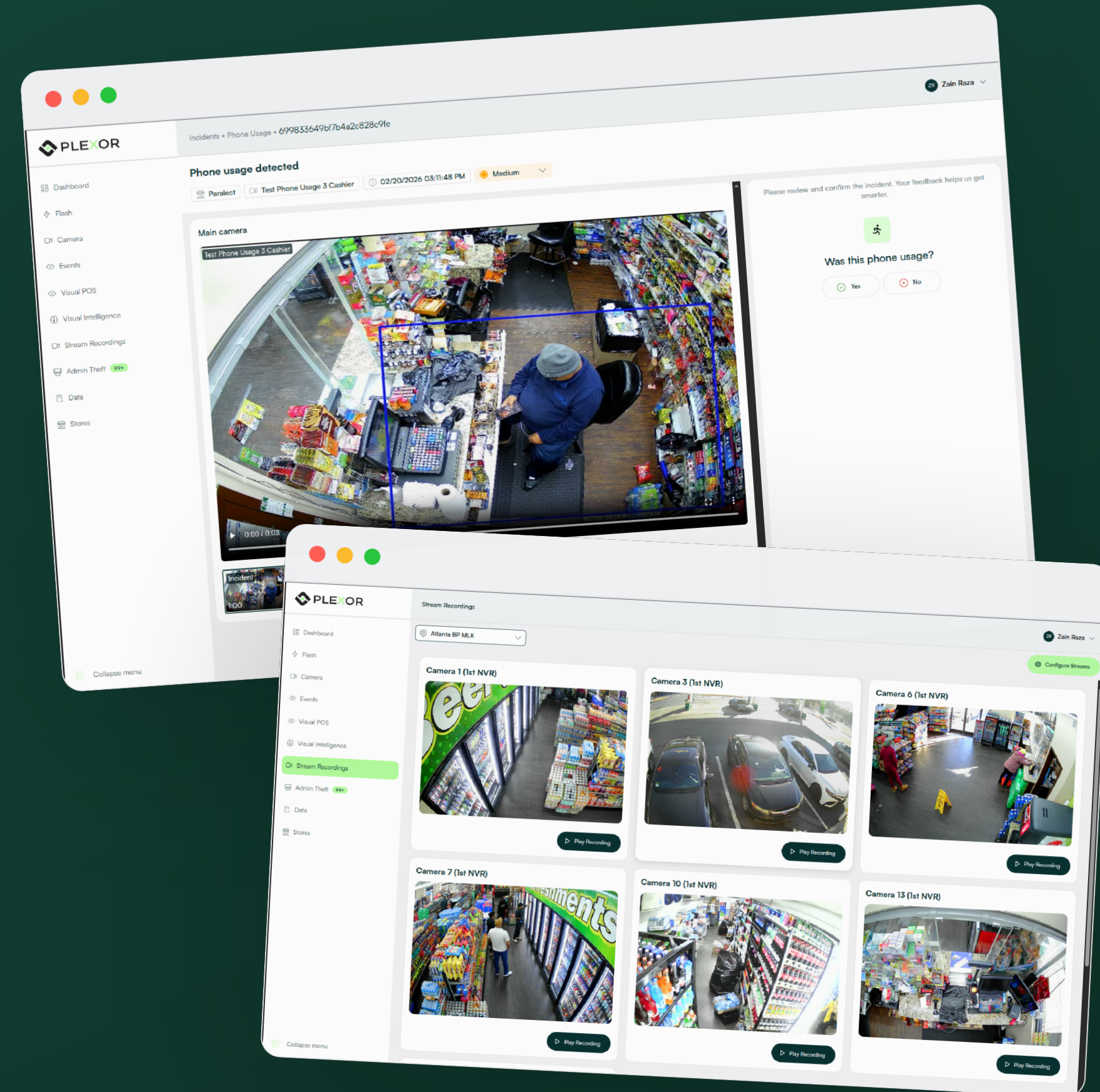


AI-Based Surveillance System

Computer-vision loss-prevention for retail — theft, POS fraud and loitering, flagged in real time.





01 - OVERVIEW

AI-Based Surveillance System

Retail shrinkage from employee & customer theft and POS under-ringing is hard to catch live. A multi-camera computer-vision platform detects it and routes alerts to store and district managers.

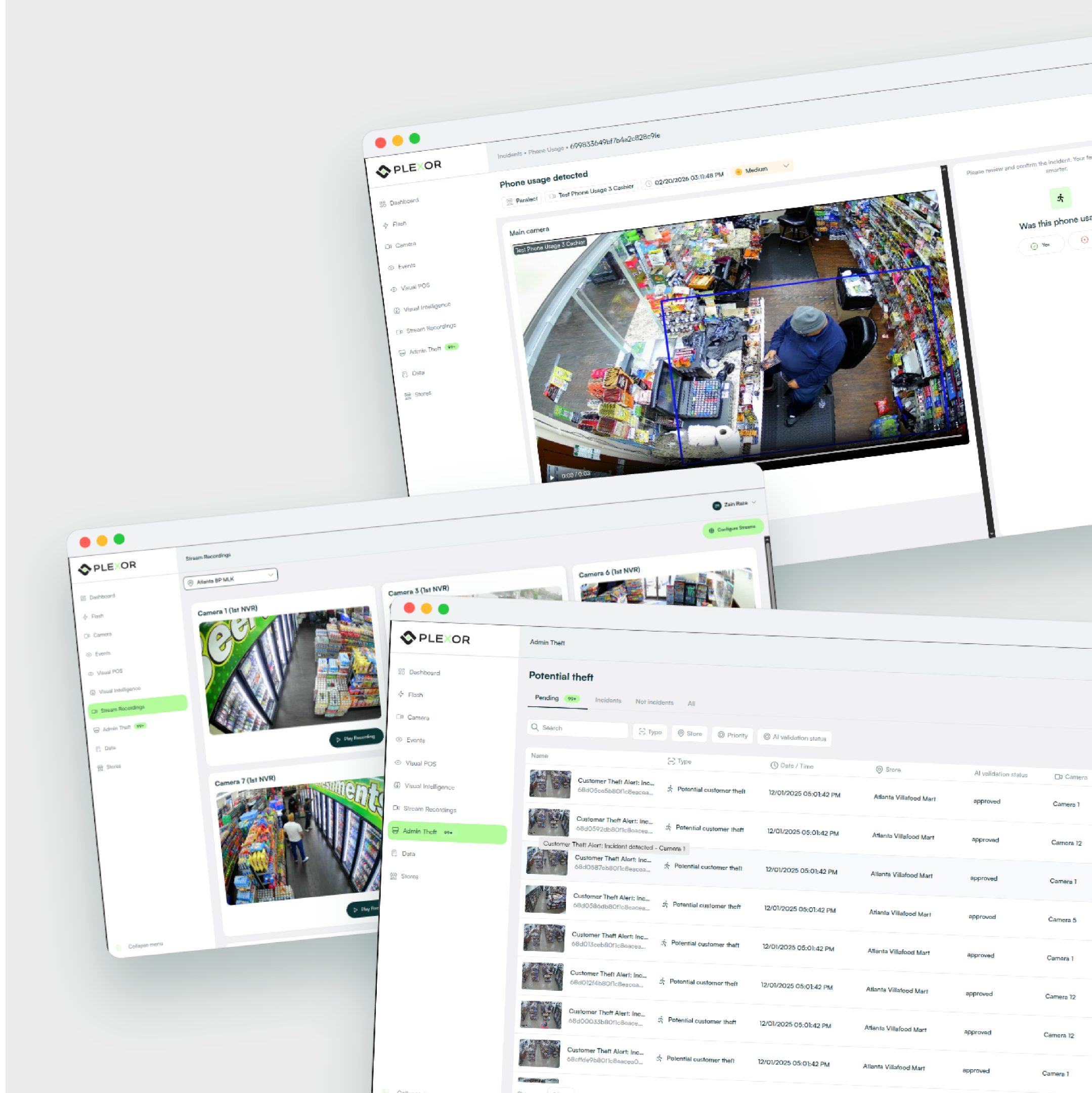
ROLE Full Stack Developer

100+
STORES
MONITORED

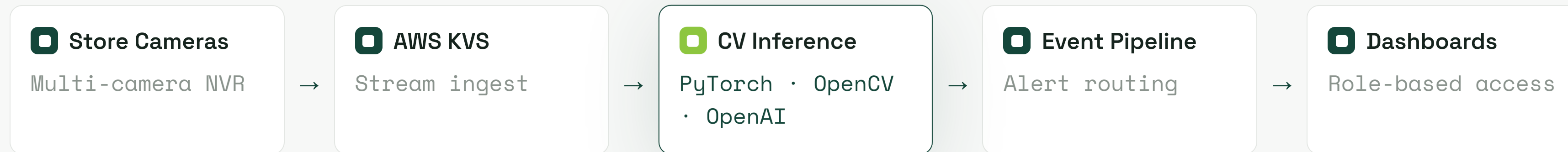
~700ms
REALTIME
INFERENCE

37+
DETECTION
MODELS

- ◆ Theft detection across employees & customers
- ◆ Phone-usage & loitering alerts with live recording streams
- ◆ Visual POS & under-ringing detection



Realtime vision pipeline, role-scoped delivery



STACK

FRONTEND

Next.js · Mantine

BACKEND

Node.js · Fastify · Python

CLOUD

AWS · EKS · Lambda · S3 · KVS

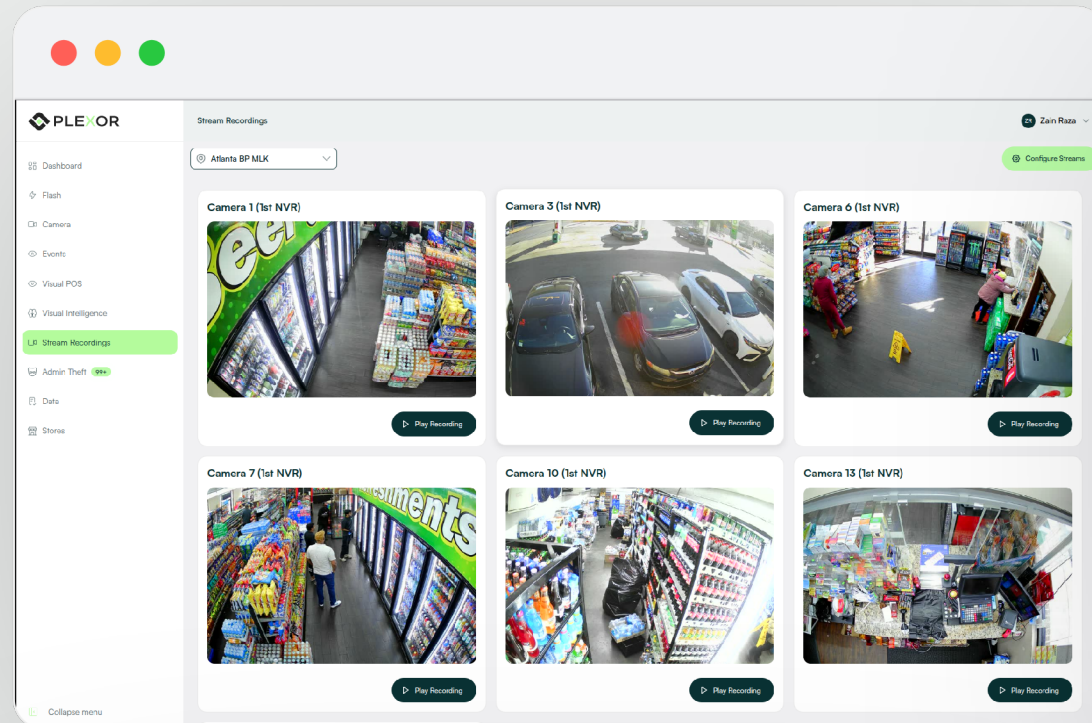
AI

PyTorch · OpenCV · OpenAI

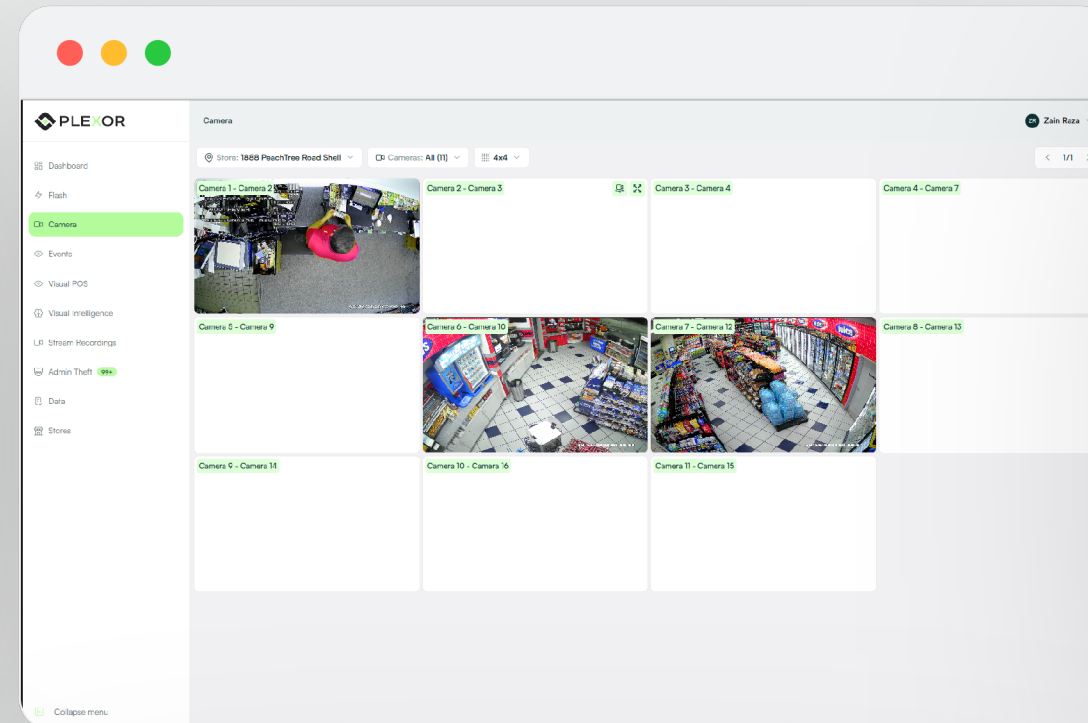
KEY DECISIONS

- 01 Realtime multi-camera streaming over AWS KVS for low-latency feeds
- 02 Model serving on EKS for scalable GPU inference
- 03 Role-scoped dashboards for store, district & admin views

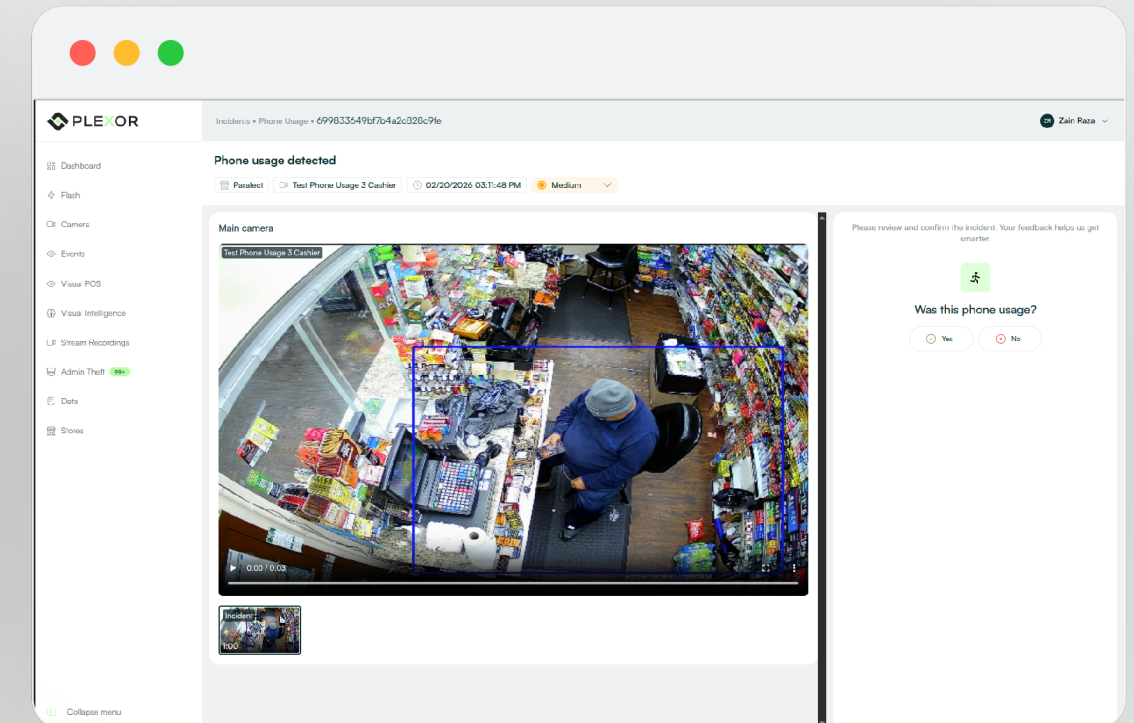
Inside the product



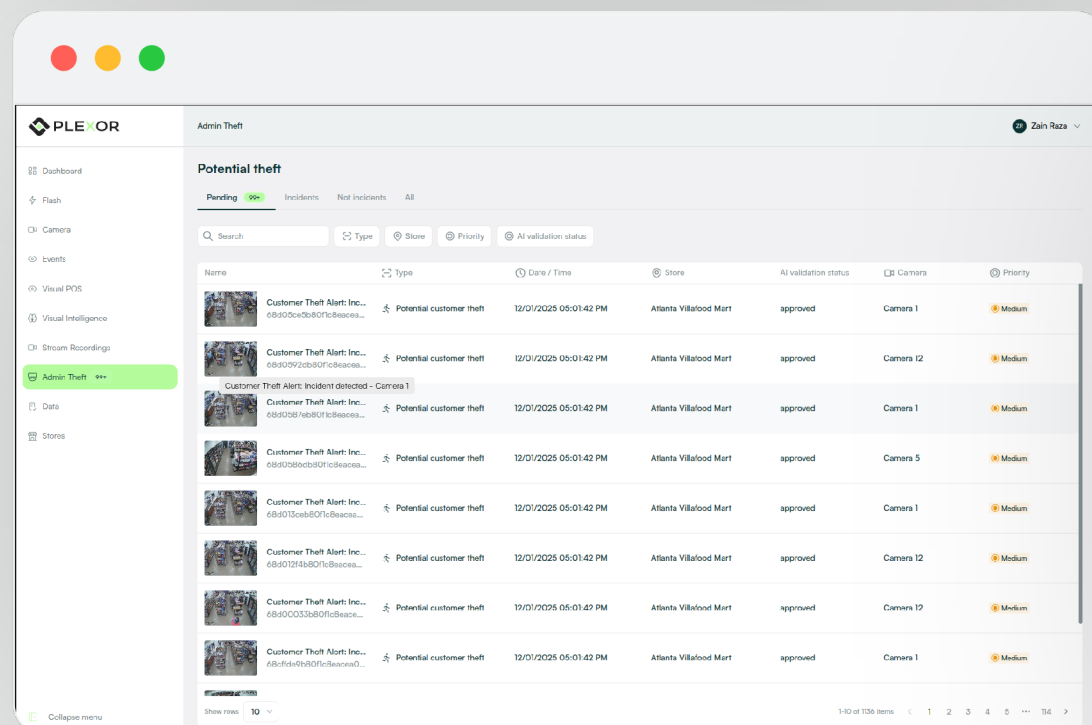
Live recording streams



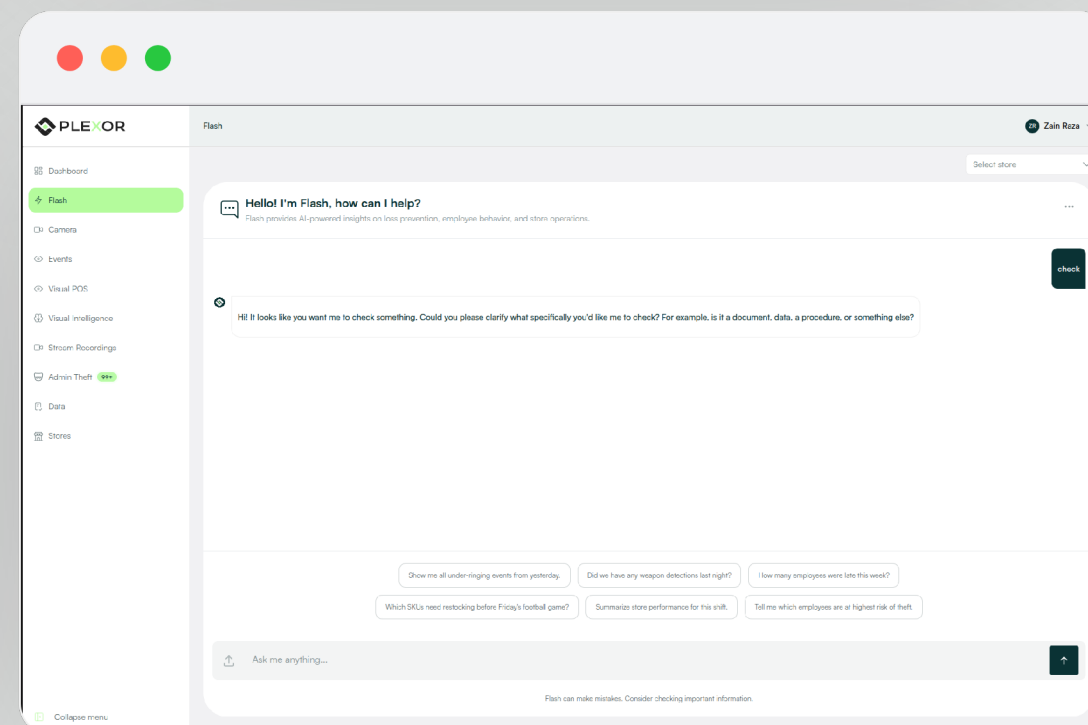
Multi-camera live grid



Phone-usage detection & review



Theft queue & AI validation



Flash - AI loss-prevention assistant

Loss prevention, measured

100+

STORES MONITORED

~700_{ms}

REALTIME INFERENCE

37+

DETECTION MODELS

Surfaced theft and POS under-ringing events in real time across monitored stores, routing prioritised alerts to the managers who could act on them.