Plumerai

Renesas Ready Ecosystem Partner Solution
Plumerai Familiar Face Identification
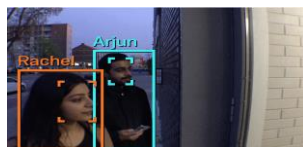
RENESAS
PARTNER NETWORK READY

Solution Summary

Plumerai Familiar Face Identification offers fast and accurate recognition of household members and strangers, with built-in people and face detection. This lightweight yet powerful software runs directly on the camera, ensuring real-time performance. Trained on 30 million labeled images and videos, its AI delivers highly accurate identifications in any condition. Support is available for the RA8D1 and RZ/V2L devices and evaluation kits, expanding to suitable Renesas RA8 MCUs and RZ Family of MPUs

Features/Benefits

- Identifies individuals and strangers at distances exceeding 10m/30ft.
- Industry-leading accuracy, validated across diverse demographics and environments.
- Detects strangers to enable appropriate reliable security responses.
- Supports both indoor and outdoor cameras, including night vision and lenses up to 180° FOV (Field of View).
- Offers flexible enrollment options, both automatic and manual:
    - Manual enrollment: users scan their face using a mobile app.
    - Automatic enrollment: users are automatically enrolled after they come into view of the camera.
- Ensures privacy and eliminates cloud costs by running entirely inside the camera

Diagrams/Graphics

People Detection, Face Detection, and Familiar Face Identification   Renesas EK-RA8D1   Renesas RZ/V2L-EVKIT

Target Markets and Applications

- Smart home cameras
- Personalized electronics that identify users
- Security cameras and video analytics
- People counting and perimeter detection

- Video doorbells
- Smart building applications
- Smart retail applications
- Smart health applications

www.plumerai.com/partners/renesas

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Features and benefits

No more notification overload:
- Only relevant messages such as "stranger at the door" or "Rachel came home" ensure users stay engaged and keep using the app.

Privacy and legislation
- Compliant with US, EU and UK privacy laws, including GPDR, CCPA and BIPA.
- No images are stored on the camera device.
- Face embeddings are created in the camera and not shared over the internet.

Continuous accuracy improvements
- Regular updates that increase accuracy and add new functionality.
- Option to fine-tune on customer data. No customer data or trained models are ever shared with others.

Try on your phone: plumerai.com/face-identification-live

Familiar Face Identification on EK-RA8D1
- Arm Cortex-M85 with Helium
- Latency: 255 ms (single core)
- Peak RAM usage: 617 KiB
- Binary size: 5.5 MiB total

Familiar Face Identification on RZ/V2L-EVKIT
- Single Arm Cortex-A55 with Neon
- Latency: 54 ms (single core)
- Binary size: 5.5 MiB total
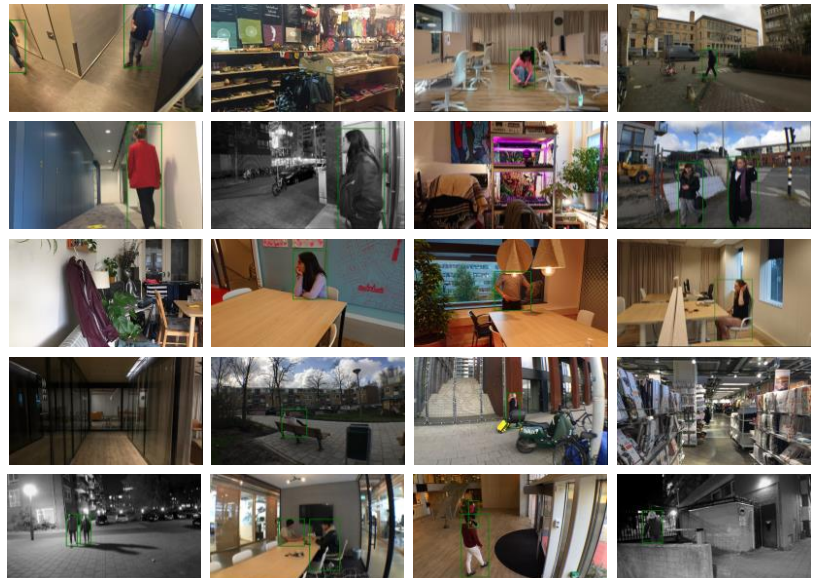
TRAINING DATASET
30M images

ARM CORTEX-M85@480MHz
4 frames/s

ARM CORTEX-A55@1.2GHz
18.5 frames/s

WITH A TINY FOOTPRINT
5.5 MB

Accurate detection under all circumstances

Website:
www.plumerai.com

Plumerai AI for Renesas RA MCUs/RZ MPUs:
plumerai.com/partners/renesas

Our blog with lots of good articles:
blog.plumerai.com/

Talks on YouTube:
search for "Plumerai talks webinars"

Get the software:
hello@plumerai.com