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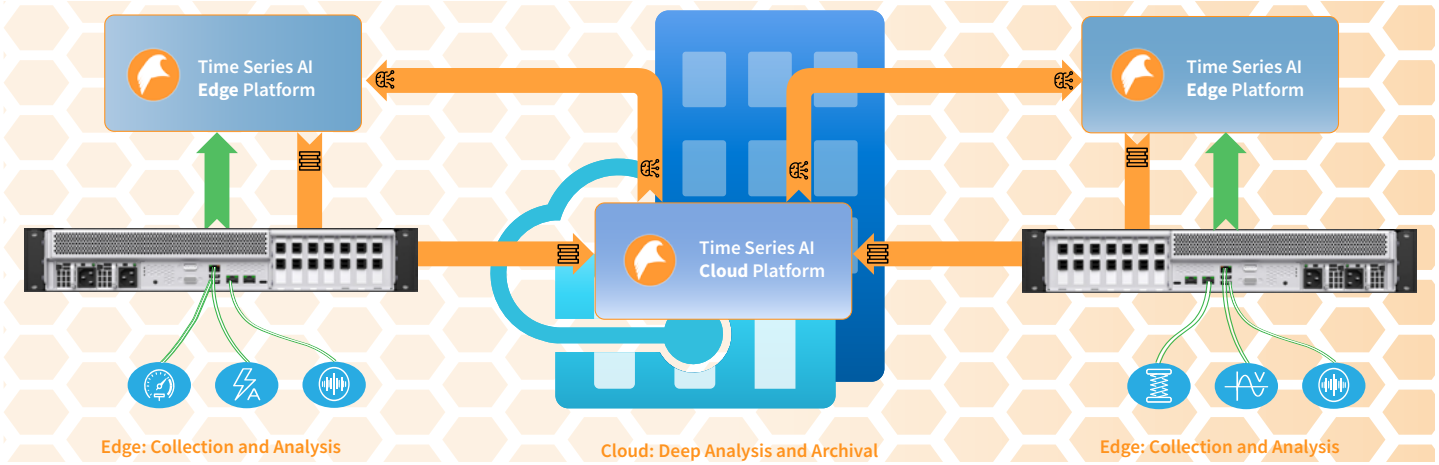
Time Series AI Cloud Platform

Sensor Modeling and Analysis
AI ● Model ● Compute ● Visualize

Full-Lifecycle Edge-to-Cloud Sensor Analytics Platform



USE CASES

Unify inputs from different locations to perform deep analysis, and to develop models that can be used at the edge for reliable and real-time execution.

- ✓ **Navy:** Scale CBM+ and design improvements by discovering patterns at individual component and entire system-level to improve operational readiness and enable Navy's sustainment goals.
- ✓ **Defense:** Identify gaps in testing protocol by comparing manual logs with instrumentation and sensor data to minimize retesting effort.
- ✓ **Energy**: Detect specific modes of failure in tank leakage as well as hydrate formation from sensor data collected at production sites.
- ✓ **Ironmaking:** Maximize production in blast furnace operations by identifying asset anomalies in SCADA/historian data
- ✓ **Mining:** Improve material processing speed by detecting poor ore grade from real-time operations data.
- ✓ **Steelmaking:** Speed up recovery from operational interruption by automating root cause identification using PLC/SCADA data.
- ✓ **Semiconductor Fabrication:** Reduce tool downtime by detecting calibration loss patterns in real-time from chamber operations data.

KEY APPLICATIONS

Sensor-agnostic, domain-independent, optimized for high-frequency scalar telemetry.

- ✓ **Advanced Condition-Based Maintenance:** Perform proactive interventions triggered by anomalous operating conditions detected from process and condition data.
- ✓ **Data Collection:** Identify poorly characterized events to help figure out which events occurred and what you can do about it.
- ✓ **Digital Twin Validation:** Check fidelity of simulation models against real-world operations.
- ✓ **Cyber-Physical Security:** Detect novel cyber-attacks by identifying deviations in OT sensor data without training on attack signatures.
- ✓ **Autonomous Anomaly Response**: Identify failure root causes and detect unknown deviations without need for fast and reliable transmission.

TIME SERIES FEATURES

Ingest Raw Data	Store and organize every data point with its provenance
Visualize Data	Zoom and pan across years of data at 1 MHz resolution
Detect Anomalies	Automated without labels and knowledge of limits
Classify Patterns	Multivariate; no feature engineering required
Compute Metrics	Calculate windowed summaries from raw data
Apply Rules	Generate low-noise alerts for conditions of interest
Generate Reports	Summarize results for enabling and guiding standard operating procedure

CLOUD PLATFORM FEATURES

Deployment	Public Cloud, Private Cloud, Air Gap
Architecture	Kubernetes with Private Resource Pools
Compliance	SOC 2, NIST 800-171
User Interface	Browser-based, Chrome/Firefox
Data Protocols	HTTP, MQTT, Open Telementry, Files
Data Modes	Historical, Live
Clocking	Data-driven, wall clock-driven

+1 (808) 343 3010 ian@falkonry.com https://falkonry.com Available Direct/Carahsoft