Category

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# AI for Manufacturing & Industrial Automation Playbook

Putting AI to work on the factory floor where downtime and safety are the real constraints

- Practitioner
- Advanced
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- Administrator
- 14 May 2019
- 3 minute(s)

Overview

A framework for AI adoption in manufacturing and industrial automation — predictive maintenance, quality inspection, and production optimization — that accounts for the operational technology environment's distinctive constraints around safety, reliability, and integration with existing industrial control systems.

Isn't manufacturing AI adoption similar to any other industrial

digital transformation initiative? Manufacturing AI carries distinctive constraints beyond typical digital transformation — safety implications of AI-influenced physical equipment decisions, integration with legacy industrial control systems not designed for AI connectivity, and the operational cost of downtime during AI system testing or failure.

Where does manufacturing AI typically deliver the fastest,

clearest value? Predictive maintenance and quality inspection tend to be strong starting points — they augment existing processes with clear, measurable value (reduced downtime, improved defect detection) without requiring AI to directly control physical equipment autonomously.

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