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Is predictive maintenance at a dead end?

Predictive maintenance has become a standard phrase in the equipment business and it is taking hold with OEMs. However, maintenance teams are not seeing much use for it. For them, *"predictive maintenance is like chasing one's own tail"* – a perspective we're increasingly hearing from manufacturing leaders for whom the inability to scale and the time and effort it takes to get benefit from predictive maintenance is a source of major disappointment.

If you are also running plant maintenance, then this sentiment likely resonates with you. The writing has always been on the wall but the industry as a whole was too caught up to notice it. Just like there is no general artificial intelligence, there is no general predictive maintenance, at least not yet! It's not even that the technology is necessarily to blame here. Simply put, the same problems don't recur, the patterns are never the same, and hence it's not possible to have enough examples to learn from to have confidence that the next problem can be prevented. Another inherent problem is that plants change quite often. The use cases for which you get good results today might not be relevant in the future because your line changed, so its behavior became completely different from what had been modeled.

The lesson here is that attaining a predictive level of operations wherein you get timely early warnings about equipment failure can be your apex goal; it cannot be your foundation. The foundation has to be anomaly detection for minimizing excursion risks and to increase the technician's efficiency and productivity of engineers. By identifying excursions everywhere and all the time, we can inform operators before even the first occurrence of abnormal behavior in most cases. This highly reduces the time engineers spend troubleshooting, finding answers, and recovering from problems.

The approach offers greater coverage since anomalies are based on self-learned normal behavior and not a particular behavior of interest. Even if predictive maintenance is unattainable at the moment, predictive analytics certainly isn't. With anomaly detection, you're constantly *predicting* what will happen next, and comparing it against what actually happens. If the two values are not the same, that means there is an anomaly. Rather than predicting when to perform maintenance, you're simply predicting what happens next. In the process, you are illuminating to the right people where attention is needed, why it is needed, and equipping them to learn from the incidents. This is why we have perfected our anomaly detection to a point where it cannot fail. Automated anomaly detection instantly frees you from the constraint of not having enough examples and you can apply it at scale in a highly cost-effective manner. We can show you how.

Best,
Nikunj

Watch Falkonry's anomaly detection in action

Learn more about how we proactively surface anomalies and unusual behaviors that you wouldn't be able to find otherwise. Our software is able to do this without data setup or costly labeling efforts. Watch this demo video to see how it works.

Watch Now

ORIGINAL CONTENT

Automating strip break classification in a cold rolling mill

Strip breaks in tandem cold rolling mills cause heavy losses to steelmakers, in the form of line stoppages and equipment damage. A typical steel mill can suffer up to 15 days of lost productivity annually on account of strip breaks resulting in financial losses in millions. Read on to find out how Falkonry's novel approach for automating strip break classification using ML can avoid such losses.

Read Now

EVENT

Join Falkonry at the AIST Digital Transformation Forum

We're excited to co-present with our esteemed customer ArcelorMittal on 7 March. The session will delve into a novel methodology for automating strip break classification using our patented time series AI platform that has delivered tangible productivity improvements to Arcelor Mittal's cold rolling mill. Be sure to also attend the Digital Transformation Expert Panel Discussion on 8 March in which we engage in what promises to be an insightful discussion about smart manufacturing technologies with other industry leaders.

Event Details

VIDEO

Product Spotlight: Falkonry Insight

Watch how Falkonry Insight overcomes some of the common hurdles that prevent manufacturers from securing the full benefits of AI. The software automatically detects anomalies, helps prioritize actions and speeds up root cause analysis leading to the faster attainment of your smart manufacturing goals.

Watch Now

Innovation Leader

Falkonry cited as an innovative AI solutions provider in a *Markets And Markets* research report. In a research study that explores the burgeoning "AI for smart manufacturing" market, Falkonry has been cited as an example of a startup player that has developed innovative products in this ecosystem.

[View Report]

Briefs

Real-time data and AI thrust manufacturing into the future. With a growing need for real-time situational awareness and insights, artificial intelligence architectures are becoming increasingly important to make sense of the acquired information.

[VentureBeat]

How manufacturers can achieve top quartile performance. When automation technologies – commonly viewed as component or device commodities – are treated as part of a broader, more strategic decision, the result can be a tremendous improvement in operational performance.

[WSJ]

Big data is dead, Long live Easy data. Most data is rarely queried, and many data lakes are just giant, messy swamps where no one really knows what they hold. The observations and other insights about big data help build the case for how big data is evolving.

[MotherDuck]