AI Copilot for Chemicals Manufacturing

Gain operational reliability and productivity with Automated AI

Avoid events *before* they impact the production

- **Timely, actionable alerts**
  Discover and understand real-time operational anomalies across the plant

- **Capture operational knowledge**
  Connect engineering know-how with production performance

- **Effortless start-up & scale**
  Operationalize and expand with minimal resources, time, and effort

➤ **Benefits across Chemical manufacturing operations**

<table>
<thead>
<tr>
<th>Problem: Sensing approaches detect but do not adequately predict emissions violations.</th>
<th>Solution: Discover anomalies in operational data which precede unsafe operating conditions and find the root causes of the issues</th>
<th>Benefit: Act before non-compliance and prevent losses from regulatory fines, equipment damage and downtime costs</th>
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<tr>
<td>Problem: Rule-based methods do not give an accurate early warning of impending compressor failure.</td>
<td>Solution: Discover early signs of increasing vibrations and identify causal factors to expedite the resolution.</td>
<td>Benefit: Increase availability by lowering unscheduled downtime. Reduce maintenance costs through better scheduling.</td>
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<td>Problem: Lab based quality checks result in long periods during which process may be out of control.</td>
<td>Solution: Utilize operational data to discover patterns indicative of low product quality. Diagnose root causes using pattern information.</td>
<td>Benefit: Avoid losses from late detection of poor processing conditions. Improve availability through faster time to problem resolution.</td>
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“Progress has been really really strong. ...have proven that we can extract value from data, do predictions and monitoring”

*Process Control Lead*

*Top 10 polyester manufacturing company*
Case study: Condition-Based Maintenance

$285,000 / event
Plugged centrifuges stop production

10 days
Advance warning

Understand root causes for timely prevention

Optimize scheduled maintenance