

How accurately can you identify me?

Uncovering Perceived Identification Accuracy of In-Vehicle Biometric Sensing

Abdallah El Ali ^{*}, Liam Ashby [×], Andrew M. Webb ^{*}, Robert Zwitser [×], Pablo Cesar ^{*‡}

^{*} Centrum Wiskunde & Informatica, [×] University of Amsterdam, [‡] TU Delft



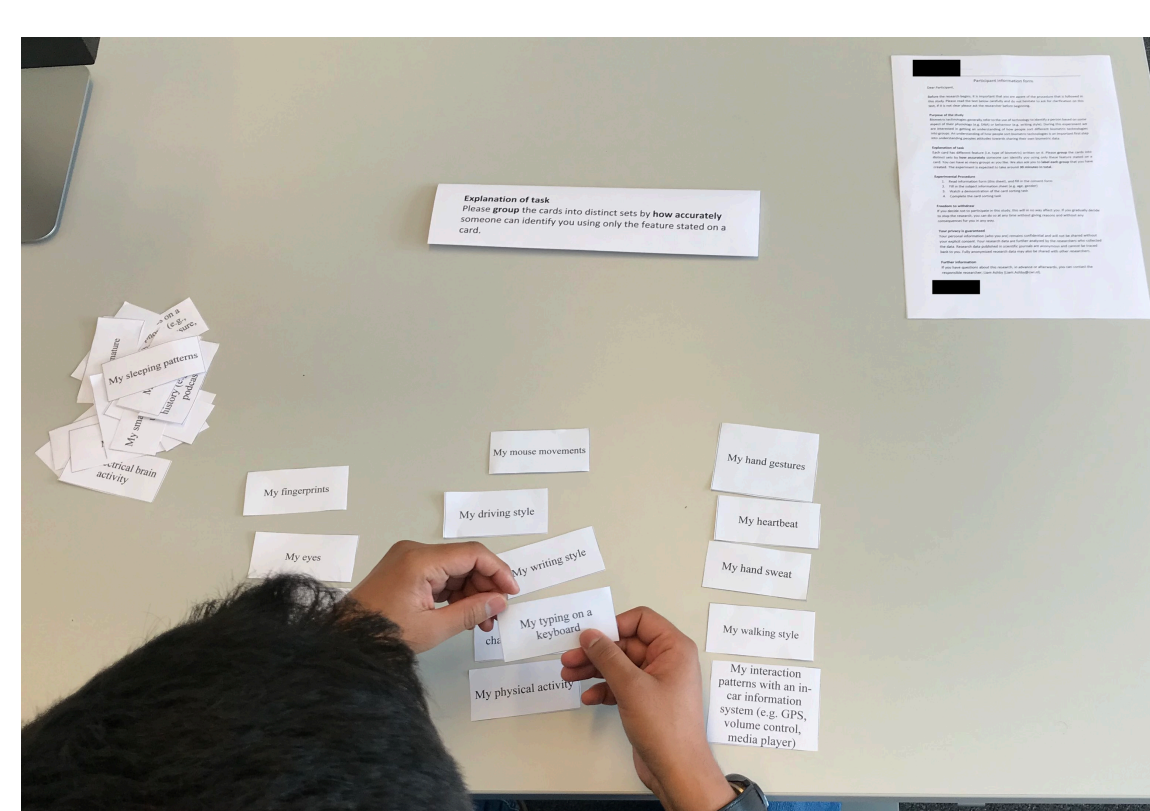
Why study this?

- **Biometric techniques** can make vehicles safer to drive (e.g., drowsiness detection), protect them against theft (e.g., authentication), provide higher cost efficiency (e.g., rewarding good driver profiles), or provide personalized in-car experiences (e.g., route personalization).

- **Privacy-personalization paradox:** consumers who value information transparency are also less likely to participate in personalization.

→ Need for understanding **trade-off** of sharing **personal biometric data** for **in-vehicle user benefits**.

RQ: How well do users perceive their physical, behavioral and physiological features can personally identify them?



Analysis: Ward's hierarchical agglomerative clustering (k=6)

Future / missed cards

- My muscle movements
- My personality
- My eye gaze patterns
- My driving route
- My company in a vehicle
- My body temperature
- My eating style
- My saliva

Closed card sorting website

