

C!EAN!

Presenting Team TRI000



Bringing you a lovelier pre-flight experience.

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PROBLEM

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PROBLEM: CHALLENGE 2

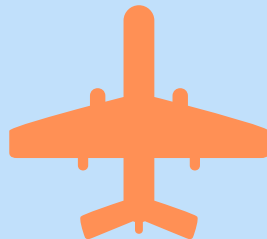


1. **Manual tracking** of occupancy levels in SilverKris Lounge
2. **Unsure** of time and location for **cleaning schedules**
3. Hygiene and **safety concerns**

TARGET AUDIENCE

CLEANING STAFF

Foster efficiency
and flexibility at
SilverKris lounge.

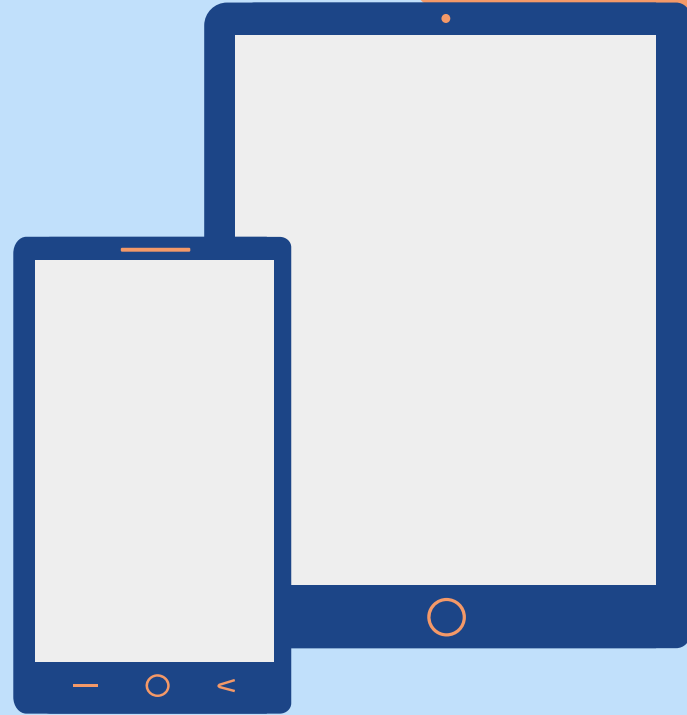


PASSENGERS

For a better and
safer pre-flight
experience

CROWD-MONITORING SYSTEM

A lightweight and easy-to-use app that tracks human traffic in SilverKris.



Link to code: <https://github.com/chuaqibao/SlAchallenge>

CROWD-MONITORING SYSTEM

01

CLEANING STAFF

Get **updates** on when and which areas to clean. **Saves times** and cut manpower cost.

02

PASSENGERS

Be informed on **real-time crowdedness**, to facilitate effective pre-planning.

Link to code: <https://github.com/chuaqibao/SIAchallenge>

USER JOURNEY: PASSENGERS

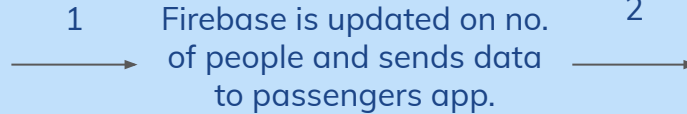


CCTV Device

Films real-time video and counts no. of people with OpenCV (Python) in different areas of lounge and sends to Firebase.



FIREBASE



FLUTTER APP

Passengers are notified on no. of people in different lounge areas for pre-planning.

Link to code: <https://github.com/chuaqibao/SlAchallenge>

USER JOURNEY4: CLEANING STAFF



CCTV Device

Films real-time video and counts no. of people with OpenCV (**Python**) in different areas of lounge. If count exceeds certain number, device notifies Firebase the need to clean the area.

CCTV receives update and resets count. Cycle repeats



FIREBASE

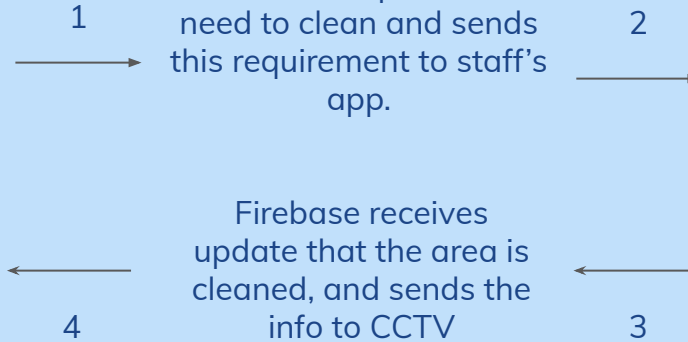
Firebase is updated on need to clean and sends this requirement to staff's app.

Firebase receives update that the area is cleaned, and sends the info to CCTV



FLUTTER APP

Staff are notified on the areas needed to be cleaned on app (**Dart**). After cleaning, cleaners will indicate the area is cleaned.



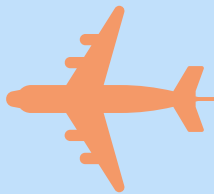
Link to code: <https://github.com/chuaqibao/SlAchallenge>

SCALABILITY

Easy transfer of object tracking onto cloud computing service



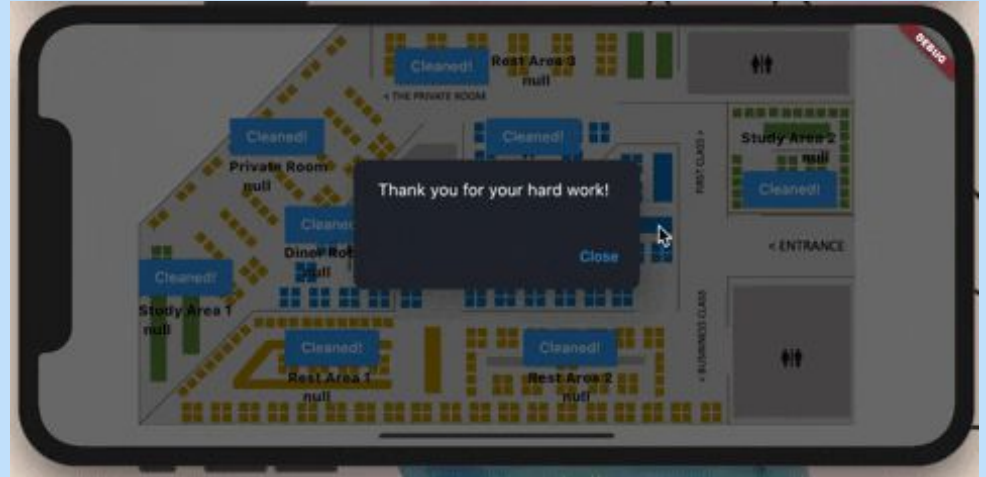
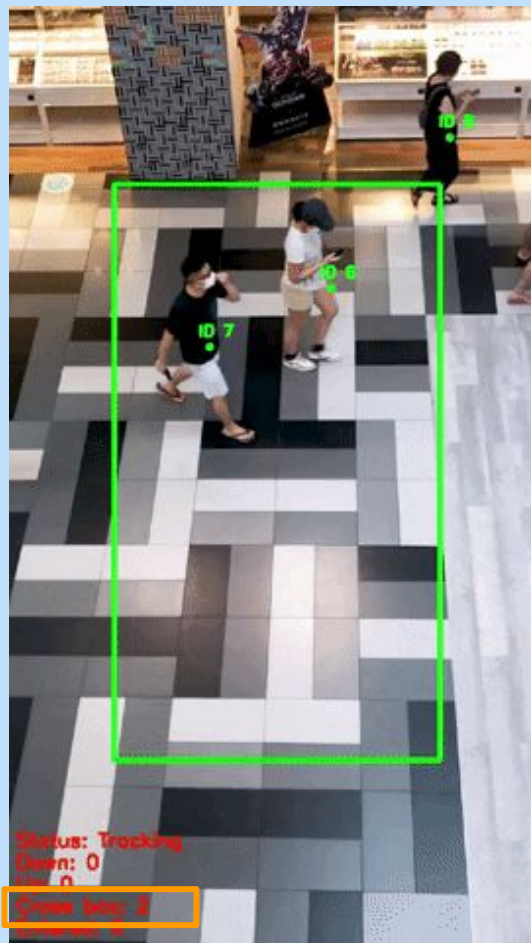
Model effectiveness can easily be achieved by increasing model accuracy



Cost effectiveness by using existing CCTV, no additional hardware needed



Link to code: <https://github.com/chuaqibao/SIChallenge>



Cleaners' App

CCTV counting no. of people who entered a specific lounge area (as bounded by green box)