# Eagle Eye: Data Observability Platform

*AI-Driven Monitoring, Anomaly Detection for Intelligent Data Assurance*

# Eagle Eye Overview

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# Eagle Eye Observability Stack

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## Comprehensive Observability Across All Layers

| Layer | Capabilities |
| --- | --- |
| User Interface (App) | Customizable User Interface, User Isolation, Feedback & Continuous UI |
| Data & Platform Observability | Live Monitoring, Real-Time automated Alerting, Automated Data Quality Rule Recommendation, Policy & Rule Repository, Lineage |
| Agentic AI and ML | Forecasting, Pattern & Drift Detection, Anomaly Baselines, Chatbot, Root Cause Analysis, Auto Ticketing, User-Centric Outcomes, Decision & reasoning quality, Policy Violation |
| BI & Analytics Layer (Power BI Dashboards) | Anomaly Trends, Data Quality Reports, Audit & Governance Dashboard, Cost Observability Dashboard |

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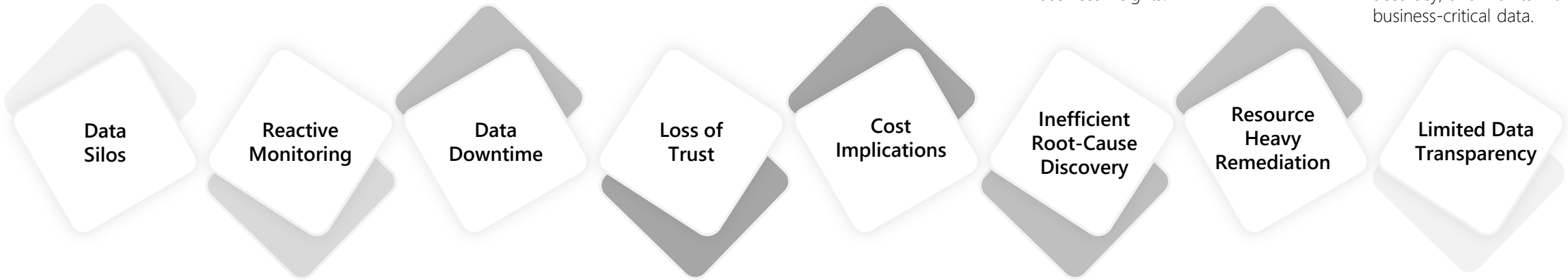
# Why Data Observability Can’t Be An Afterthought

Most data teams identify data issues only after they've disrupted business operations, often due to lack of real-time monitoring and early warning systems.




1. Fragmented data sources across departments. Lack of a unified data view
2. Issues detected post-impact. Absence of proactive alerts.
3. Delayed dashboards and broken pipelines. Breach of Service Level Agreements (SLAs).
4. Stakeholders question data reliability. Hesitation in data-driven decision-making.
5. Increased operational costs. Potential revenue loss and compliance penalties
6. Teams spend excessive time manually tracing issues across complex data pipelines, slowing down resolution and delaying business insights.
7. Without proactive monitoring, problems are often discovered too late forcing reactive, manual fixes that consume resources and increase operational risk.
8. Enterprises lack an end-to-end, granular view of data health, making it difficult to pinpoint root causes, ensure accuracy, and maintain trust in business-critical data.

# Eagle Eye Capabilities

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- Easy Source Integration
- Data Lineage Visualization
- Unified Observability User Interface
- Automated Data Quality Checks and Customization of Rules
- Anomaly Detection
- Ticket Raising Feature through GenAI Chatbot
- Historical Trend Analysis
- Data and Metadata Security
- Secure by Design
- Chat with Your Data
- Cost Intelligence

## Capabilities

- Data behavioral insights
- Intelligent Alerting
- Proactive Monitoring
- Seamless Alerting Tool Integration (Teams, Jira, Outlook etc.)
- Conversational GenAI Chatbot for insights
- Cost Observability & Performance Enhancement
- Customized Tools as per requirement
- AI-Powered Insights
- LLM-Powered Observability
- Drift & Pattern Detection
- Find Hidden Waste

# Custom and Source Sync Enhancements in Eagle Eye

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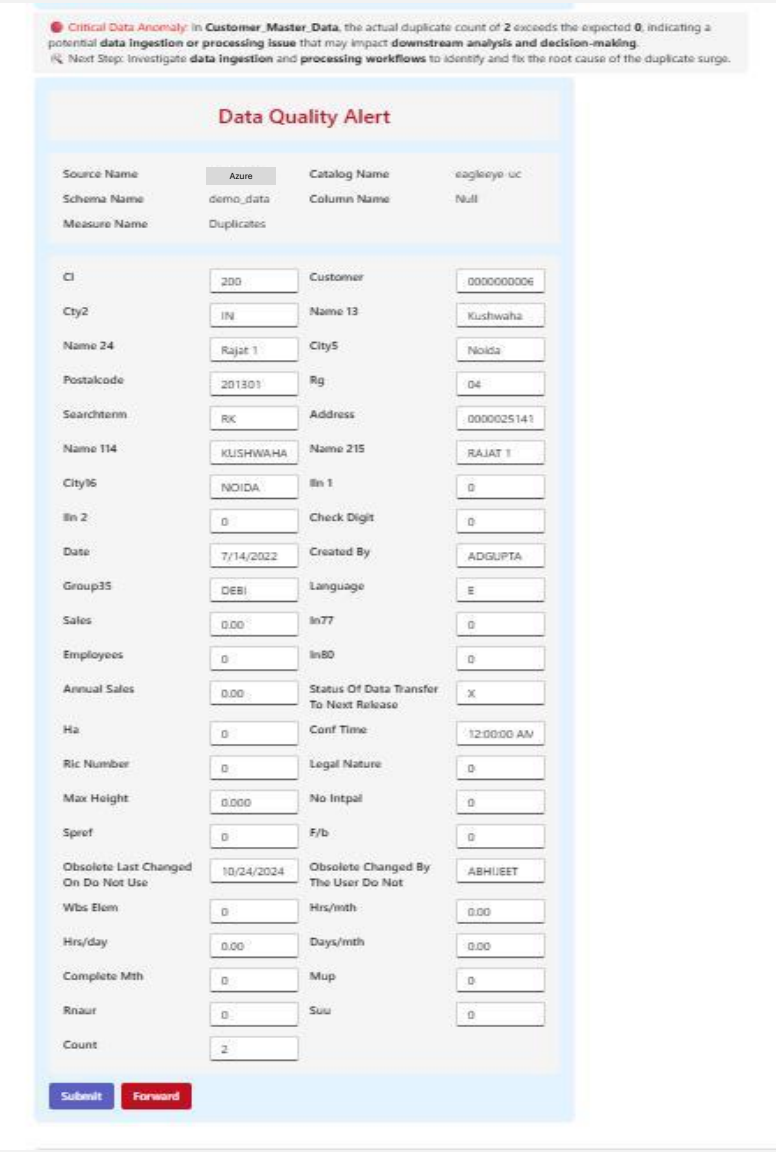
## Custom Business Rules

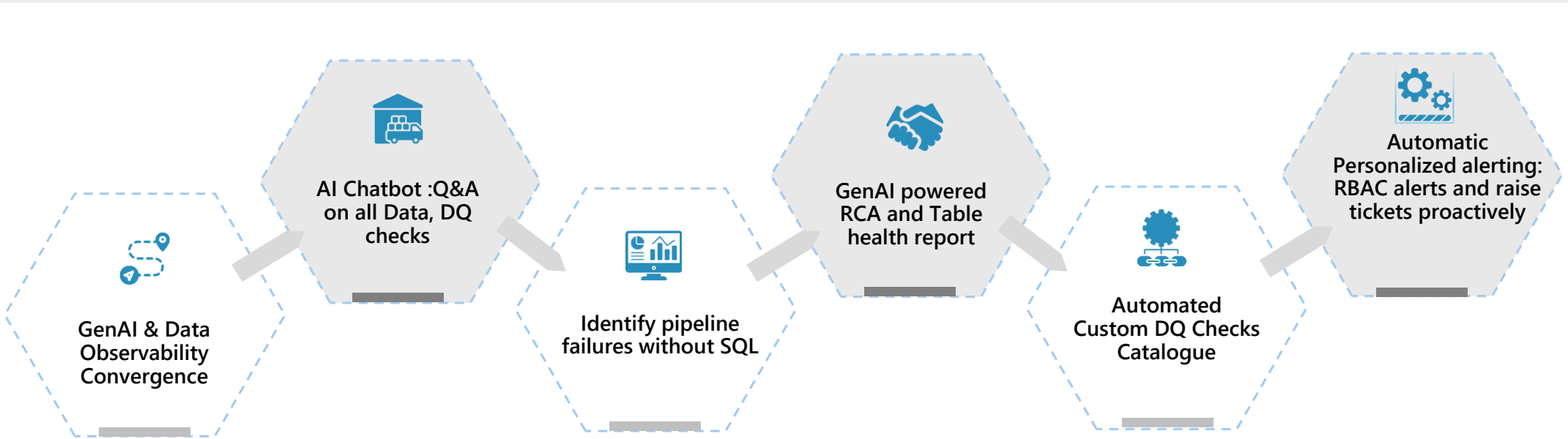
Enabled Custom rule configuration to trigger alerts based on alterations in specific column value, empowering proactive anomaly detection and faster incident response.

## Real Time Source Sync

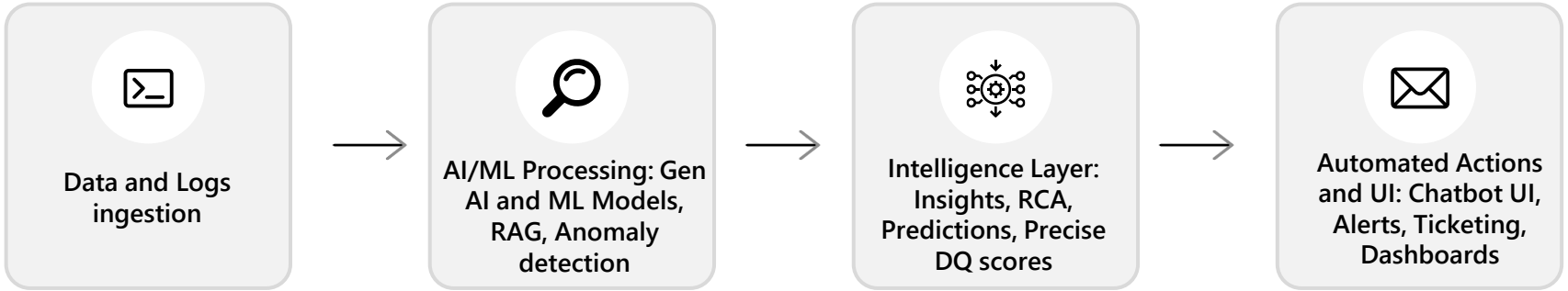
Integrated card-level actions that automatically update the source when record-level issues are detected, with email notifications delivered in structured card format for better traceability and resolution.



# AI-Powered Transformation




## Framework



# Reference Architecture: Eagle Eye Data Observability

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## Data Sources

SQL

salesforce

Redshift

ORACLE

## Data Pipeline Layer

ETL

Streaming

Batch

## Observability Core

Data Watcher
(Volume, Schema, Freshness)

Anomaly Detector
(Unsupervised Models)

Feedback Learner
(User overrides → retraining)

GenAI Bot
(Query/RCA/Alert/Email)

## BI & Analytics

Dashboards

KPI Trends

## Incident Response

TICKET

# Quantifiable Gains from Eagle Eye

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| Metric | Before Eagle Eye | After Eagle Eye |
|---|---|---|
| MTTD (Mean Time to Detect) | 6 hrs | 5 mins |
| RCA Turnaround | 3-4 days | 1 hour |
| False Alerts | Frequent | Reduced via feedback learning |
| Productivity Gain | Manual | ~90% Auto-detection |
| Trust in Reports | Low | High Confidence with DQ |

# Eagle Eye Data Observability Flow

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# Future Roadmap

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1

### Advanced Workflow Automation

Automate data quality checks and anomaly detection workflows to ensure continuous, hands-free observability across pipelines.

2

### Job Scheduling and Monitoring

Enable scheduled execution and real-time monitoring of observability tasks to detect and alert on data issues proactively.

3

### Platform observability

Implement continuous monitoring of cloud services to track performance, resource usage, and overall health.

4

### Cost Observability

Establish cost observability to monitor and analyze the expenses of all running cloud services in real time, enabling identification of high-cost resources and optimization opportunities to maximize efficiency and reduce waste.

5

### Pipeline Connectivity

Seamlessly integrate with data pipelines to monitor operational health, detect failures, and automatically extract metadata and lineage for end-to-end visibility.

6

### Custom Metrics

Allow teams to define and manage domain-specific data quality rules and metrics tailored to unique business requirements.

# Data Observability: Growing Relevance Across Industries

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## Why Data Observability Matters

- Rising data complexity in distributed systems
- Demand for real-time, high-quality insights
- Increasing regulatory compliance requirements
- Critical for AI/ML success and business agility

## Growth Drivers

- 📊 Data Explosion
- ⚖️ Regulatory Pressures
- 🤖 AI Adoption
- 🧩 Ecosystem Complexity

## Target Sectors

- 📉 BFSI
- 🛍️ Retail
- ✈️ Government,
- 🏥 Healthcare
- 📞 Telecom
- ⚙️ Manufacturing
- ⚡ Energy

# Generic Use Cases Across Industries

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| Scenarios | | Challenges |
| --- | --- | --- |
| A small glitch in the inventory pipeline went unnoticed. | Retail | Result: Out-of-stock reports didn't update, stores missed replenishments, and sales dropped. |
| A KYC image failed to upload during onboarding. | Banking | Result: The process stalled, delaying activation and damaging user trust. |
| Undetected API latency disrupted data flow. | Telecom | Result: Dashboards showed outdated KPIs, leading to poor executive decisions. |
| Duplicate patient IDs went undetected. | Healthcare | Result: This caused compliance issues and treatment confusion. |
| Campaign metrics failed to sync. | E-commerce | Result: Marketers misread results, missed targets, and churn increased. |

# Case Study

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**A global e-commerce company faced revenue loss during flash sales due to data pipeline delays, causing incorrect inventory display, delayed order processing, inaccurate dashboards, and customer trust issues from false "Out of Stock" errors.**

## Solution

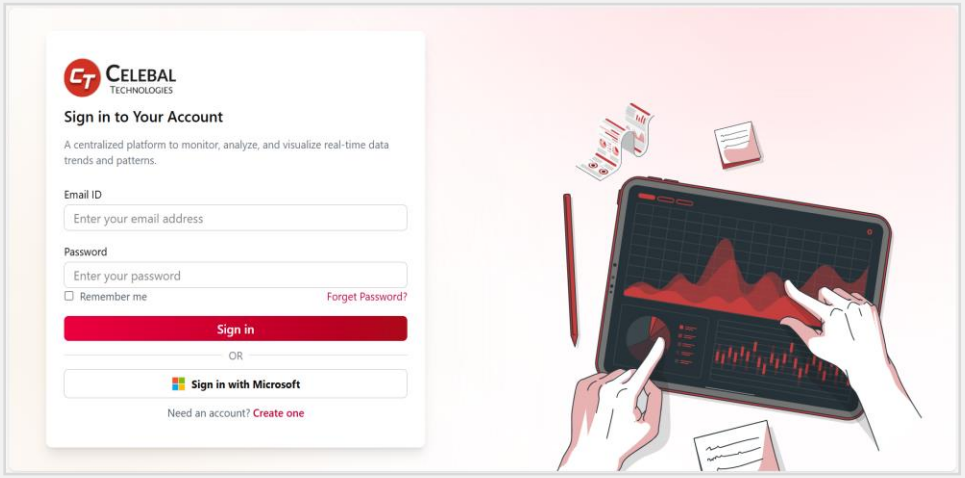
- **Real-Time Data Quality:** Monitored freshness, schema drift, and anomalies with profiling data quality on table and column level.
- **Metadata Synchronization and Historical Pattern Analysis:** Learns from past metadata to detect outliers and anomalies in the data.
- **Smart Alert Triggers:** Eagle Eye sent contextual alerts and remediation actions to the right teams using Jira, Microsoft Teams, Outlook and Azure DevOps.

## Outcome

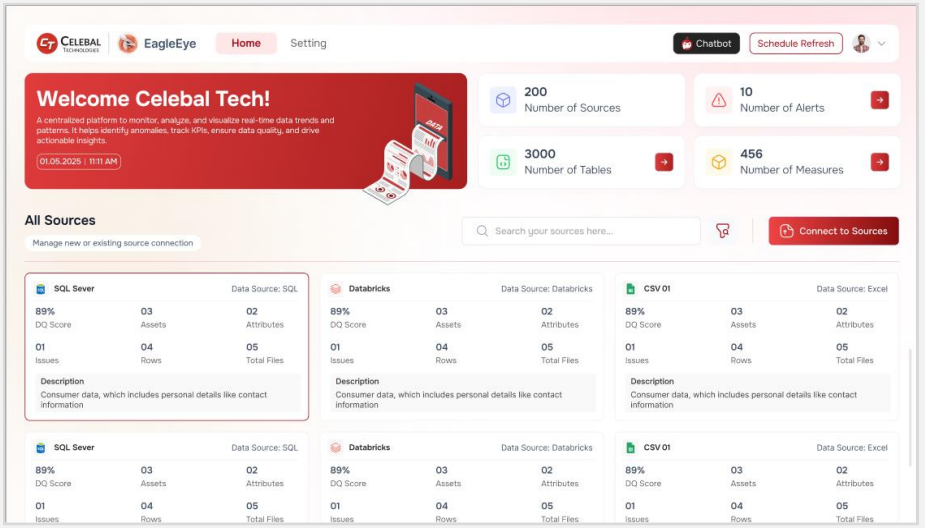
- Implemented solutions led to a 43% reduction in revenue-impacting data issues
- 70% faster incident resolution, while real-time visibility boosted confidence among sales and marketing team
- Ultimately helping avoid nearly 30% reduction cost during the next promotional campaign.

# Eagle Eye At Glance

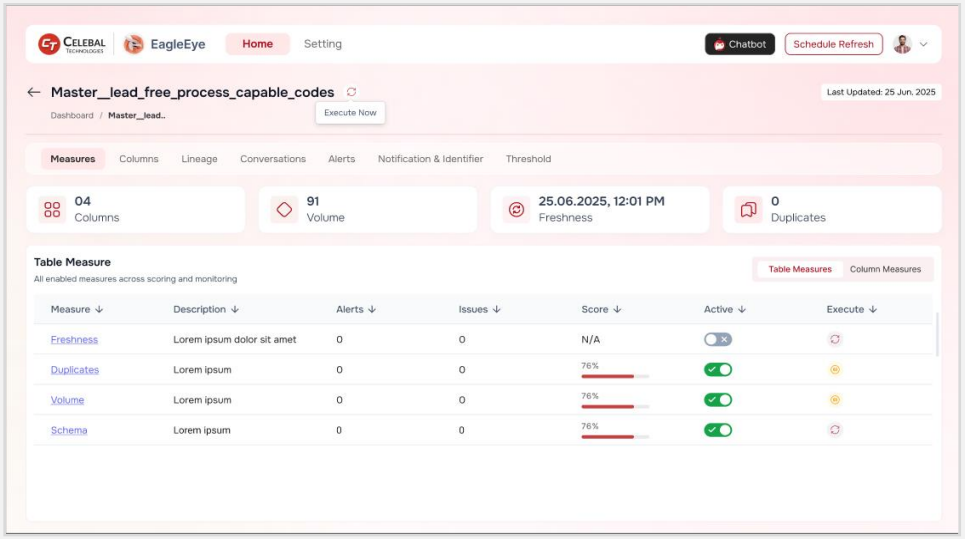
## Sign In Page



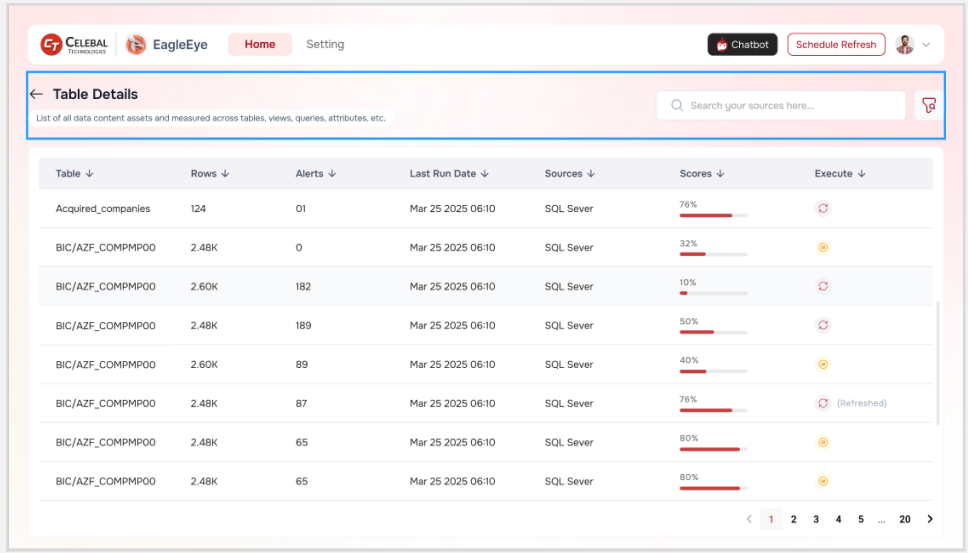

## Home Page




## Global Checks




## Details Page



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## With Eagle Eye, Data-driven decision-making shouldn't be impossible

A proactive, intelligent Data Observability layer helps unlock trust, speed, and insights

With AI/ML and Generative AI, Data Observability is no longer about just watching data - it’s about truly understanding it

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# THANK YOU

**Let's Discuss How to Enable EagleEye in Your Environment**

eagleeye@celebaltech.com