Smart Contact Tracing System

Team name: 5Bugs

Pitfalls of current contact tracing system

REQUIRES SMART DEVICES (TRACETOGETHER) OR NRIC (SAFEENTRY)

DIFFICULT FOR CERTAIN GROUPS OF PEOPLE

BLUETRACE RUNS POORLY ON OLDER SMARTPHONE MODELS AND OPERATING SYSTEMS

SAFEENTRY IS EASY TO EXPLOIT

Smart Identification Traceability (S.I.T)

Works together with SafeEntry

Leverage AWS technologies

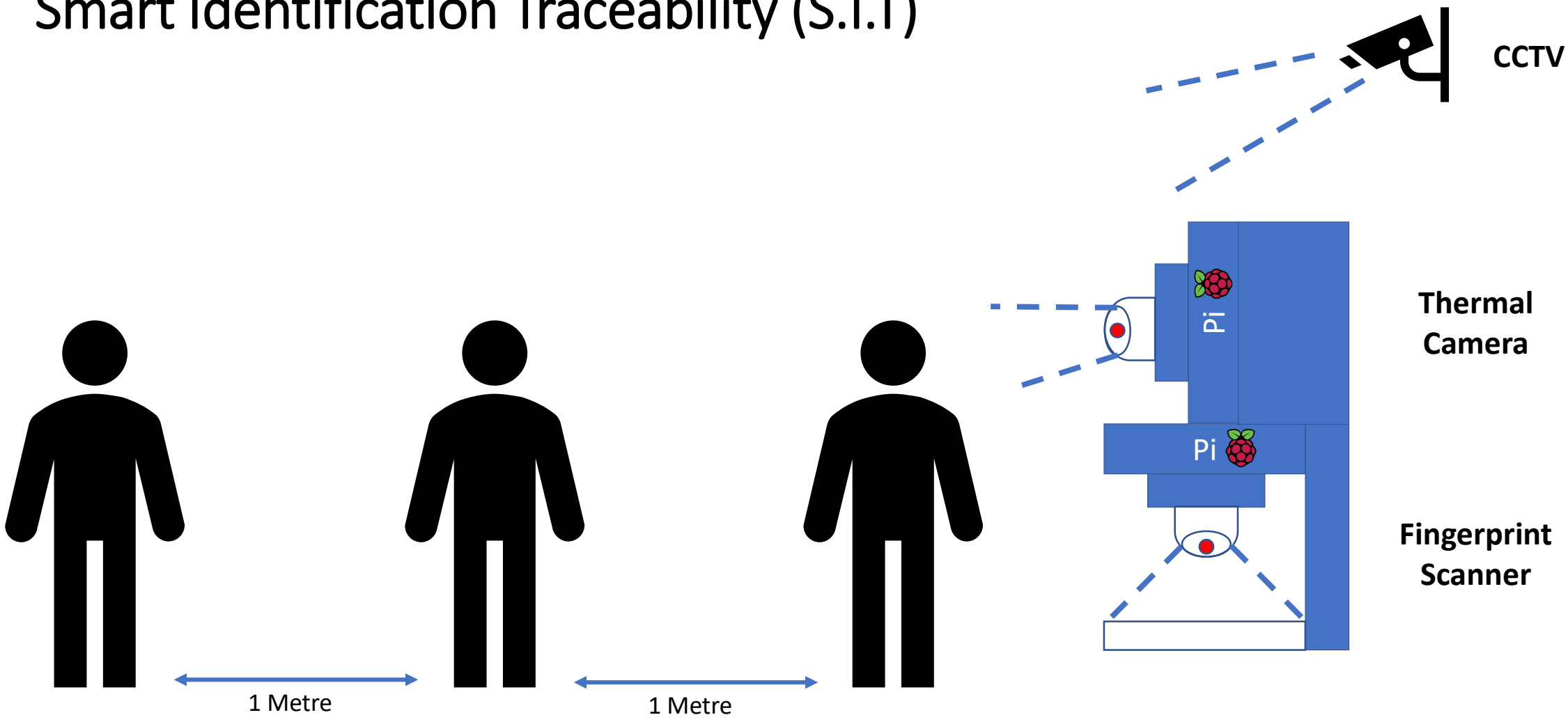
Item-free check-in

Automation of contact tracing and visiting of SafeEntry areas

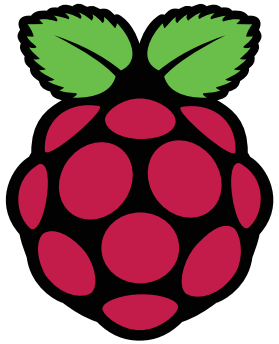
3 component solution

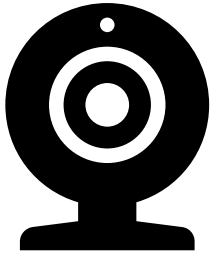
1. Biometrics Identity Tracker (B.I.T)
2. Level Imaging Thermology (L.I.T)
3. Human Identification and Tagging (H.I.T)

Smart Identification Traceability (S.I.T)



Biometrics Identity Tracker (B.I.T)





1. Fingerprint Capture
2. Fingerprint Process
3. Fingerprint Match
   - (99.75% accuracy)

Fingerprint Capturing and Processing

Fingerprint Matching

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Infomation confirm! Fingerprint matches: person Id 285 right ring
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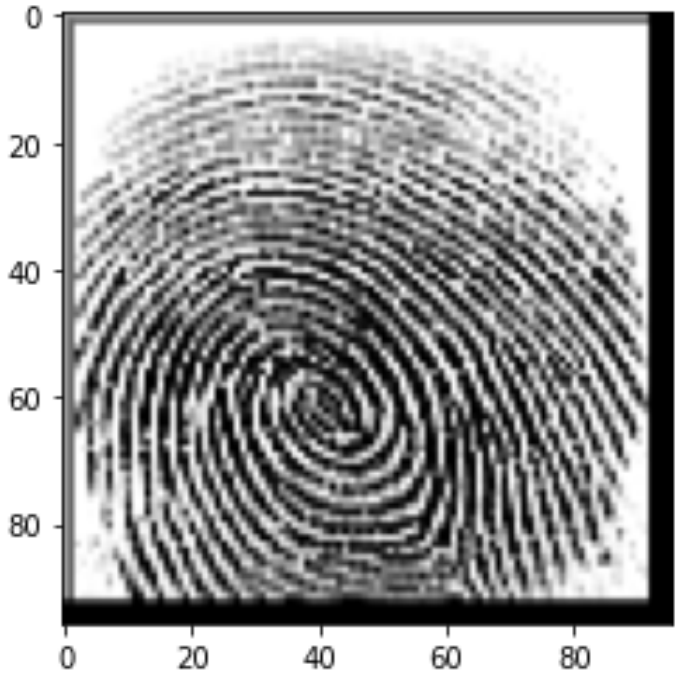
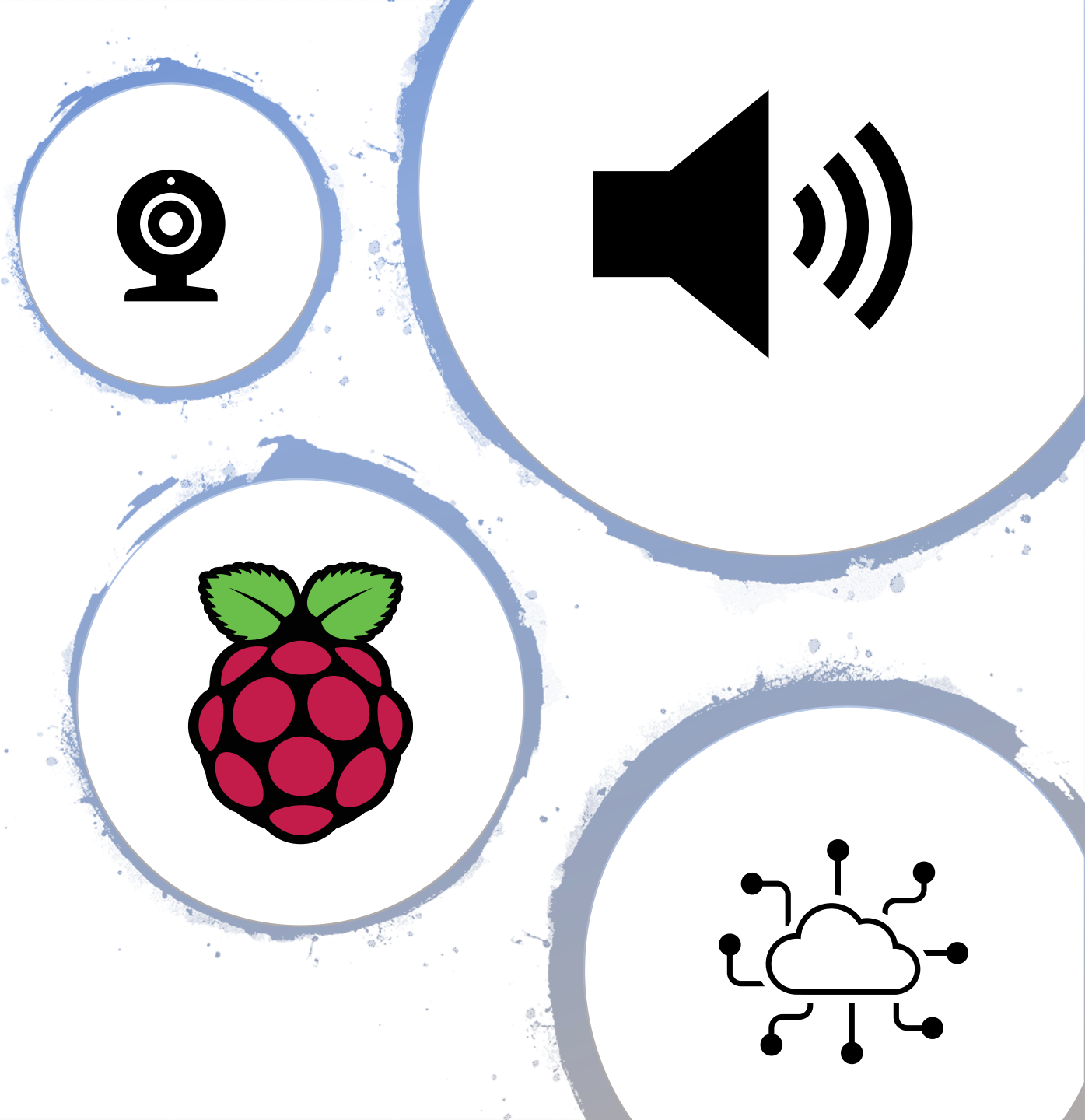


Level Imaging Thermology (L.I.T)

- Real-time detection of temperature
- Alert sounds off when temperature ≥37.5°
- Makes use of low cost hardware



L.I.T Hardware

Human Identification and Tagging (H.I.T)

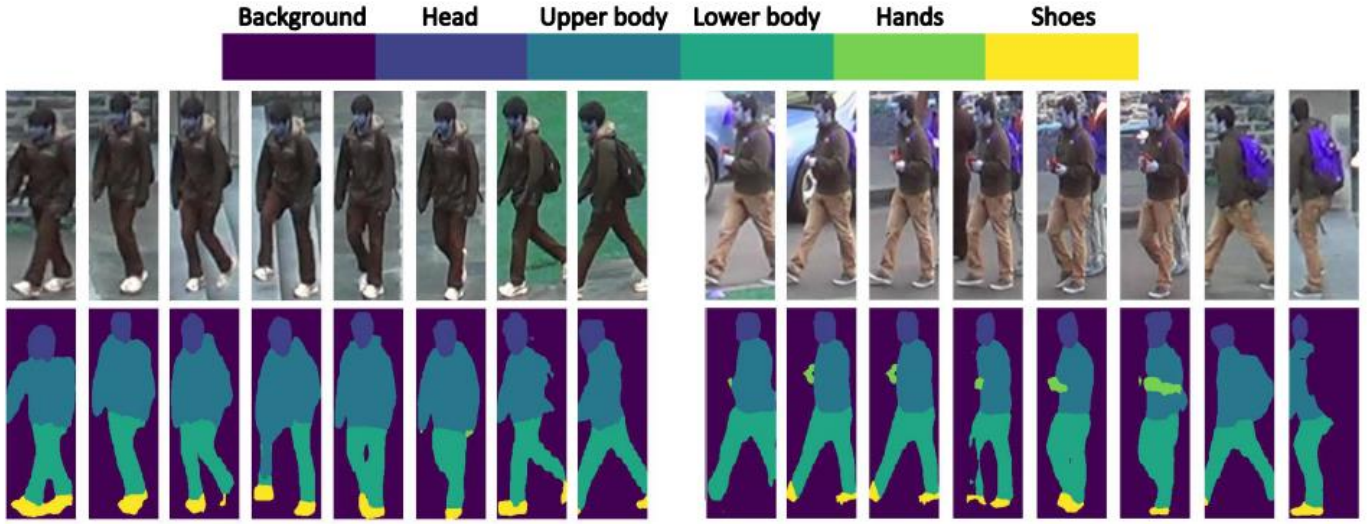
- Utilizes recorded CCTV footages
- Identify and tag humans based on various elements
- Dashboard for tracing affected person

Model Flow

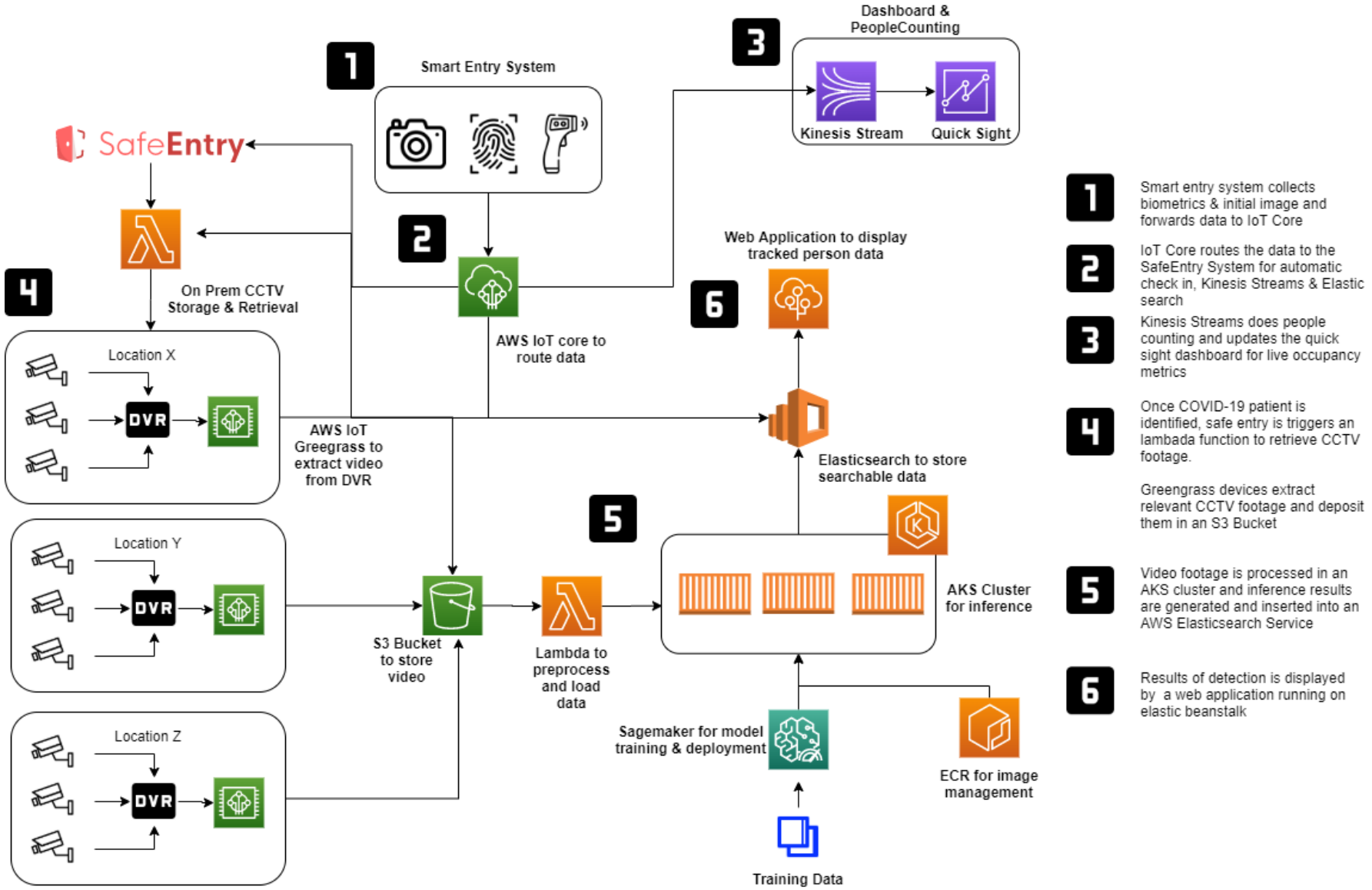

Frame Extraction
Human Identification + Cropping
Reidentification

Human Identification

Reidentification

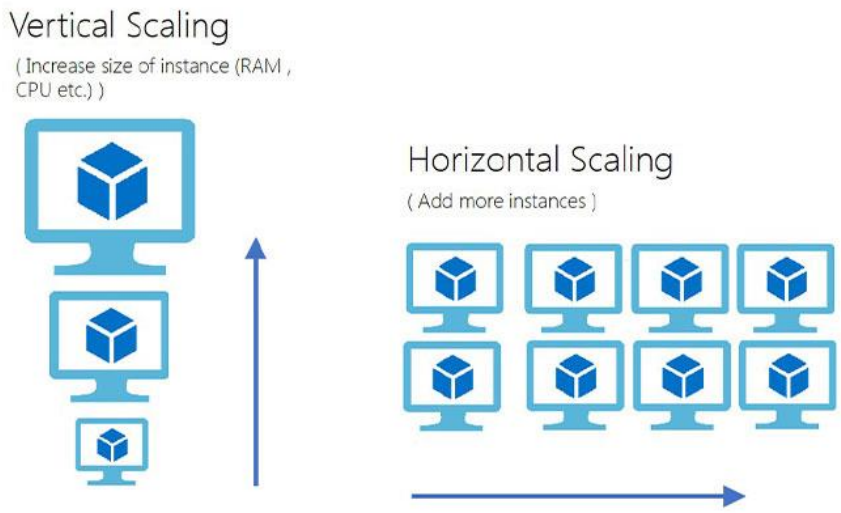


How does it work together?



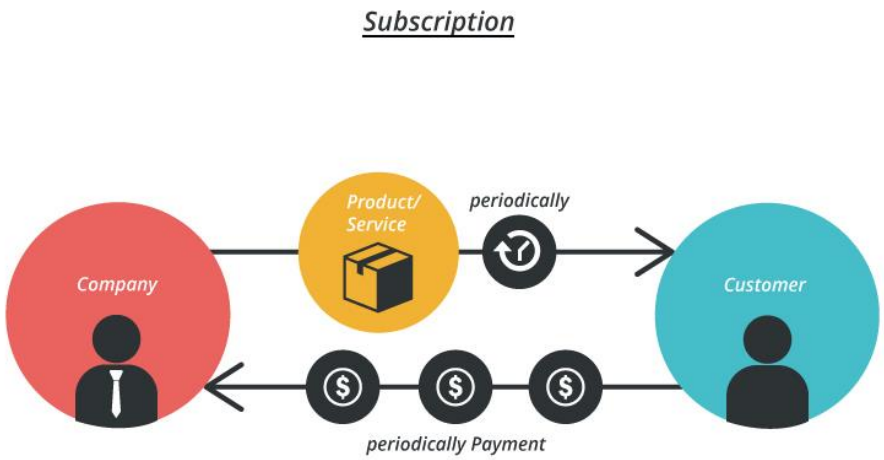
Scalability

- Able to build the solution with low cost as compared to the market.
- Leverage on AWS Cloud services to scale
  - Horizontal scaling – Able to add on more AWS instances
  - Vertical scaling – Scale up the instance



Business Model

- Product and Service model
- Model 1 – Subscription service, provide technical assistance to deploy and maintain the components. (Periodic payment)
- Model 2 – Product, package and sell the different components (Revenue based on Units sold)



Thank you