

IQR Analytics improved data quality by reducing manual QA by **60–70%**, false alerts by **40%** for a hospitality chain.

## **Data Quality Monitoring Framework for a hospitality chain**

IQR created a Python-based framework to identify and suppress outliers in raw tables. This helped in lesser manual QA, improved data accuracy and boosted data confidence.



## Background

Reliable insights depend on strong data quality assurance, yet ensuring accuracy was hindered by the lack of an automated anomaly detection framework.

Analysis was delayed by repeated validations and duplicated quality checks across the data pipeline

Decision-making was slowed by reduced confidence in reported metrics.



## Key challenges

- Very random set of issues in pipelines resulting in discrepancies / partial data loads.
- No existing documented QA set up / reporting.
- Data issue root cause identification often happened at reporting layer long after issue happened in pipeline.
- Tracing root cause and data fix involved multiple teams making the whole process longer.

## Our Solution



A Python-based framework with preconfigured limits to identify numeric drift, outliers, missing values, validates row counts, duplicates, Seasonality & holiday flags, source vs. target mismatches.

Auto-corrects common issues like partial loads were identified by row-count/timestamp mismatches Vs Source and mitigated by auto-retry or reprocessing only the missing slices.

Daily email alerts with top issues and interactive reports. False flags suppressed to reduce noise & alert fatigue.

## Impact

- **Business Impact : Data Quality assurance, enabled faster decisions, stronger compliance, and higher productivity.**
- **Productivity gains: 60–70% less manual QA, 40% fewer false alerts, 30% fewer reruns,**



## About Us

We are a team of passionate data enthusiasts who thrive on numbers, insights, and problem-solving. With a strong foundation in Retail, Hospitality, Banking, Insurance, Entertainment, and Technology, we bring decades of combined experience in transforming raw data into strategic business value.

Our vast experience handling large-scale customer transactional and behavioral data, building Customer 360 solutions help businesses understand customer journey, lifecycle analytics and engagement patterns.



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