

# Olive: Mitou - Solve

## We "Sense" You

- Interpret emotion from biodata (heart rate, respiration rate, etc)
- Enhance user (customer) experience using Emotion AI
- Olive tech lets products "sense" and "sympathize" with users

## Technological Expertise

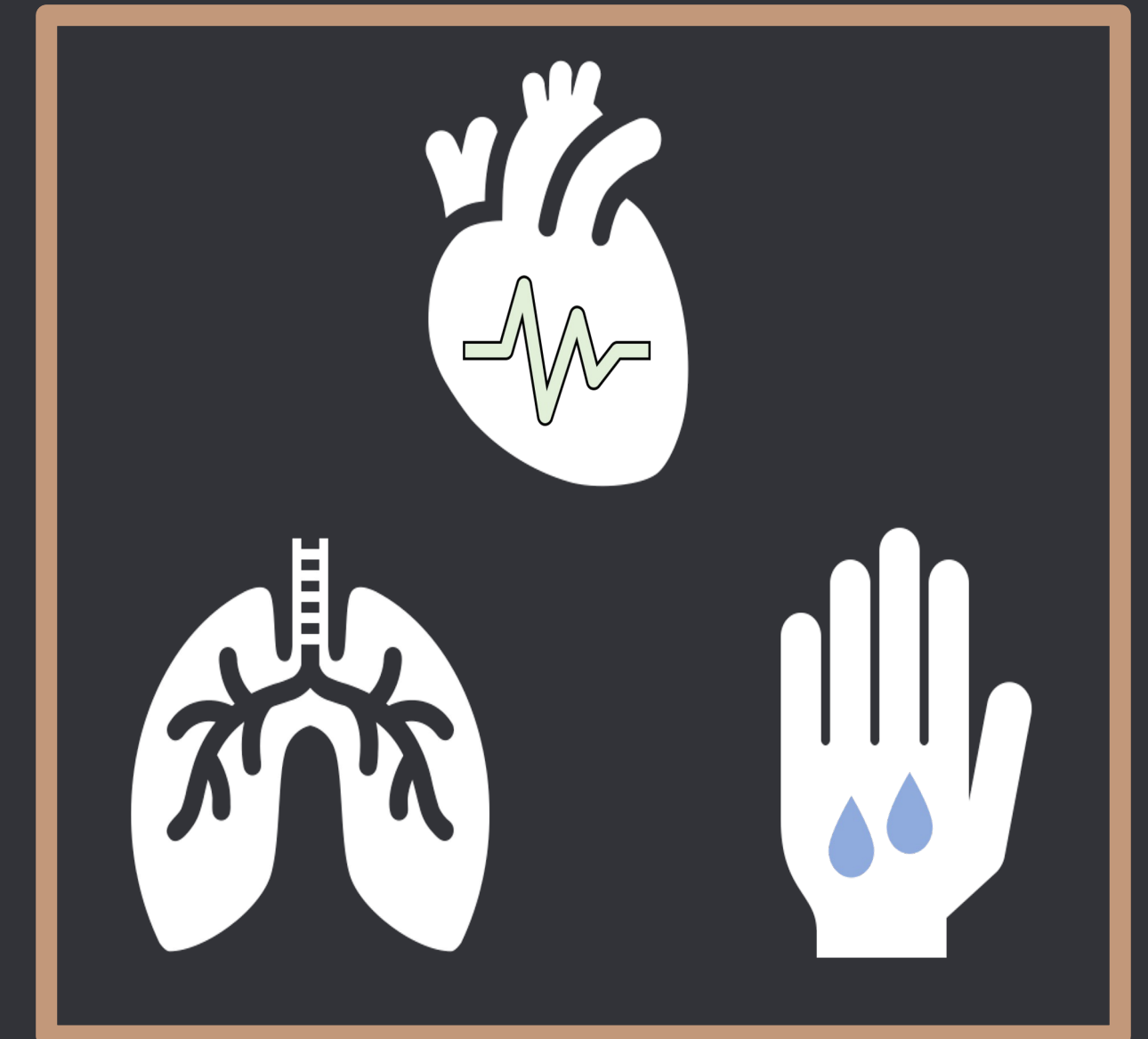
- Biodata-based emotion recognition
- Computer vision, wearables
- Forecasting, activity recognition

## Partners and Sectors

- Partners: Mitsubishi, Fujitsu, Toshiba, etc.
- Sectors: education, telemedicine, tourism, mobility, office, shopping

## Our Members

- 50% international staff (55% of engineering team)
- Primary language: English
- **International students, and internationally-minded students welcome!**
  - *Your English does not need to be perfect, but you must be comfortable working in English!*



**Biodata**

# Challenge 1: Face-Down Detection System

Olive

## Issue: Detecting Downward Faces in AI Education Systems

- Young students often lower their heads, making facial detection difficult  
→ Without face data, the system lacks critical input

## Solution: Face-Down Detection System

- Ensures student presence is captured when face is down  
→ Use top-of-head landmarks (nose, ears) for detection and inference?

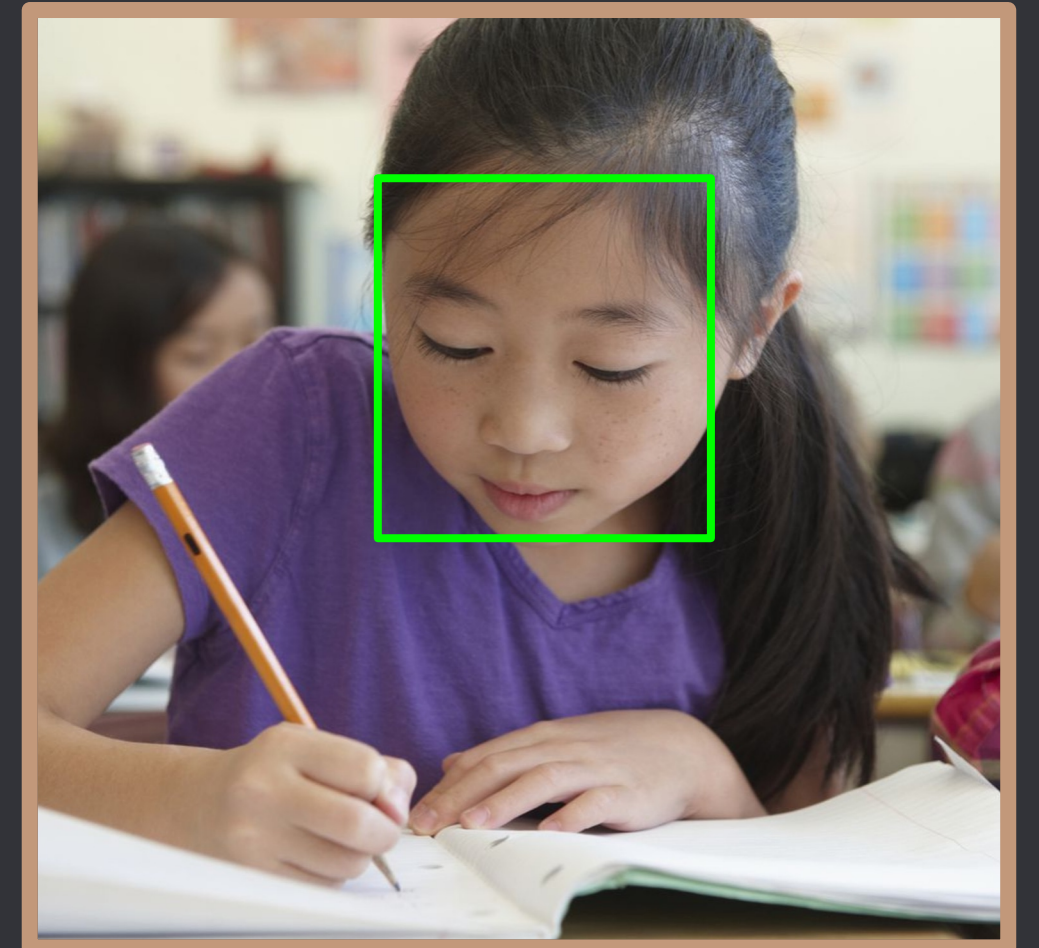
## Target Users

- Education Sector. Mainly classrooms, but also self study situations  
→ This means various different sensing environments

## Technical Specs

- Real-time operation on: Raspberry Pi, Chromebook, and Windows
- Utilizing Python

**Message from Engineering Team:** *"This issue affects the essential input stage of our pipeline. The right solution can greatly improve our educational AI products. Let's solve this together!"*



Face-up: successful detection



Face-down: **no detection**

# Challenge 2: Privacy-Preserving Tracking System

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## Issue: Recognising Repeat Customers While Preserving Anonymity

- Want to know if shoppers are repeat shoppers, or if they are actually staff
- Need to do this while preserving people's' privacy

## Solution: Privacy-Preserving Tracking System

- Obtain enough information to track people in shop, but must preserve privacy
- We need ID, and details like age and gender
  - How to obtain and store enough information, while preserving privacy?

## Target Users

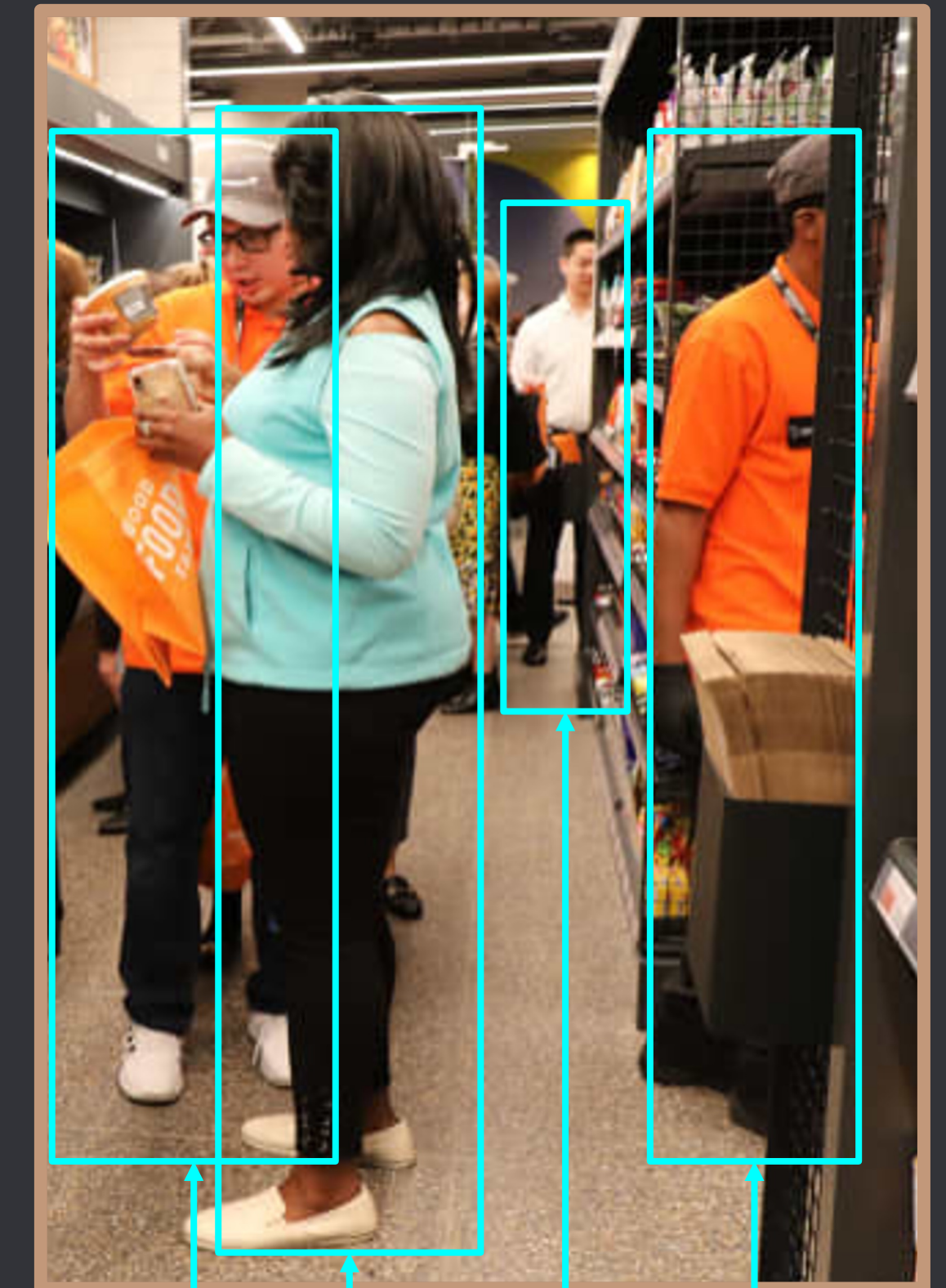
- Shopping
  - This means various different sensing environments

## Technical Specs

- Real-time operation on various devices: Raspberry Pi, Windows, and Mac
- Utilizing Python

**Message from Engineering Team:** "This is a current issue, and implementing it correctly will have a direct impact on our existing deployed systems.

*This is a great opportunity to work on a live, pressing problem!"*



ID:1  
Age: 40s  
Sex: Male  
Staff: No

ID:3  
Age: 30s  
Sex: Male  
Staff: No

ID:2  
Age: 40s  
Sex: Female  
Staff: No

ID:4  
Age: 30s  
Sex: Male  
Staff: Yes

# Challenge 3: Purchase Intention Predictor

## Issue: Limited Number of Sales Staff Makes Sales Difficult

- There are often situations where there are many customers in a shop
- How do sales assistants focus their efforts to optimise sales?

## Solution: Purchase Intention Predictor

- Can we determine which customers are most likely to buy something?  
→ 100% accuracy not required, even a small amount of info is useful!

## Target Users

- Shopping  
→ This means various different sensing environments

## Technical Specs

- Real-time operation on: Raspberry Pi, Chromebook, and Windows
- Utilizing Python

**Message from Engineering Team:** *"This is a completely open challenge. Feel free to come up with a suitable scope, approach, and solution. We want to hear your ideas!"*



Most Likely  
to Purchase

Least Likely  
to Purchase

## Website

- <https://www.01ive.co.jp/>

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Please feel free to ask any questions, we are looking forward to working with you!