



A perfect automated anomaly detector

Ever since machinery and production processes became complex, we have been on a quest to accurately and automatically identify unexpected or unusual behavior from industrial automation data. These unusual behaviors – or instances where the data differs significantly from the expected – are what we call anomalies. Now, you may ask, why does anomaly detection matter in the first place? The answer is simply that we cannot possibly pay attention to all the data we generate today. We need something that will narrow down the data to only the parts that are important – the parts that are unexplained and therefore likely to provide us with a learning opportunity. These anomalies are what we can spare some attention to in order to keep production in our control.

It is said that the most valuable information is contained where you will find the most uncertainty. One way of looking at this uncertainty is “unusualness”. A perfect anomaly detection system is capable of never missing unusual behavior and also accurately measuring the degree of unusualness. Through a deep learning architecture, Falconry has developed an efficient, understandable, and accurate AI.

This AI has such an extreme level of competence that **Falconry is incapable of missing anomalies**. And because we are able to reliably measure the degree of unusualness, you have the option of defining how unusual a behavior has to be to get your attention. It then becomes a function of how much attention you want to give to a certain class or source of data, and you can dial up or down how much you want to know or participate in learning about your data by simply choosing what level of unusualness you want to work with. Effectively, this perfect anomaly detection system optimizes the value of your attention.

What does this mean in practice? It means that you can find all of the behaviors that need your attention distilled down from all the information that is being produced. Let’s say that you look for anomalous behavior close to three standard deviations from the mean within a normal distribution. Statistically, that means 99.95 percent of data won’t be unusual. So by choosing the level of unusualness, you can narrow down your interest or your attention to just 0.05 percent of the data. In other words, you could ration your time and your attention and achieve 99.95 percent improvement over exhaustive analysis without getting overwhelmed.

We are now at a point where perfect, automated anomaly detection in industrial automation data doesn’t require any people and soon enough pattern recognition will not require any either. Already, it only requires supervision by domain experts and soon they will only be responsible for validation, with the rest managed by computers. Achieving all of this effortlessly (requiring no setup) makes it a great place to start your *Smart* initiatives.

If you would like to see how our perfect anomaly detection system can benefit your operations, watch the videos linked below, or [reach out to us](#) for a live demo.

Best,
Nikunj

ORIGINAL CONTENT

Top AI Trends For 2023

AI is seeing an early spring with ChatGPT but otherwise there are a number of challenges that have held back AI broadly. Here we cover some of the trends that address these challenges to move into a new benefits regime with AI. Falconry is leading the charge in many of these areas. Stay tuned for exciting breakthroughs this year.

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EVENT

[IME West] Digital Readiness - Are You Prepared For The Future?

Join Falconry Founder and CEO, Nikunj Mehta, at IME Anaheim West 2023 as he highlights methods that can leverage a wealth of digital productivity technologies to create an environment that embraces rapid change. Undergoing a technology transformation does not just denote an organization’s investment in IT assets - it consists of three components: culture, process, and technology.

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VIDEO

Enabling Data-Driven Operations With Falconry

With heavily instrumented manufacturing facilities producing terabytes of data every month, automated AI analysis is the only way to make sense of it. Find out how Falconry’s no-setup, effortless approach to AI implementation can help you recover the significant time and effort that goes into manually analyzing operational data.

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ORIGINAL CONTENT

Digital Transformation: Which Problems Should You Focus On First?

We believe greater value can be derived from solving long tail problems which can result in quicker wins, especially at scale. Read on to find out how a homogeneous approach that is adept at provisioning the right set of capabilities against sensor data can help you achieve your smart manufacturing goals.

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VIDEO

Watch Falconry Insight In Action

Insight proactively surfaces anomalies and unusual behaviors that you wouldn’t be able to find otherwise. Most importantly, Insight does this without data setup or costly labeling efforts. Watch this demo video to see how it works.

[Watch Now](#)

Innovation Leader

Falconry featured in AXA Venture Partners’ analysis of the most innovative software players in defense. In a comprehensive infographic, AXA Venture Partners collates some of the most innovative players in the DefTech industry, particularly those with a software-heavy approach. Falconry is named as an innovative player under the decision intelligence and predictive maintenance category.

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Briefs

Redefining physical industries and powering the ongoing industrial evolution. An insightful exchange between Eclipse Founding Partner Lior Susan and Ty Findley, host of The Digital Industrial Podcast, which delves into the opportunities and challenges that lie ahead for digital industrial innovation.

[\[Eclipse.vc\]](#)

The top 10 tech trends in 2023 everyone must be ready for. From AI Everywhere to Quantum Computing, here are the emerging tech trends that will be shaping our digital world in the next 12 months.

[\[Forbes\]](#)

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