



connect

CHAMPIONS TRACK





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Marathon's Seeq Champions Maximizing Value to the Business

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Pushing for Greater Adoption

Seeq > Video Shorts Name V Common Issues! Seeq Al Assistant Videos 01_What Is Seeq.mp4 02_Getting Started and Opening a Workbe... 03_Navigating the Framework.mp4 04_Graphing by Lane.mp4 05_Turn On Labels.mp4 06_\ 07_0 ► 08.0











COMING TOGETHER IS A BEGINNING; KEEPING TOGETHER IS PROGRESS; WORKING TOGETHER IS SUCCESS.

Henry Ford



Optimizing Processes by Applying ML

Empowering the workforce:



ML modeling for frontline engineers



Increase efficiency in process knowledge ingestion & troubleshooting



Process optimization



Anomaly detection



"Yesterday" - Environmental Compliance with Workbench

General "Starter" Workbench and Organizer pages have been generated to introduce personnel to their data and calculations within the Seeq ecosystem through a centralized project.



Data depicted here is for demonstration purposes only and does not reflect data collected at any Marathon facility

"Today" - Environmental Compliance with Vantage

Leveraging our PI-based Compliance infrastructure in Seeq to access our incident data, add context and realize workflow efficiencies



"Tomorrow" - Consolidation of Environmental Workflow

- Enable users to map contextual justifications within their engineering sandbox and collaborate using the same data
- Integrate Vantage entries from other workforces



- Potential long-term benefits

 External Reporting Requirements
 - Posterity
 - ML potential for algorithmically "missed" incidents

The Place of Anomaly Detection in a First Principles World

- Refining processes are mature and can generally be well modeled via first principles...molecular speciation and thermodynamics
- No 'history' required to understand deviation from 'normal' and causation insight
- Complexity and robust convergence numeric algorithms can challenge use in tactical, automated application
- Application for AD exists when combination of FP model complexity and tactical requirements align



A Case History for Anomaly Detection



- Normalized fractionator pressure drop difficult to model with FP
 - Less interested in immediate knowledge of the why
- Much more interested in early detection of trend – when a problem can be corrected
- Variation in the dP measurement challenges rule-based notifications
- Detection of shift in time series from stationary to monotonic increasing would have provided early warning of potential problems







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QUESTIONS?

