

# How to gain added value from AI

E-BOOK

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## INTRODUCTION

# Artificial Intelligence, Machine Learning and Deep Learning: What's the difference?

Is it machine learning (ML), deep learning (DL) or rather artificial intelligence (AI)? In the search for the right term, it is easy to lose track.

What do the various concepts mean and how do they differ in practice?

An overview.

# AI, ML and DL explained simply

In summary, the situation is as follows:

- Artificial Intelligence (AI) in English AI for Artificial Intelligence is the overarching science concerned with the development of machines that exhibit some form of intelligence.
- Machine learning Machine learning in English is a subfield of AI that focuses on techniques that enable computers to learn from input data and patterns.
- Deep learning multilayer learning, in turn, is the collective term for a group of techniques for self-directed machine learning, in which algorithms make themselves smarter.

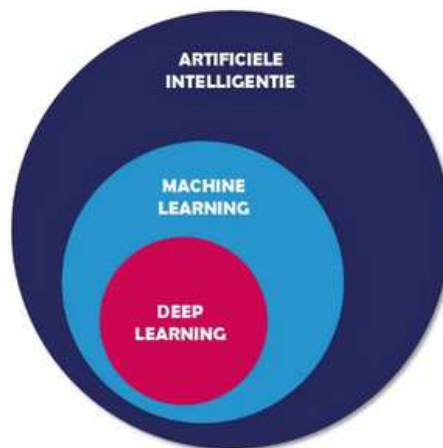


Abbildung 1

## Artificial intelligence

Artificial intelligence is about building machines that exhibit some form of intelligence. As a concept, AI is inextricably linked to the history of the first computers, and for that we have to travel far back in time.



Abbildung 2: Überreste des ersten mechanischen Computers

More than two thousand years ago, the ancient Greeks had already developed a complex analogue machine to perform complicated astronomical calculations, although their invention is still far behind what we understand by artificial intelligence today.

The British mathematician and code-breaker Alan Turing is generally regarded as the father of the modern computer. His pioneering work in the 1940s and 1950s not only ushered in the era of lightning-fast computing machines, Turing also laid the philosophical and practical foundations for abstract concepts such as the self-awareness of intelligent computers. These groundbreaking considerations eventually led to the Turing Test, which is still an important, if somewhat outdated, benchmark for whether or not a machine can be considered intelligent and self-thinking.



Abbildung 3

Today, AI encompasses a wide range of different concepts, including machine learning and deep learning. Meanwhile, hard work is also being done on the practical implementation of fully conscious artificial intelligence, which will soon broaden the playing field to include human AI, for example.

## Machine learning

Machine learning is a branch of AI that focuses on techniques that enable computers to learn from input data and patterns. In practice, this is done with the help of data mining. This is a technique that extracts relevant information from databases. A machine learning algorithm does not need a structured database - such as an Excel file with neatly arranged data - but is intelligent enough to find relevant data points in unstructured data. Many companies are already using machine learning today: Amazon, for example, automatically recommends products to its users based on their previous purchases. Another example is Netflix, which suggests series and films to its subscribers based on their previous viewing behaviour.

## Deep Learning

Deep learning is essentially an advanced form of machine learning, but it differs significantly in one way: by adapting itself. A Deep Learning model can adapt based on external signals - data - whereas Machine Learning can only adapt based on manual adjustments, such as in the code underlying the algorithm.

Well-known examples of Deep Learning today include self-driving cars and our own Trendskout platform. Both do not require explicit user feedback to adapt successfully. Deep Learning algorithms are fully focused on the desired end result and steer themselves accordingly.

However, Deep Learning should not be confused with neural networks. Neural networks are often used as a synonym for Deep Learning, but they are not the same thing.

A neural network is a technique that can be used for machine learning, deep learning as well as overarching AI. Neural networks mimic the way the human brain works to classify information based on examples. In the general public, for example, they are known as a means of quickly categorising images based on a limited number of known photos.

## CONCLUSION

### **Each project requires its own type of AI**

It's true: The sometimes confusing terminology and the ever-changing AI landscape do not make it easier to see the forest for the trees. Deploying the right technology in an organisation is a task for specialists. This is exactly where the Trendskout platform proves its value. The platform automatically selects the appropriate AI algorithm for each use case based on relevant parameters.



# And what about business intelligence?

Both artificial intelligence (AI) and business intelligence (BI) are still too often misused or even confused with each other. Where exactly are the differences between AI and BI? And why do smart companies use both in combination to make better decisions and strengthen their competitive position? An overview



## Reporting instead of predicting

BI and AI are often used synonymously in a business context to refer to working with sophisticated data-based insights that are then subsequently used for decision-making. While this is fundamentally true, AI and BI are very different - both in theory and in practice. In summary, you could say that BI looks at the past, while AI also makes predictions about the future.

In companies, AI aims to analyse and interpret large amounts of data and act accordingly. AI itself makes connections, predictions and can also suggest follow-up actions. This offers tangible benefits in a business context. For example, sales teams can track their leads more effectively, while plant operators can better assess and manage downtime and maintenance of their machines.

**BI represents the past, while AI also estimates the future.**

## BI in detail

BI or Business Intelligence is a technology used to collect data and present it in an understandable form. BI does not interpret the data itself, but merely provides an understandable presentation of the data. Interpreting the data and finding correlations and possible follow-up actions is the responsibility of the person reading the reports. For example, BI can generate a first-class sales leads report just as well as AI, but BI does not subsequently provide predictions about which leads should be contacted first to maximise sales opportunities.

## Graphic overview

	BI	AI
<b>Basic idea</b>	Collect data and make it accessible in a simple, readable form.	Mimicking human intelligence and behaviour to help organisations make data-driven decisions.
<b>Focus</b>	Answering questions with reference to the past.	Predictions about the future based on data from the past.
<b>Under the bonnet</b>	Data presentation similar to a spreadsheet. Supplemented by classical statistical methods.	Advanced machine learning and deep learning algorithms.
<b>Concrete advantages</b>	Presentation of data and a clear overview of historical data.	Forecasts on Customers, Competitive Positions, and Market Changes, along with Added Intelligence in Machines (e.g., for Image Recognition)
<b>Keywords</b>	Reporting, Data Warehousing, Matrices, Dashboards	Predictive analysis, forecasting, natural language processing (NLP), image recognition.

## AI and BI: better together

Although AI and BI have a lot to offer separately, they can also be used together to deliver even better results. Combining BI and AI is the perfect recipe for delivering analytical solutions in any business situation. First, BI gets to work analysing historical data. AI then predicts future events and actions based on that information. The best of both worlds.




In practice, BI provides comprehensive reports, while AI makes predictions and recommends actions.

BI that is supported by AI is also called AI-powered BI. It can dive deep into complex problems and extract crucial insights from data that was previously inaccessible or has not yet been explored. When used together, the two can automatically search older data and provide alerts for new and interesting events or insights. AI-powered BI platforms can also save analysts a lot of time and enable them to turn to more effective data analysis projects. By combining BI with the best of AI, companies have the chance to analyse data even more efficiently, gain actionable insights and anticipate the future. And that's where value is added for businesses.



## Some application examples

The number of AI applications is practically infinite. To make everything more manageable, for this e-book we have made a selection of common applications from three areas that are important for every organisation: Sales and Marketing, Production and Operations, and Customer Service.



## Sales and marketing

Artificial intelligence has a major impact on almost all business areas. Sales is no exception. More and more organisations are turning to AI to organise, streamline and make their sales teams more efficient. The need for AI software in sales is simple: salespeople are sitting on reams of valuable data, but don't know where to start to make use of it. At the same time, many salespeople are drowning in repetitive tasks and lead qualifications that often contribute little to what really matters: closing new business. So there are many opportunities for improvement.

### Simple data acquisition

Data on sales processes is relatively easy to collect these days. Contacts or touchpoints with potential and existing customers are already automatically registered in many companies. Quotations, order forms, documents from pre-sales correspondence and invoicing are also part of the normal sales cycle. Most modern ERP and CRM packages are also able to store this data indefinitely and create clear historical charts from it. As a rule, however, this is as far as it goes. Nicely presented sales charts from a CRM system may be valuable to measure and compare successes, but the old stock market wisdom applies here as well: past results are no guarantees for the future. The analytical and forecasting power of a CRM system is therefore not sufficient. And this is exactly where Trendskout's AI comes in.

### Targeted help for sales teams

The benefits of AI insights for sales teams are huge. Salespeople's time is precious and teams need to carefully decide what to focus on to achieve maximum results in the time available.

Even for the most experienced sales staff, it is almost impossible to extract all the relevant information from the endless sales-related data streams and interpret it correctly. And this is where Trendskout comes in. The advanced data analytics reveal the underlying sales dynamics and provide concrete forecasts with regard to potential and existing customers. This allows sales reps to better target their prospects and customers and serve them faster. With AI, previously unseen opportunities suddenly come to light. Artificial intelligence notifies teams of new sales opportunities that would otherwise go unnoticed and provides data-driven advice that helps salespeople do their important jobs.

 6 months after launch, the relative increase in total sales was 8.5%

### **The most important advantages of AI in sales**

There are many ways that companies can use AI for sales to open up more opportunities for their sales team. This is happening in very different areas for both multinationals and SMEs. In each of these areas, AI picks up where traditional ERPs and analytics tools leave off. An overview:

### **Sales forecasting and sales projection**

AI for sales forecasting works with thousands of data points from all kinds of data sources. Artificial intelligence links data from different databases and looks for insights and hidden patterns that would not be visible to the human eye. In this way, an accurate forecast of future figures becomes possible and it is easier to estimate who will buy what and when.

AI-based forecasting thus goes beyond the typical forecasts using spreadsheets or reporting systems and complements business forecasts with the power of AI. This leads to much more accurate forecasts and can also predict erratic patterns. This is not only helpful for sales teams, but also for their customers. In some companies, the intelligent forecasting model even goes so far as to identify the needs of end customers before they are even aware of them.

### Identifying sales opportunities

Why just predict sales when you can influence them? That is exactly the task of opportunity recognition. Based on the available data from corporate CRM and other tools, an opportunity recognition algorithm gets to work and reveals hidden opportunities. Often with spectacular results, as the case of Coeman Packaging proves. AI informs sales teams of new opportunities that might otherwise be lost, enabling companies to get more out of their leads and existing customers.

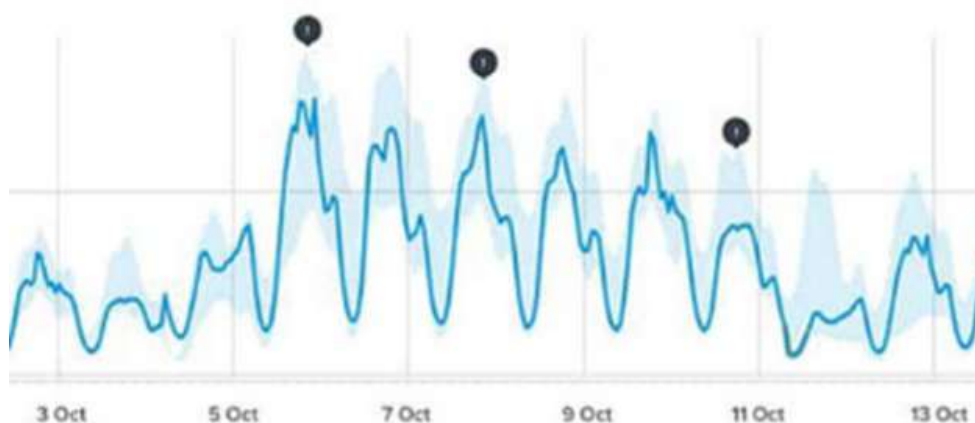


Abbildung 4

## Estimate outflow

An intelligent AI tool is connected to the entire underlying business software via plug-ins. In the background, it monitors all contacts or touchpoints with potential and current customers. Possible reasons for increased customer churn are automatically identified and passed on to the responsible sales representative for follow-up. This gives companies time to communicate in a timely manner and increase customer loyalty. In other words, AI makes reactive sales proactive again.

## Impact analysis

Intelligent AI algorithms can uncover sales drivers. Trendskout's sales AI, Sales Booster, for example, performs an advanced impact analysis. It reveals the decisive factors that motivate customers to buy or reorder. Impact analysis thus provides answers to many "why" questions and enables more detailed insights into operations and sales.



Abbildung 5



## **Next-Best-Actions**

AI software can recommend the next steps or next-best-action in a sales cycle. The algorithm develops this suggestion based on historical data from your CRM system or other databases. These data-based recommendations serve as a guide and increase the success rate of your sales reps' phone calls or emails. This way, your team is not flying blind, but can make targeted contact and precisely dose their sales efforts.

## **Product recommendation**

An AI tool like Trendskout Sales Booster interprets previous sales and recommends additional products or services that fit an existing customer. Depending on the company's business model, these suggestions can be automatically proposed to the end customer or forwarded to the responsible account manager or sales manager. This allows companies to maximise their upsell and cross-sell opportunities. Behind the scenes, product recommendations are made via AI using a so-called recommendation engine. This is an intelligent clustering and classification algorithm that connects unexplored data points to make personalised sales suggestions.

## **Data-based personas**

AI classifies and segments customer profiles into sales and marketing personas. This is done on the basis of objective sales data and other information - and no longer on the basis of subjective criteria. Data-based profiles are increasingly accurate and can be used at the interface between sales and marketing, which in turn enables target group-oriented communication.

## Interview

# Coeman Packaging

Companies and organisations sitting on valuable mountains of relevant data are increasingly relying on AI to process it. This is also the case for Coeman Packaging, a distributor of packaging materials and machines in Waregem, Belgium. With more than 3,000 B2B customers, the company generates a turnover of around 35 million euros. "We had been looking for ways to make even better use of our sales opportunities for some time. In the end, we decided to use Trendskout's AI to create sales forecasts and maximise our turnover," explains Managing Director Luc Vanderbeke.

### Optimise distribution time

Coeman Packaging has a long history and pioneered extensive IT investments back in the 1980s. Over the years, this led to highly developed ERP and CRM packages in the company that contain a wealth of data. However, extracting all this data was a known bottleneck from the beginning.

"A lot is happening in our market," explains Vanderbeke. "Not only are our customers and competitors evolving, but so are our products. Moreover, our sales staff spent too much time on administrative tasks, while we would have preferred them to focus on pure sales. So we looked for opportunities,

to evolve and add value to our data to make more targeted sales. That's how we quickly came across Trendskout and its broad AI applications."



"In a turbulent Corona year, Trendskout has helped us deliver the same strong numbers today as last year."

### **Recognise opportunities**

The company now uses Trendskout AI for its forecasts to identify less visible sales opportunities. Behind the scenes, it's mostly about sales opportunity recognition, which is built into Trendskout AI by default. This model looks for patterns in Coeman Packaging's decades-old historical sales and customer data. The AI then analyses this data to make accurate predictions. Specifically, the AI software automatically generates a monthly forecasting report,

which shows which customers might need a reorder. In practice, the algorithm's suggestions are more than 80 % accurate, complementing the gut feeling and routine of the experienced sales team. Hard data thus supports sales, which by nature relies on human relationships.

### **Simple Technical Setup**

Incidentally, the algorithm was implemented very quickly - a prerequisite for the Coeman Packaging team. The data from the existing ERP and CRM systems were simply connected to Trendskout via the standard API, without any costly measures upfront. This way, the AI algorithm could immediately start sifting through the data to get quick results. Connections to future software or other external data sources are also possible.

## Customer relief

"The beauty of Trendskout for us is that you don't have to be a computer specialist to discover new sales opportunities," says Vanderbeke. "Trendskout AI provides immediate added value for our sales people. Our customers notice the extra attention they receive and appreciate the relief they experience." The AI prediction model recognises customers' needs even before they recognise them themselves.

## Continuous improvement

"In a turbulent Corona year, Trendskout has helped us to present the same strong figures today as last year."

The results of the AI forecasting model are evaluated monthly and adjusted as needed to further improve accuracy and give the sales team the best chance of winning new orders.

## Production and operation

Production and process optimisation are nothing new. As early as the mid-20th century, statistical models were applied to various variables in the production process under the leadership of East Asian industries. This was done using classical mathematical methods and required an enormous amount of error-prone manual work, so that these methods could only be used by the largest corporations. Today, the flow of information is so great that statistical analyses as they were carried out in the past can no longer be used cost-effectively.

Recent developments in AI and machine learning make it possible to automatically analyse this information and use it to optimise daily operations. Leading industry players are already applying these techniques in various pilot projects, and the race to deploy them on a large scale has begun. Here are some practical examples.

### Predictive maintenance

The concept of predictive maintenance is simple. Complex equipment and industrial machines need to be serviced at regular intervals. This should preferably be done near the end of the life of the machine or the part to be replaced.

To ensure functionality, many machine parts in large production halls are still regularly replaced according to their estimated service life. However, the buffer time is often far too long and it would be more efficient to be able to intervene with foresight.

AI-based predictive maintenance optimises the timing of maintenance for maximum cost savings. To do this, we use a number of specific algorithms, depending on the type of predictive maintenance required in practice.

## Classification vs. anomaly detection

Behind the scenes, there are two technical solutions to perform predictive maintenance using artificial intelligence. The choice of a particular AI algorithm for data analysis and training depends on the type of machines to be monitored. If the equipment is often defective or fails, classification is a logical option. If, on the other hand, the equipment is rarely defective, then anomaly detection is usually better.

## Detecting anomalous data

The inevitable drawback of reliable machines is that there is often little evidence of actual failures or indicators that might predict failures in the data provided by the machine. As long as all components are working smoothly, monitoring systems will show only a small number of abnormal values for the parameters they monitor. In this case, the AI can also learn to assess which suspicious signs or data anomalies could cause a potential machine failure. Fortunately, there are several algorithms specifically designed for anomaly detection. Autoencoders, for example. An autoencoder is a special type of neural network that learns to recognise what exactly can be considered "normal behaviour". Anything that deviates from this standard pattern is by definition an irregularity and a cause for concern. A potential danger of autoencoders is that, because of their structure, they may also consider more frequent deviations or anomalies as "normal" if their number is too high. It may therefore be a good idea to remove a possible excess of anomalous data from the training data for the algorithm.



Abbildung 6

The graphs above show whether data was found that deviates from the normal situation, and if so, how large the deviation is. This leads to a mean absolute error. It is not so much the absolute values that matter, but their ratio.

The input field at the bottom of the settings screen shows the threshold value that the algorithm should use for anomaly detection. The algorithm automatically determines a suggestion for this.

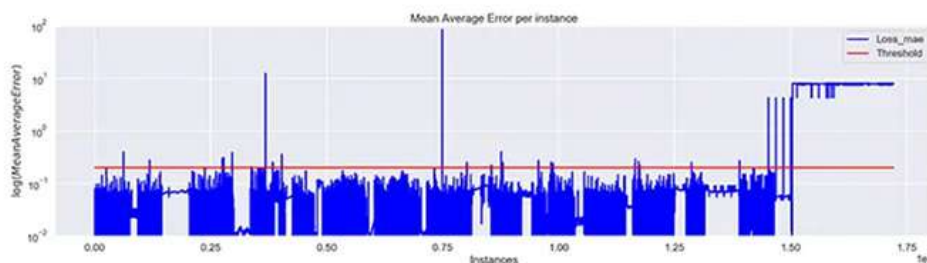


Abbildung 7

In the figure above, the red line represents the threshold. The blue bars are the mean absolute errors of all recorded data. By the way, these numbers are logarithmic to get a better overview. So in reality, the deviating data points are much larger outliers than one would expect at first glance.

Any blue bar above the red line is therefore considered by the algorithm as an anomaly to be reported. The data is automatically forwarded to the company's external alarm systems via an API or can be added to a report text for further action.

## Anomaly detection and quality control

Detecting exceptions, outliers or anomalies is an essential part of any quality assurance process. This can involve the detection of disturbances that would not be noticed in a human analysis, and this often means an interaction of different data points. When a data point changes conspicuously, and when this is already apparent in human analysis, it is often preceded by a whole history of anomalous behaviour.

Anomaly detection is used to detect this behaviour in advance. This technique is used as part of predictive maintenance, but also separately, e.g. for the

- Detecting subtle fluctuations in energy consumption
- Detecting deviations in the production process that affect production quality
- Controlling fault management systems
- ...



As in many other cases, static procedures were already tested in the 20th century to determine the number of deviations in a process. This procedure is not only time-consuming manually, but also extremely prone to error. It always assumes that the conditions in the sample are representative of a larger quantity, but this is often not the case in reality. Finally, the production process itself is subject to numerous other HR, supply chain and IT procedures that are constantly changing.

Since the advent of AI and Deep Learning, technology has become powerful enough to recognise all the nuances within this data.

### **Impact analysis of production parameters**

Impact analysis and deep propensity modelling answer questions such as "Why are production targets for a certain product line not met?", "Why does a certain type of machine require more maintenance?", "What motivates my employees?" or "What affects my ROI?". This type of analysis looks for the reasons why something is happening or not happening.

For impact analysis, techniques such as propensity modelling are used in combination with the latest Deep Learning technology. In this way, all the correlations and insights in your data and in the processes that drive your business can be uncovered. For the human brain, this would not be possible in a realistic time frame.

## How does that work technically?

### Selection of the targets

The first and crucial step in this type of analysis is to define a goal that is important to you or your business, e.g. ROI, conversion rate, downtime, etc. The AI needs this information to evaluate what positively or negatively impacts these goals in the next steps. This can be done directly in a user interface based on your data, you do not need to provide separately annotated data.

### Data expansion

Unlike classic systems, Trendskout can evaluate several types of data simultaneously. This is not only a technical advantage, but also ensures that you can augment your original data with all kinds of other data sources, which can then be evaluated in terms of correlations that also affect your targets. So the original data in which you selected your target is augmented by other data that you upload. In this way, you can examine very comprehensively what influences your goals and you will not miss a single correlation. One of the technological pillars of Trendskout is a distributed computing platform with a high degree of parallelism. This technology is used to process, denormalise, cleanse and convert the various data sources into other formats in the background so that they can be processed by neural networks and other deep learning techniques in Trendskout.

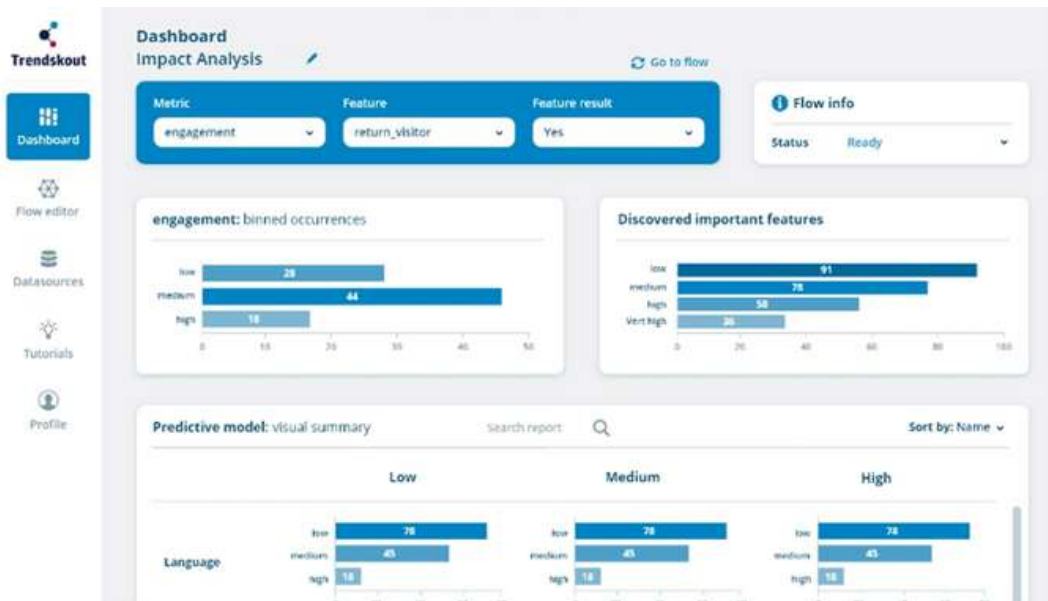


Abbildung 8

## Slope modelling

Slope modelling is a technique that statisticians have been using for several decades. The problem with these classical techniques was often that the discovered correlations could not be described by static, mathematical formulae. Thanks to new developments in Deep Learning, these correlations can now be modelled in a much more powerful way. To illustrate, you can compare modelling with purely mathematical formulas to trying to draw a face with only straight lines: The result will turn out angular and provide only a rough indication of what that person actually looks like. Deep Learning techniques can also draw flowing lines and thus give a better picture. This is also what happens with slope modelling: Neural networks better understanding the connections in your data. In propensity modelling, TrendsKout applies different types of Deep Learning algorithms to your data and assesses each time whether the detected connections and insights really have an impact on your data.

have on your target. For this purpose, a portion of the data is evaluated each time in test mode to assess the accuracy of the slope model. By defining your target in the first step and then expanding the data, no interaction is required. As with other AI and Deep Learning analyses in Trendskout, Auto ML & Solution Space Exploration - data processing, algorithm selection and parameter hypertuning - automatically search for the best performing model.

After the propensity modelling phase, the underlying relationships are extracted from the winning model. These relationships and simulation results provide information on how your business objective is positively or negatively affected. This report is one of the automatic actions in Trendskout. In addition to being queried directly in Trendskout, the information in this report can also be linked to your company's business intelligence solution.



## Case study

# Team Industries

Turnaround times are a key element in establishing correct pricing in production processes. Lead times depend on factors that influence each other and are difficult to identify. For this reason, Team Industries used Trendskout AI. It predicts lead times for specific orders based on available production data. Using this information, Team Industries produces accurate estimates and quotations that are both cost-effective and competitive.

# Customer service

## The underlying technology: Natural Language Processing (NLP)

NLP is a collective term for techniques that understand and respond to text or language data - and respond with their own text or language - much like humans do. NLP combines computational linguistics - the rule-based modelling of human language - with machine learning and deep learning models. Together, these technologies enable computers to process human language in the form of text or speech data and "understand" its full meaning, including the intent and mood of the speaker or writer.

NLP applications are thus made possible by a combination of techniques, such as:

- Part-of-speech tagging, also known as grammatical tagging, determines the nature of a particular word or piece of text based on its usage and context.
- Named Entity Recognition (NER), identifies words or phrases as meaningful entities. For example, NER identifies Europe as a place and "William" as a male first name.
- Sentiment analysis attempts to extract subjective features such as attitude, emotion, sarcasm, confusion or distrust from texts.
- Text classification: Divides text parts into groups and categorises them. For example, quotation requests are grouped by topic or requests are assigned to the right person.
- Next-Best-Action - the best next action - is not an NLP technique in itself, but is often used to suggest answers that can be presented in a specific context. For example, a response to a specific question is automatically suggested to customer service staff in order to achieve a specific goal, such as solving a problem quickly.

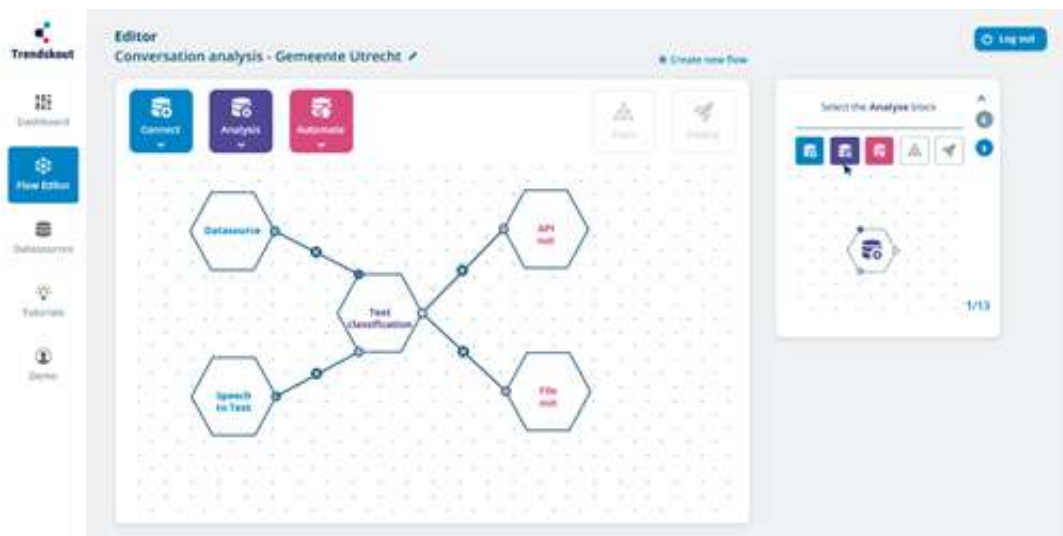


Abbildung 9

## Automatic response to customer service requests

Customer service in different industries has to answer many questions from customers and intermediaries in different forms. These are, for example, questions about delivery dates and times or returns, questions about offers, requests for clarification on a particular matter ... Of course, these questions always have to be answered, and this is often time-consuming and thus a burden on the net profit of any organisation. At the same time, however, the quality of this process is also important, as a balance must be struck between the speed of response and the monitoring of organisational goals. By using an AI-driven customer service, all these questions can be identified and answered automatically.

In doing so, the AI can take into account specific goals and response strategies set by the organisation:

- The right customer service for each type of customer
- Monitor the profitability of the customer service process and minimise the number of contacts
- Identify upselling opportunities during the conversation
- ...

For questions that require a personalised answer, such as questions about the delivery time of goods or specific orders, links to ERP or other software packages can be provided, with the customer service AI searching the database for the specific information. In this way, even questions that require a very personal answer can be correctly answered automatically.

This relieves the customer service department to a great extent. Only the questions that cannot be answered by the customer service AI are passed on to the human employees so that they can deal with the more complex problems and focus more intensively on the personal service that really makes a difference.

### **Analysis of customer service flows**

An enquiry often consists of several questions and is often handled by several people. Each conversation contains important information for the company about how its product or service is being received and used, and how effective the customer service process itself is.



Therefore, many companies use AI to analyse customer communication from emails or phone calls and to sift through the underlying information. The goal is to support strategic decisions or optimise the customer service process. Some questions that can be answered:

- Which questions are asked most often and what trends can be identified?
- Which answers best fit certain questions?
- How does our product or service perform in the market?
- Which questions lead to the most follow-up contacts?
- Can we derive scripts from best practices?
- ...

## HLN-Interview

# Moderating online comments

Online interactions are a challenge for organisations. Disruptive content quickly becomes a problem for a company's image, while completely disabling online interactions misses opportunities to strengthen the brand and customer service relationship. Moderating and filtering online comments used to be a time-consuming task for human moderators. With NLP, this can now be done automatically, reducing the cost of online moderation to a fraction. A very popular news website is that of the Belgian daily newspaper "Het Laatste Nieuws". Below you will find an interview.

### 250,000 reactions per month

"We publish more than 700 articles on our news website every day. Together they provide around 250,000 reader responses per month," explains Kurt Minnen. As managing editor, Minnen is the link between the newspaper editors and the technical teams behind the website. "Our extensive comments section sets HLN apart from other news media.

Previously, all reader responses were manually checked by a team of a few permanent employees, reinforced by temporary staff. For the last three years we have been working with an external agency."



Abbildung 10

## Pressure on moderators

"Of course, such active moderation comes at a price," explains Heiko Desruelle, Digital Manager at HLN. "A full-time team, whether internal or external, is simply not cheap. It is also not always easy in terms of content. All moderators first undergo training on our internal selection criteria for acceptable answers. Although the rules of conduct are clear, much remains open to interpretation. Hate mail and racist comments are of course unacceptable and will be deleted immediately, but the classification of other comments is less straightforward. It often depends on the moderator on duty whether a certain reaction is allowed or not. In addition, the work is sometimes stressful. Popular articles quickly lead to a flood of reactions. These "rush hours" put a lot of pressure on the moderators. And this is where Trendskout's artificial intelligence has come in handy."

## AI as salvation

"A solution that could reduce our team's workload without a lot of effort and investment was more than welcome," says Desruelle. "When the Trendskout people first came to us, they had a few relevant business scenarios with them. Then I challenged them with an old dataset from our website: Would Trendskout's AI platform be able to work with it immediately, without any further information? Amazingly, it worked on the first try."

Minnen adds, "Trendskout proved to be a breath of fresh air compared to other AI platforms and expensive consulting firms that required lengthy implementation cycles. For content moderation at HLN, we simply wanted a clear, cost-effective solution that would give us an immediate ROI, nothing more. In less than four weeks, Trendskout had a live test case implemented on our website. It was an instant success. Forty per cent of reader comments are being

now automatically sorted out by the algorithm, while doubtful cases are reliably passed on to a human moderator."



"Within four weeks, Trendskout had implemented a live test case on the HLN website."

### website implemented." One AI platform for all projects

"There are plans to use the power of artificial intelligence in other places as well." Desruelle continues: "We already have plans to use Trendskout's AI platform to help us with another tricky issue: the HLN paywall."

Currently, our editors put articles behind a paywall based on their own experience. This manual selection is often more like a guessing game than we like. We'd like to see if Trendskout AI can find the recipe for success in selecting premium articles."

"That is exactly the beauty of the Trendskout platform," Minnen continues. "We can work creatively to solve specific business problems without a lot of effort or risky investment. This gives us a distinct advantage in today's competitive media landscape."



**Trendskout**

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