

A Multimodal Biometric System using Palm Vein & 10-print Fingerprint Sensors

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Motivation

The Department of Homeland Security would like to improve the performance of the biometric system used at airports for international travelers.

Objectives

- Use multimodal setup to improve the performance of the biometric system.
- Determine usability of this multimodal system.
- Use palm vein as a contactless sensor in the multimodal system.

Methodology



Collect Images using all three sensor layouts

Video interactions with all three sensors

Determine performance metrics for each system separately

Analyze video interactions and survey questions to determine usability factors of each system

Present results showing performance and usability for the multimodal system compared to other two individual systems.