6 Benefits of using predictive analytics in manufacturing

DetectX®

Why the Manufacturing Industry needs Advanced Analytics

It is becoming increasingly evident that manufacturers are adopting AI based tools to make powerful data-informed decisions. A recent Gartner report, on the 2022 agenda of Chief Information Officers in manufacturing organisations, reported that 53% of CIOs would invest in data analytics solutions to help them address common manufacturing problems.

Interestingly, 28% of CIOs indicated that Artificial Inteligence (or Machine Learning) will be included in their IT investments for 2022.

This clearly illustrates the direction that the manufacturing industry is taking in becoming more competitive, efficient, and profitable. The challenge that all manufacturers face is to continuously achieve the following key business goals:

→ Increase revenue and funding,

→ Reduce business risks,

→ Maintain and improve quality while decreasing operational costs, and

→ Competitive innovation

DetectX®

These business goals are no easy manufacturers neglect to use advanced leading business solution tools to assist them.

This is where advanced AI-driven data analytics play a critical role. They offer manufacturers invaluable analytics that will transform their businesses through accurate predictive alerts and workflows

More specifically, advanced data analytics solutions and intelligent systems assist manufacturers by:

→ reducing errors and mistakes in production lines,

→ matching and synchronising demand with supply chain activities,

→ reducing inventory to a suitable level, scheduling work and shifts according to predicted production levels, and

→ detecting accidents or machine failures early.

Addressing these items significantly contributes to the overall business performance of manufacturers.

Not all advanced data analytics are the same and pattern based predictive analytics produce more powerful benefits than other approaches.

The Power of Predictive Analytics

Predictive analytics is a type of advanced analytics that includes statistics, highly sophisticated AI principles and multiple machine learning algorithms to identify patterns in data and make predictions and

suggest actions for companies about their future performances and outcomes. Financial institutions that neglect the use of predictive analytics are more likely to experience unnecessary costs, risks, non compliance, and missed opportunities

suggest actions for companies about their future performances and outcomes. Financial institutions that neglect the use of predictive analytics are more likely to experience unnecessary costs, risks, non compliance, and missed opportunities

In simpler terms, predictive analytics identifies patterns within current and historical data and produces alerts and actionable insights that are based on a high probability of events occurring.

The impact of predictive analytics should not be underestimated, as it can unlock businesses' potential and catapult them into leading competitors within their industry.

DetectX®

Making the transition to smart manufacturing begins with reliable data that provides manufacturers with new, often unexpected insights into increasing production efficiency and quality.

Assessing risks to production and revenue forecasts using analytics and business intelligence will gain momentum because manufacturers will be striving for the most accurate sales and margin forecasts they can get, further improving financial visibility.

Louis Columbus, 2021 (Forbes)

DetectX®

There are many benefits of predictive analytics, but we will examine 6 key common benefits that it can offer manufacturing businesses:

1 Predictive analytics improve quality and minimise waste. Powerful AI pattern recognition technology provides early detection of production errors. As a result quality control is bolstered, as it allows supervisors overseeing the production line to pay closer attention to factors that hinder quality output

2 In general predictive analytics optimises the production cycle. It offers powerful demand forecasting that will effectively match demand with sales, as it accounts for market trends and opportunities. These analytics maximise revenue and minimise control costs.

3 Safety measures are strengthened through predictive analytics as it greatly reduces the number of incidents within manufacturing. The business solution analyses a vast amount of variables,situations and circumstances and creates alerts or preventative warning signals to factory managers that will allow them to

4 Predictive analytics optimise workforce demand and task allocations. Analytics accurately predict increased workforce demand, which allows for successful early scheduling and capacity planning. As a result, manufacturing businesses avoid a reduction of output or quality, shortage of labour, and prevent the high costs associated with temporary workforce solutions.

DetectX®

4 Machine productivity is maximised by predictive analytics. Advanced analytics offer early detection of machine faults,which means preventative maintenance can be rolled out at more appropriate times. Successful preventative maintenance will prevent significant machine breakage and the loss of production and downtime associated with it.

5 Predictive analytics improve chain synergy and optimise logistics by helping manufacturers produce on-time delivery rates. Analytics accurately predict delivery delays, which helps managers to create data-informed contingency plans.In effect, this will reduce stock shortage when sales demand spikes, removing mismatches between supply and demand.

DetectX®

Key Takeways

The task of effectively analysing and investigating a substantial amount of data on a continuous basis can be a significant challenge for manufacturing businesses.This vital task will never go away, but rather continue to grow at an exponential rate

There are many scenarios and examples where manufacturing organisations reap significant rewards from predictive analytics. The benefits of predictive analytics as a solution are theoretically real, however, they will only come to fruition when appropriate sophisticated softwareis used.

Not all software solutions are the same, as some are more successful than others in helping manufacturers capitalise on the benefits of predictive analytics. For this reason, it is essential to choose the right specialist and appropriate predictive analytics platform, that has a proven track record.

Manufacturing businesses should consider the following capabilities when selecting solutions:

→ text and data analytics (structured and unstructured)

→ highly sophisticated algorithms that are applied for high automation of model building and design (this means the elimination of manual rules/model maintenance are automated)

→ automated feedback learning

→ secure and high introspective integration models that allow multiple data source integrations;

→ scalable modules for higher performance processing

→ flexible business workflows' that notify and assign relevant people to tasks and

→ real time process monitoring and control
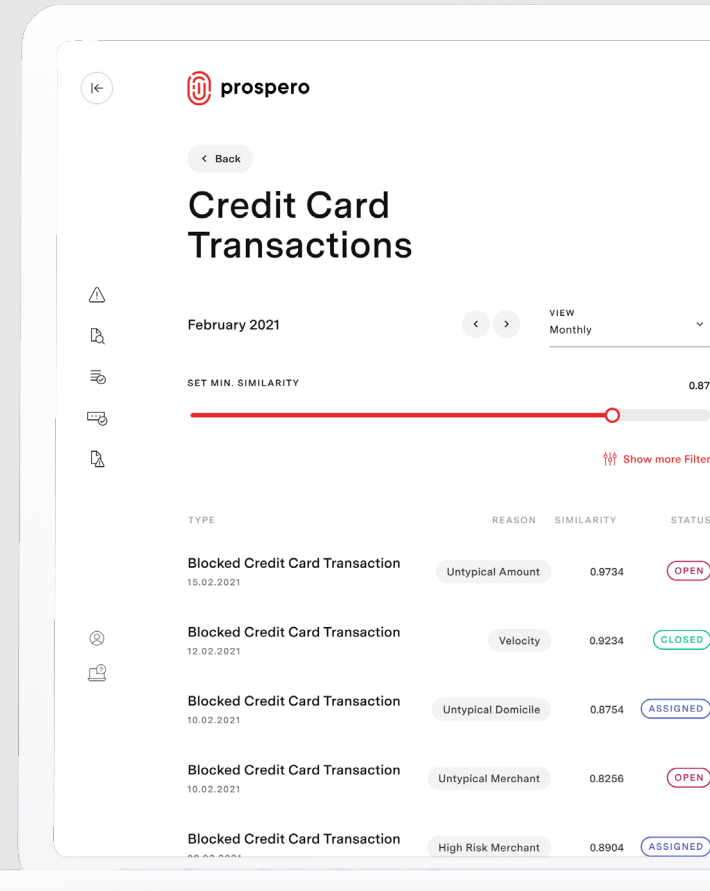
Overall, even if manufacturers don't have an appetite to apply predictive analytic solutions to their whole organisation it is still incredibly advantageous for them to apply it to one department or area as it will produce vast benefits. predictive analytics software, contact Prospero

---

For more information on successful predictive analytics software, contact Prospero.

DetectX®

DetectX is a powerful predictive analytics platform, based on machine intelligence, that offers organisational solutions. These solutions look at specific data sets, findpatterns, and make predictions about desirable and undesirable outcomes. DetectX solutions offer companies a much needed helping hand in processing data and developing predictive models. The DetectX platform analyses structured and unstructured data and assigns relevant analytical tasks to employees. This platform covers the entire chain process and makes advanced data analytics objective, automated, and scalable.

Who we are and how we can help you.

Prospero was founded more than 20 years ago to assist businesses in getting value from their own data. Prospero finds and reports opportunities and risks in business. Their solutions offer significant predictive power that is combined with modules that optimise and automise businesses. All Prospero analytical solutions are built on DetectX, Prospero's powerful predictive analytics platform.

Contact us:
partners@prospero.systems

---

prospero

< Back

Credit Card Transactions

February 2021

VIEW
Monthly

SET MIN. SIMILARITY   0.87

Show more Filter

TYPE	REASON	SIMILARITY	STATUS
Blocked Credit Card Transaction 15.02.2021	Untypical Amount	0.9734	OPEN
Blocked Credit Card Transaction 12.02.2021	Velocity	0.9234	CLOSED
Blocked Credit Card Transaction 10.02.2021	Untypical Domicile	0.8754	ASSIGNED
Blocked Credit Card Transaction 10.02.2021	Untypical Merchant	0.8256	OPEN
Blocked Credit Card Transaction	High Risk Merchant	0.8904	ASSIGNED

DetectX®