



# Revenue Incident Response Agent

Elastic Agent Builder Hackathon 2026 — Architecture Overview

## AGENT PIPELINE (6-STEP AUTONOMOUS INVESTIGATION)



## INTELLIGENCE ENGINES

### Statistical Drift Detection

Z-score analysis comparing baseline vs current anomaly rates. Values exceeding  $z > 3.0$  trigger investigation.

### Confidence Scoring

$$C = S \times 0.4 + T \times 0.3 + D \times 0.2 + H \times 0.1$$

Weighted formula: Signal strength, Temporal alignment, Cross-signal validation, Historical deviation.

### Deployment Recency

Exponential decay model correlating recent deployments with anomaly onset timing for causal inference.

## TECH STACK

Elasticsearch 8.x

Node.js

Express.js

React 19

Vite

Chart.js

Lucide Icons

REST API

## API ENDPOINTS (10 INTELLIGENCE ROUTES)

GET /api/health

GET /api/deployment-impact

GET /api/financial-loss

GET /api/timeline

GET /api/alerts

GET /api/anomalies

GET /api/risk-score

GET /api/business-impact

GET /api/services

GET /api/explainability

## DATA ARCHITECTURE

### Data Sources

- invoices (2,400+ records)
- system\_events (deployments)
- transactions (payments)
- churn\_events (retention)

### Dual-Mode Operation

- Live Mode:** Elasticsearch queries
- Fallback:** JSON file analysis
- Transparent mode switching
- Zero data loss guarantee

### Output

- Executive dashboard (React)
- Autonomous AI chat analyst
- Forensic reasoning trace
- Verifiable confidence scores