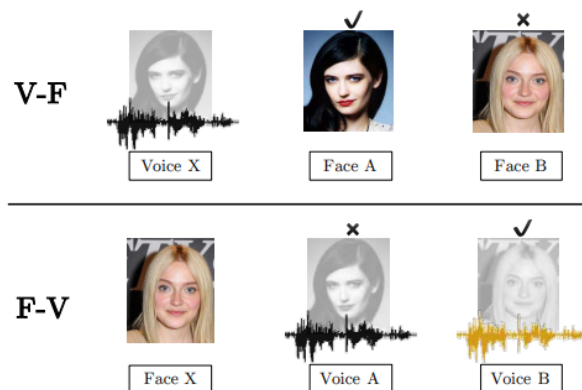


Figure 1: Cross vice and face identifications

Project Description

This project will include:

- First, a literature study to identify the state of the art in cross-modality recognition.
- Second, the design and execution of experiments involving biometrics such as face, voice, brainwaves, and potentially others based on the literature.
- Finally, the project will investigate how to detect and analyze these shared patterns.

References

- IEEE Xplore: Paper 1
- CVPR 2018: Seeing Voices and Faces Together
- IEEE Xplore: Paper 2