EVALUATION

TESTING INSIGHTS

Users wanted **confirmation feedback** and **flexible privacy**.

Gesture chaining improves confidence and **reduces perceived theft risk**.

ADAPTABILITY

Fridge or Foe works in university kitchens, offices, and shared housing, among other areas

Less effective in environments with low social trust

MOBILITY ASPECT:

Uses **device vision** and **local storage** (no cloud required), making it able to be installed across different shared sites.

ETHICS & FUTURE WORK

ETHICS & PRIVACY:

- Optional identity visibility (name/ photo toggle)
- Private or time-limited gestures
- Local storage only — no external data collection
- Transparency on how data is used
- Automatic deletion of item photos when food removed

POTENTIAL FUTURE WORK:

- Adaptation kit for regular fridges
- Accessibility options for users with limited mobility
- Expanded testing in offices or residential communities

[√FRIENDS^{-1}]

FRIDGE OR *FOE*

Fridge or Foe turns your everyday food storage into a fun, community-driven experience through gesture-based access and local interaction.

PROBLEM SPACE

THE ISSUE

Shared university fridges **lack accountability.**
With **no identity or ownership**, **food theft and confusion are common problems** we face.
This isn't just about missing drinks, we're seeing a **breakdown of trust** within shared environments.

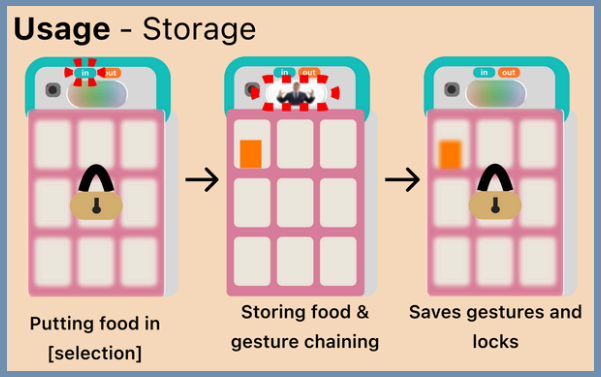
THE CHALLENGE

How can we use **social and mobile computing** through technology to build **trust and collaboration** in communal spaces?

DESIGN CONCEPT

Fridge or Foe uses a **gesture-recognition system** connected to a **3×3 smart-fridge grid.**

To store or take out food, you perform a **chain of three gestures**.



This series of gestures can be **shared with your friends** to give them access to your food, transforming a **private act into a social experience**.

CORE FEATURES
Gesture-based lock / unlock
Optional gesture sharing
Local data storage for privacy

RESEARCH & PROTOTYPING

KEY ACADEMIC RESEARCH

- **Embodied Interaction (Dourish, 2001)**: Physical gestures enhance engagement.
- **Design for Trust (Söderberg, 2021)**: Transparency builds shared responsibility.

KEY USER RESEARCH FINDINGS

- Most users **valued visibility** and **trust cues**.
- Many **worried** about **gesture imitation** and **photo display**.
- **Short/expressive gestures** felt most **comfortable**.

PROTOTYPE ITERATIONS

1. Role-play mock-up within the main context
2. Cardboard low-fidelity prototype
3. Functional build with Raspberry Pi gesture recognition