



# The Quite Heist

# WHAT'S THE REAL ISSUE ?

- ▶ Shared spaces cause stress over belongings
- ▶ Expensive smart anti-theft tools are out of reach
- ▶ Fear of theft impacts focus and well-being
- ▶ Need for affordable, discreet, real-time alert system



# TARGET AUDIENCE

- ▶ Students | Carry backpacks daily in crowded spaces (university, buses, cafés)
- ▶ Urban Commuters | Face frequent risk of pickpocketing in metros and public transit
- ▶ Tourists & Travelers | Often distracted in new environments — easy targets for thefts



# WHY IT MATTERS?

250, +  
000

Items lost annually on  
Deutsche Bahn trains

**Alert systems increase perceived  
security (Mowbray et al., 2023)**



### Tile Trackers

Helps locate lost items via Bluetooth — useful after theft, not during.



### Loctote Anti-Theft Bags

Slash-proof and lockable —

offers strong physical protection but no real-time alerts.

## What's already out there ?

### Birdie

Personal safety alarm triggered manually — not designed for bags or motion detection.



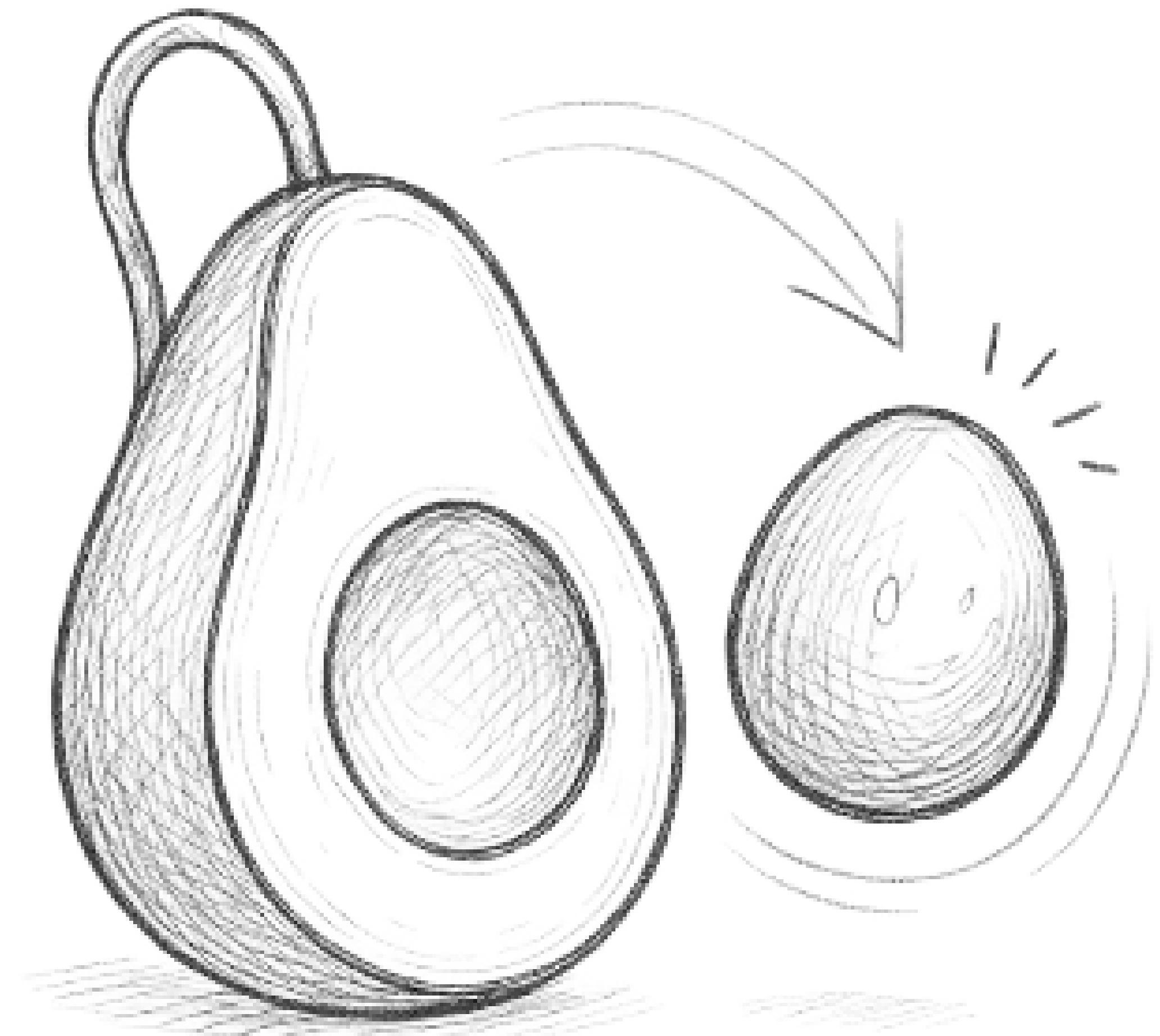
### Pacsafe Bags

Built-in security features like hidden zippers — but lacks active theft detection.



# OUR CONCEPT

An Avocado Alarm



# How Does it **WORK ?**

A black and white photograph showing a portion of a laptop keyboard in the upper right and a small, white, cylindrical device with a magnet attached to a zipper pull in the lower left. The device appears to be a DFPlayer Mini module. The background is a wooden surface.

- ▶ Device is armed using toggle switch
- ▶ When zippers are pulled apart → magnet detaches
- ▶ Reed switch detects separation from magnet
- ▶ DFPlayer Mini plays preloaded alarm sound

# TEST SETUP

"Simulated real-world theft scenarios with 8 participants (aged 22-28) across busy trains, buses, and shared spaces."



▶ Public Transport



▶ Public Bench

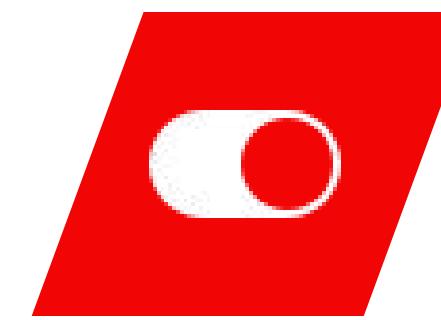


▶ Café

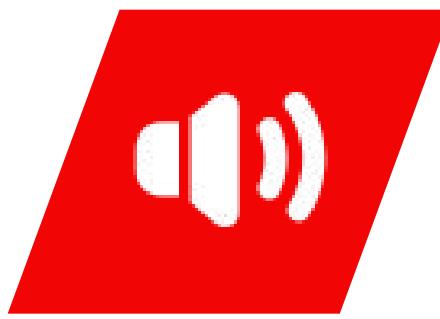
# DATA COLLECTED



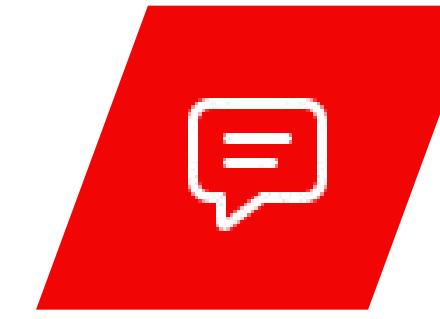
**Reaction time  
of device**



**Feedback on  
manual toggle**



**Alarm loudness  
and clarity**



**Comments on size  
and discretion**



**Visibility of  
design**

# What **USERS** Said



**Ms. Alekhya**

Student at HSRW

**“ Really useful, but it’s a bit too visible. A smaller version would be perfect.”**



**Ms. Kavisha**

Student at HSRW

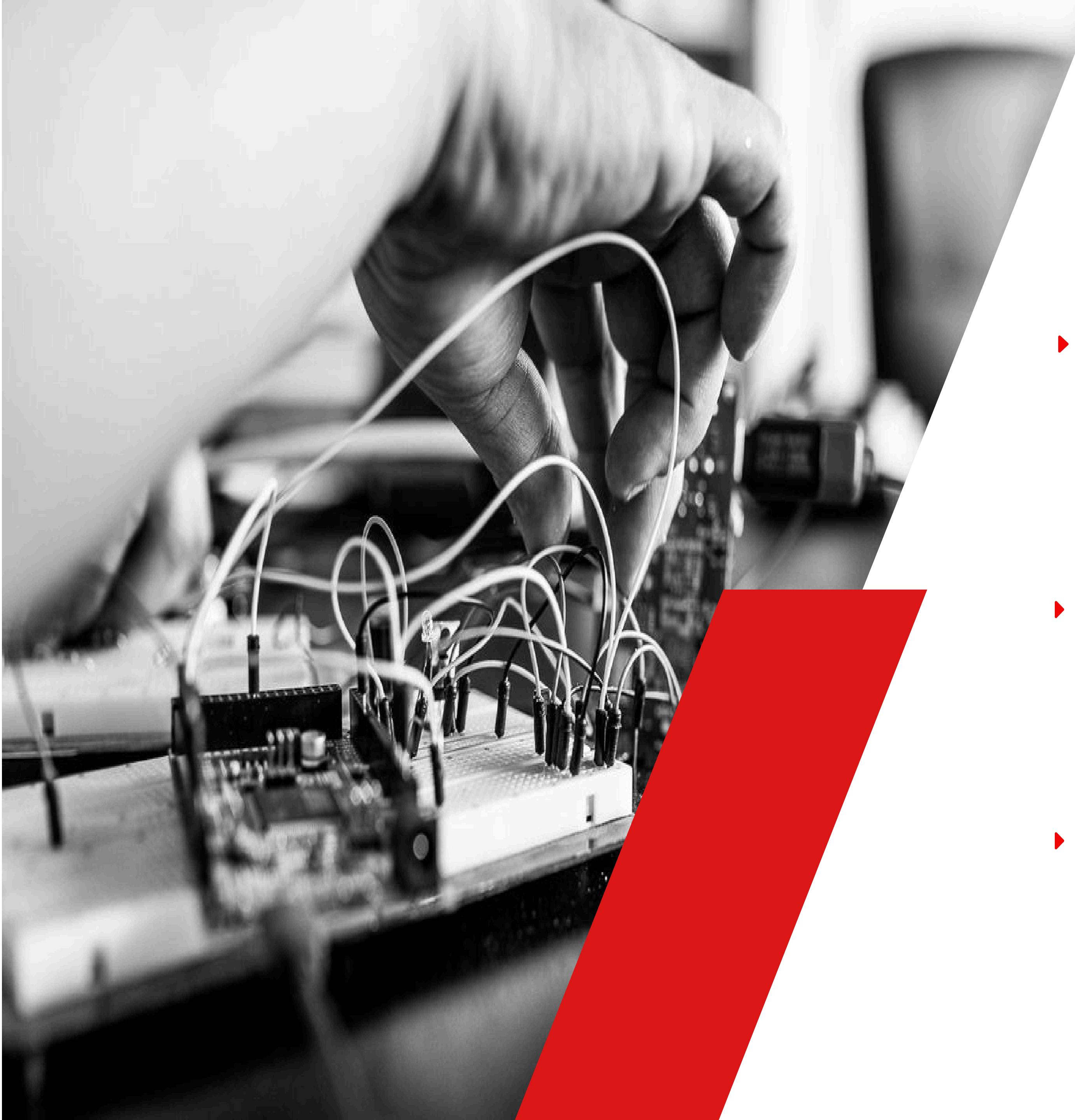
**“ It startled me, in a good way! The alarm is loud enough to make people notice.”**



**Ms. Lianne**

Student at HSRW

**“ The manual toggle is smart, but a thief might figure it out if they look closely.”**



# CONCLUSION

- ▶ Functional prototype successfully detects theft attempts
- ▶ Real-world testing proved effectiveness
- ▶ Honest feedback shaped improvement areas

# OUTLOOK

01 **Smaller, Smarter Design**

02 **Secure the Toggle Mechanism**

03 **Smarter Disarming Options**

- ▶ Miniaturize the design using smaller components or custom PCB
- ▶ Make the toggle switch tamper-proof or hidden
- ▶ Explore NFC or app-based arming/disarming

## Harsh

- ✓ Coded the logic for the project
- ✓ Designed the casing in Fusion 360 based on the proposed concept
- ✓ Contributed to user testing
- ✓ Final project paper and video of prototype

## Sumaira

- ✓ Ideation of Designing and Redesigning of the case
- ✓ Assembled and integrated electronics into the case and solved related issues
- ✓ User Testing and Data Analysis
- ✓ Designed and created the presentation visuals and content
- ✓ Final project paper

## Ümmü

- ✓ Initial research on user needs and existing solutions
- ✓ Conducted testing sessions and collected user feedback
- ✓ Final project paper
- ✓ Designing of the poster

# **THANK YOU !**

