

Avathon Industrial AI platform for oil & gas is a comprehensive artificial intelligence (AI)-based anomaly detection and asset/process management solution. Industrial AI platform tackles the most critical production, reliability, and process optimization challenges facing the oil and gas sector today, automatically digesting large amounts of data and transforming them into actionable insights that integrate easily and intuitively with existing workflows. Our patented, industry-leading AI capabilities enable your organization to extract real value from your data with faster, more accurate, and explainable insights that maximize production efficiency, asset life, net-zero goals, and worker safety, striking an optimal balance between profitability and sustainability.



### INCREASE PRODUCTION OUTPUT

- Improve asset availability.
- Schedule maintenance based on actual need.
- Reduce alert fatigue from false-positive alarms.



### REDUCE OPERATING COSTS

- Reduce unnecessary maintenance.
- Convert raw data to actionable insights.
- Manage spares more effectively.



### PREDICT ASSET & PROCESS ANOMALIES

- Detect and mitigate anomalies faster.
- Receive advance notice of equipment failures.
- Identify patterns and improve responsiveness.



### IMPROVE SAFETY & NET-ZERO

- Track flaring and venting.
- Reduce process waste.
- Enhance end-to-end KPI visibility.

### THE CHALLENGE

Energy companies have embraced digital transformation to deliver a complex array of products efficiently and cost-effectively, ensuring regulatory compliance, maintaining worker safety, and achieving sustainability goals. Sensor miniaturization and cost reduction have rapidly fueled this transformation, but have, in turn, created datasets so massive that companies are overwhelmed. Energy companies now realize that converting raw information into actionable insights requires capabilities only AI can deliver.

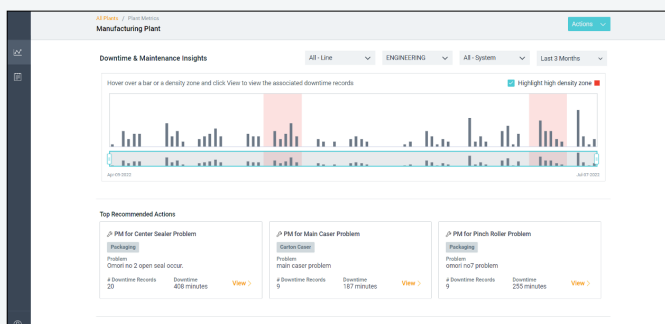
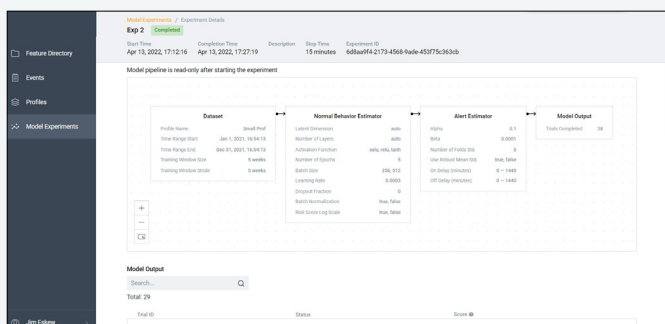
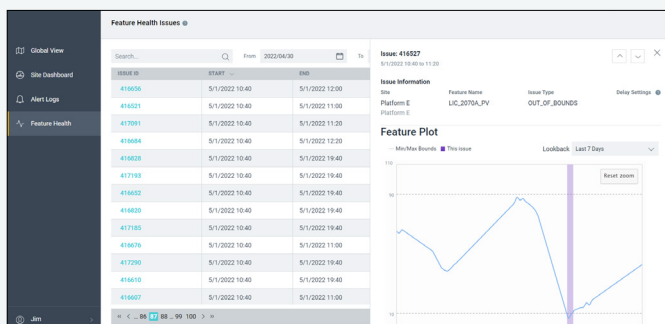
### WHY AVATHON?

Our unique approach and deep experience in the oil and gas industry enable us to provide faster data-to-insight processing that is backed by evidence, with meaningful and accurate explanations that can be understood by staff with no data science knowledge.



### REAL-WORLD RESULTS

- A supermajor with high-volume offshore platforms implemented Industrial AI platform on critical systems, realizing \$30Mn in annual production increases per platform.
- Industrial AI platform successfully identified 75% of production-impacting events an average of eight days in advance for a large E&P company.
- An offshore operator using Industrial AI platform eliminated alarm noise and predicted a failure several months in advance, where previous non-AI approaches would have been overwhelmed by a significant number of false-positive alarms.



## ANOMALY DETECTION AND ALERT TRIAGE

- Monitor globally deployed models in one view.
- Identify the models in alerting state.
- Visualize the change in risk and associated features contributing to that risk.
- Triage alerts with a single click and preview relevant alert details in one view.
- Identify similar historical alerts to isolate recurring anomalies.
- Label alerts to document root causes of anomalies.
- Track alert dispositions for feedback on efficacy of the model in capturing true anomalies used as retraining input.
- Add commentary to the model to capture observations.

## SENSOR HEALTH

- Monitor quality of time-series (sensor/feature) data with flatlining, missing data, out of bounds, and spiking rules.
- Visualize feature health alerts on a time-series plot.
- View and edit feature health rule parameters to fine-tune the quality and number of alerts generated.
- Identify anomaly detection models affected by feature health.
- Identify sensor failure even when an alert has not been triggered.

## ML DEPLOYMENT

- Capture input for building normal behavior models (NBMs) by:
  - Identifying and visualizing features
  - Adding events and event filters
  - Adding training and prediction filters
- Create model experiments and compare results of experiment trials with multiple scoring/evaluation approaches.
- Deploy models to run predictions in real-time.
- Create templates for repeatability in subsequent model-building exercises.

Avathon is your trusted partner in extracting the most value from your asset and/or process data and converting it into actionable and explainable insights. Contact us to discuss how Industrial AI platform can unlock the power in your data at [info@avathon.com](mailto:info@avathon.com).

## ABOUT AVATHON

Avathon, a leader in Industrial AI, extends the life of critical infrastructure while advancing the journey toward full autonomy. Avathon's Industrial AI platform empowers commercial and government customers with scalable, secure, and value-driven solutions that enhance efficiency and resilience across heavy industry.

To learn more about how Avathon's AI solutions can unlock the power in your data, visit <https://avathon.com/industries/energy/oil-gas/>.