Continuous Monitoring

Real-Time Performance Monitoring Dashboard

Production AI System
Making predictions
24/7 operation

Monitoring Metrics

Performance
AUC: 0.94
Target: >0.90

Throughput
245/hr
Normal range

Latency
12.5s
Slightly elevated

Error Rate
0.2%
Within threshold

Drift Detection

Input Drift
⚠ Increasing

Concept Drift
✓ Stable

Alert System

● Normal: Auto-monitored
● Warning: Team notified
● Critical: Immediate action

🔔 **Current: Input drift detected**

Performance Trend (30 days)

1.0

0.9

0.8

Threshold

⚠ Recent decline detected

Automated Response

1. Log event with timestamp
2. Capture current model state
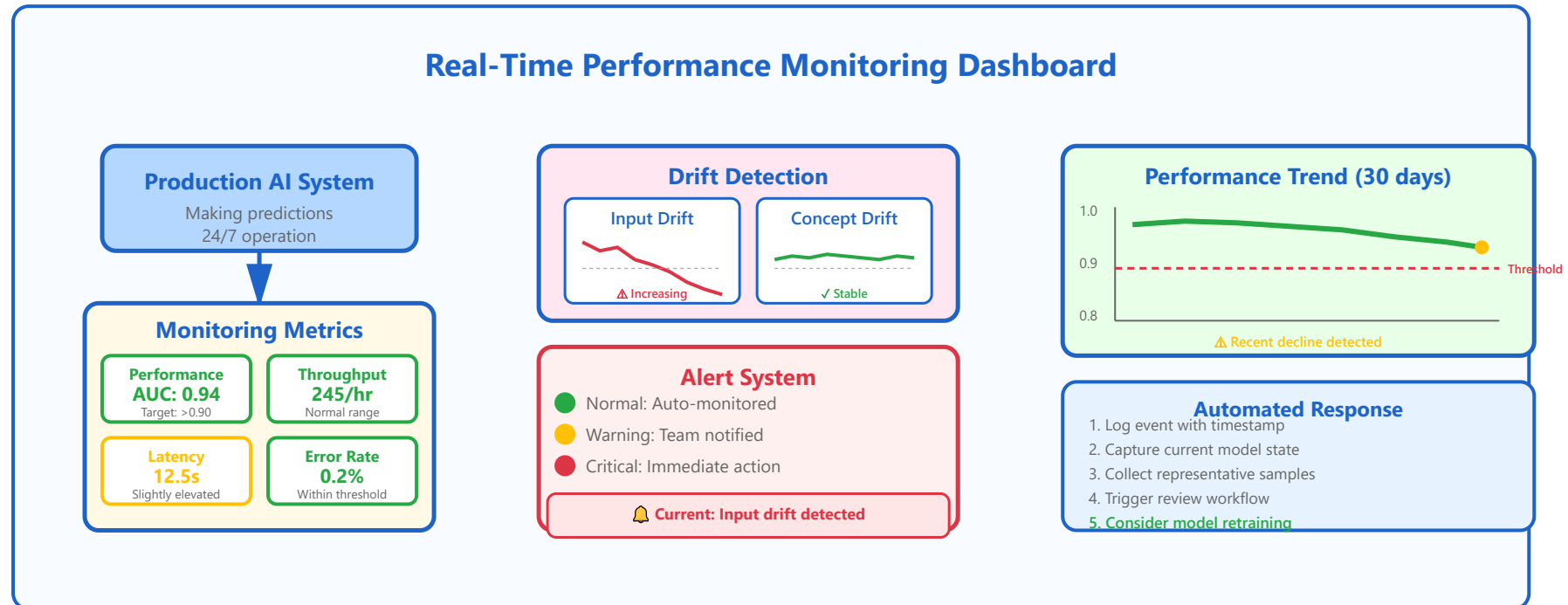3. Collect representative samples
4. Trigger review workflow
5. Consider model retraining

Real-World Metrics

Sensitivity, specificity in production. Compare to validation performance

Alert Systems

Automated alerts for anomalies. Performance degradation, unusual predictions

Performance Degradation

Detection of model staleness. Dataset shift from new equipment or protocols

Update Strategies

When and how to retrain. Regulatory considerations for algorithm changes

Regulatory Compliance

Documentation for audits. Adverse event reporting to FDA