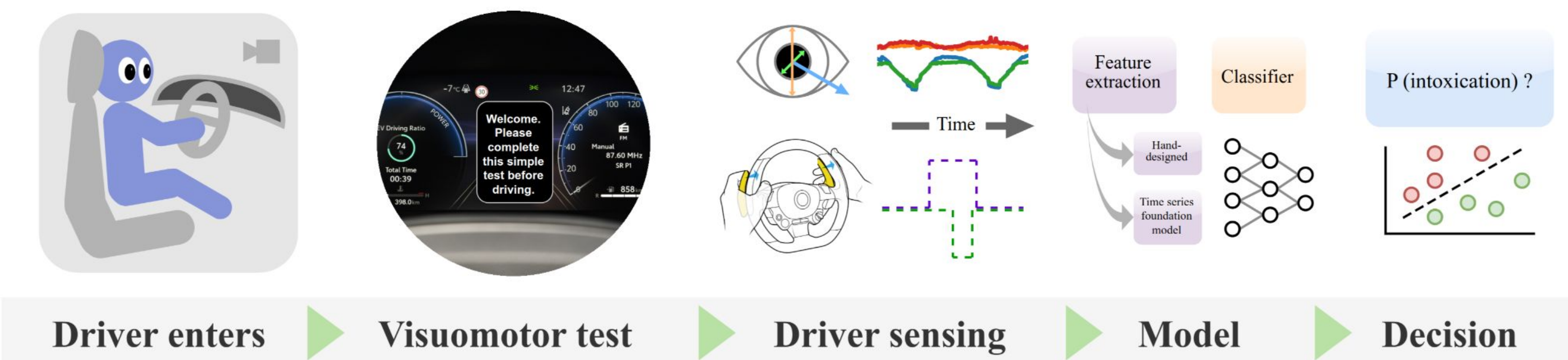


## Goal

Predict alcohol impairment of driver *before* they drive, using only a driver monitoring camera.



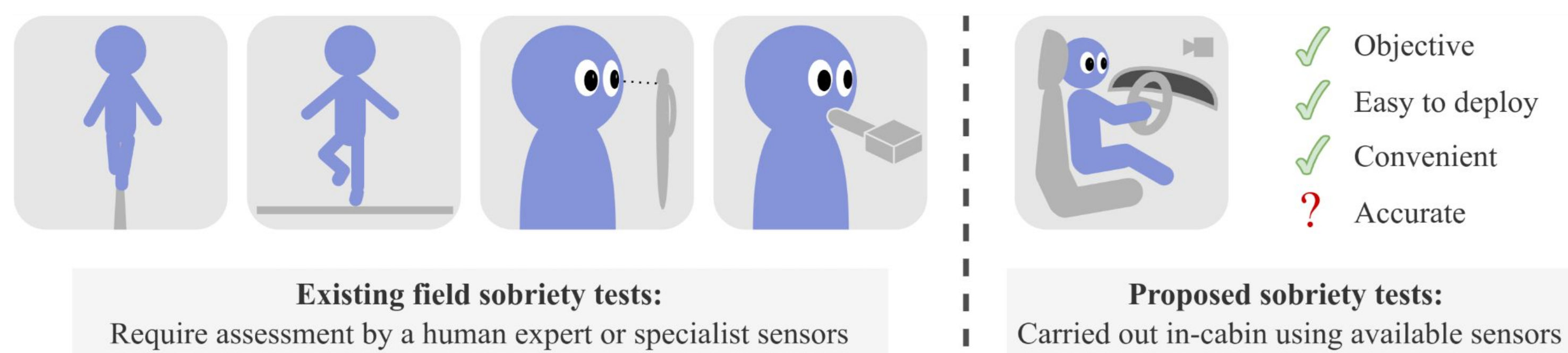
## Why?

! >1/5 fatal road traffic accidents alcohol-related

📷 Driver monitoring cameras more common

🕒 Early detection better

## What's new?

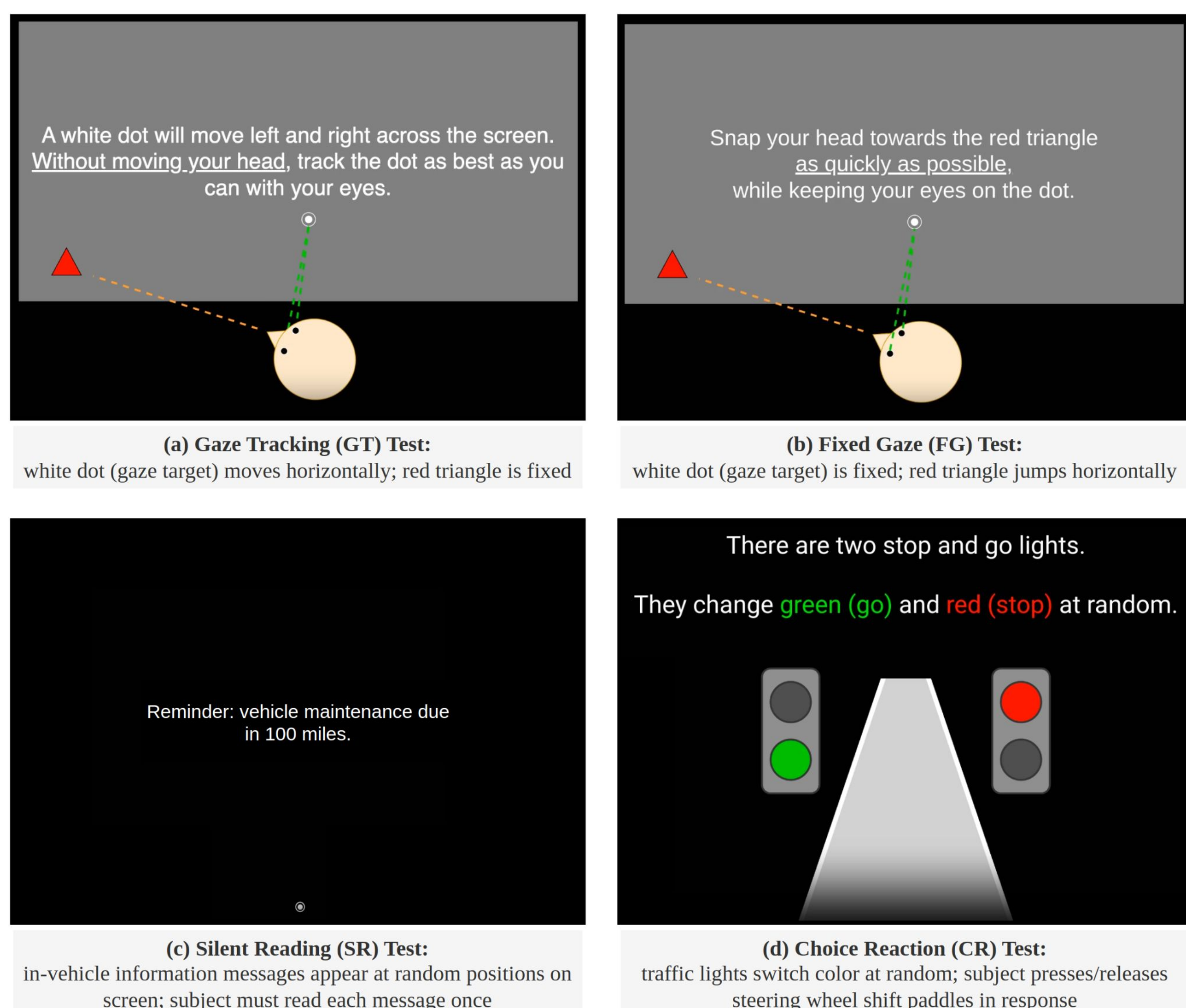


🤖 Automated, objective, convenient (<10s)

💰 No need for extra sensors or equipment

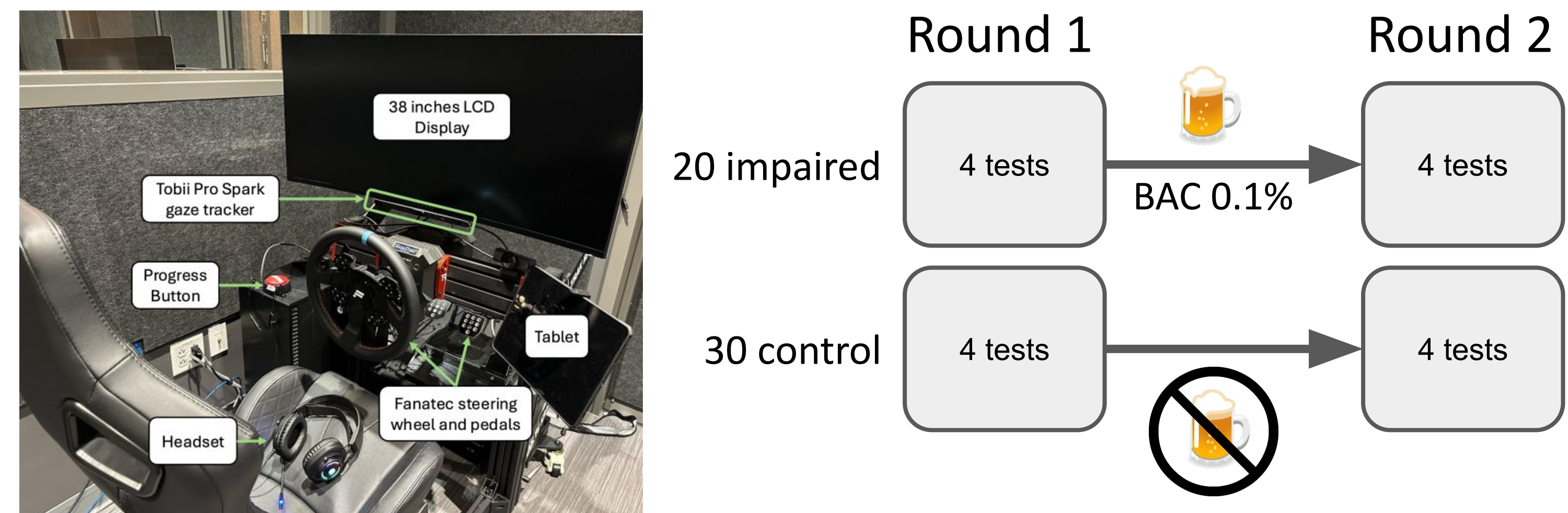
👁 Focus on gaze (privacy, generalizability)

## Proposed tests



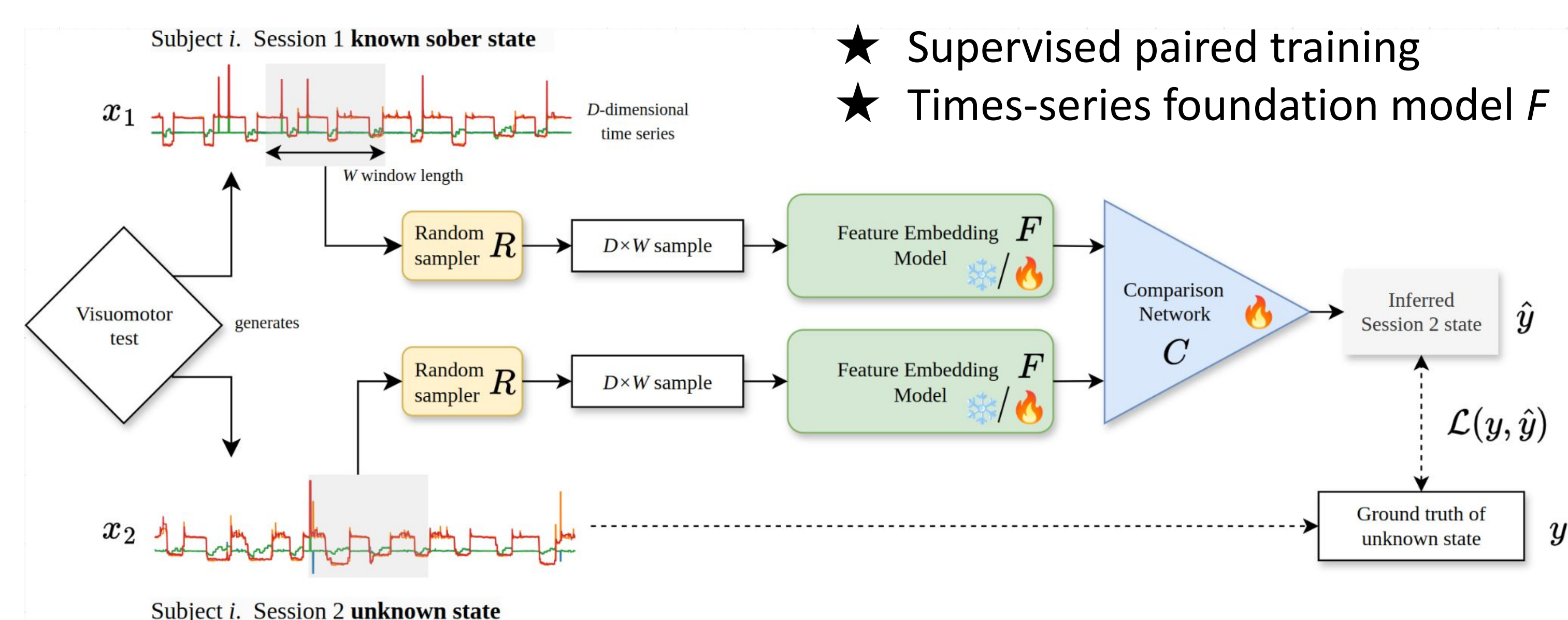
We designed four candidate visuomotor tests, to stress different types of user behavior to try to quickly elicit detectable signs of drunkenness.

## Dataset

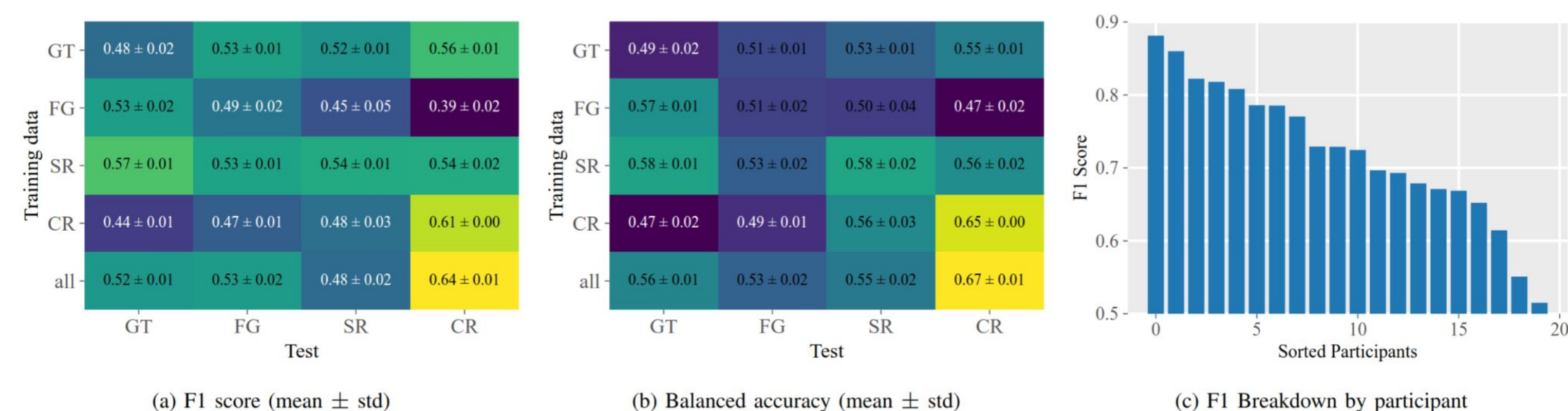


7.2h gaze tracking & reaction data from 50 subjects (total 100 samples per test)

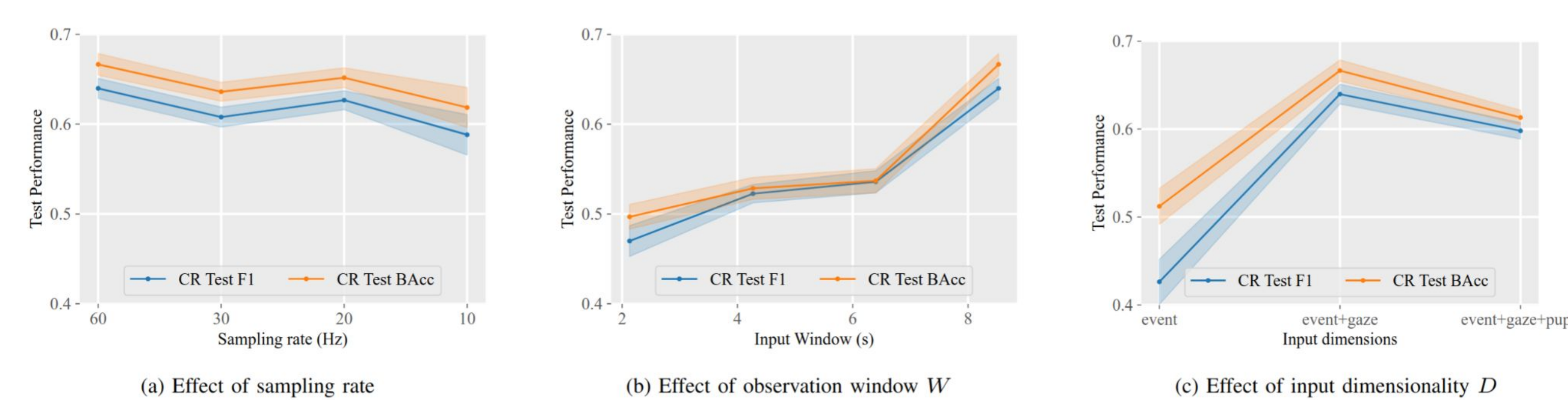
## Model



## Experiments



Choice reaction test most promising  
Gaze tracking may be too noisy with fast motion



More data (input observation window, training data) would likely improve performance

## What's next?

Promising, but need more:

- data (repeats, subjects)
- models (self-supervised, modalities)
- test designs (many possibilities)
- in-situ testing (real vehicle)

Data & code available!

