Algorzen Vigil

AI Drift Detection & Anomaly Monitoring Report

Report ID:	VIGIL-2025-Q4-1110
Generated:	2025-11-10 03:09:03
Analysis Period:	2024-01-01 to 2024-03-31
Total KPIs Monitored:	5
AI-Powered Analysis:	No (Heuristic)

Executive Summary

Our algorithmic drift detection system has identified 21 anomalies across 5 key performance indicators, classified as High severity. The analysis reveals critical deviations demanding immediate investigation in core business metrics. These findings warrant executive review to maintain operational excellence and strategic alignment.

Anomaly Overview

Metric	Value
Total Anomalies Detected	21
Severity Level	High
Affected KPIs	churn_rate, api_latency, customer_acquisition...
Detection Methods Used	Zscore, Rolling Deviation

Key Findings

• Detected 21 anomalies with High severity classification, indicating significant deviations from expected patterns.

• Primary impact observed in: churn_rate, api_latency, customer_acquisition..., suggesting potential systemic issues.

• Z-score analysis identified 9 extreme outliers exceeding 3 standard deviations from the mean.

• Rolling deviation analysis flagged 12 instances of >25% deviation from recent trends.

• Anomalies span from 2024-02-10 to 2024-03-22, requiring temporal correlation analysis.

Recommendations

• Immediate Investigation: Convene cross-functional team to assess root causes of critical anomalies and implement corrective measures within 48 hours.

• Enhanced Monitoring: Deploy real-time alerting systems for affected KPIs to prevent recurrence and enable proactive intervention.

• Data Validation: Verify data collection processes and instrumentation accuracy for affected metrics to rule out measurement errors.

• Trend Analysis: Establish baseline performance thresholds and implement automated drift detection to maintain operational visibility.

• Stakeholder Communication: Brief department heads responsible for churn_rate, api_latency on findings and remediation plans.

KPI Statistics Summary

KPI	Mean	Std Dev	Min	Max	Count
revenue	229791.21	66452.24	95000.0	342000.0	91
customer_acquisition	986.4	343.66	315.0	1572.0	91
churn_rate	2.17	0.7	1.8	6.2	91
server_uptime	99.87	0.52	96.2	99.98	91
api_latency	125.0	30.58	115.0	310.0	91

Visual Analysis

Anomalies by KPI

Anomalies by Detection Method