Use Cases - Data

Industry	Domain
Retail	Operations Supply Chain Finance & Accounts Marketing Sales Admin Managing Real Estate IT Support Customer Service
E Commerce	R&D Operations Supply Chain Finance & Accounts Marketing Sales Admin Managing Real Estate IT Support Customer Service

Pharma	R&D Operations Supply Chain Finance & Accounts Marketing Sales Admin Managing Real Estate IT Support Customer Service
Banking & Financial Services	R&D Operations Supply Chain Finance & Accounts Marketing Sales Admin Managing Real Estate IT Support Customer Service
Insurance	R&D Operations Supply Chain Finance & Accounts Marketing Sales Admin Managing Real Estate IT Support Customer Service
Manufacturing	R&D Operations Supply Chain Finance & Accounts Marketing Sales Admin Managing Real Estate IT Support Customer Service
	R&D

ITES	Operations Supply Chain Finance & Accounts Marketing Sales Admin Managing Real Estate IT Support Customer Service
Product	Operations Supply Chain Finance & Accounts Marketing Sales Admin Managing Real Estate IT Support Customer Service
Healthcare	Operations Supply Chain Finance & Accounts Marketing Sales Admin Managing Real Estate IT Support Customer Service
Education	Operations Supply Chain Finance & Accounts Marketing Sales Admin Managing Real Estate IT Support Customer Service
Travel	Operations Supply Chain Finance & Accounts Marketing Sales

	Admin Managing Real Estate IT Support Customer Service
Consulting	Operations Supply Chain Finance & Accounts Marketing Sales Admin Managing Real Estate IT Support Customer Service
Telecom	Operations Supply Chain Finance & Accounts Marketing Sales Admin Managing Real Estate IT Support Customer Service
Government	Operations Supply Chain Finance & Accounts Marketing Sales Admin Managing Real Estate IT Support Customer Service
Fashion	Operations Supply Chain Finance & Accounts Marketing Sales Admin Managing Real Estate IT Support Customer Service

Media & Entertainment	Operations Supply Chain Finance & Accounts Marketing Sales Admin Managing Real Estate IT Support Customer Service

1. Retail

1.1 Research & Development

Behaviour Analytics

When all relevant data is collated and analyzed, it can provide insights that may have never been considered before — for example, recognizing high value customers, their motives behind the purchase, their buying patterns behaviours, and which are the best channels to market to them and when. Having these detailed insights increases the probability of customer acquisition and perhaps drive their loyalty towards the brand.

https://acuvate.com/blog/top-5-predictive-analytics-use-cases-retail-industry/
https://www.kaggle.com/ivy1219/customer-behaviour-observation

1.2 Human Resources

Employee churn prevention

Keeping the employees engaged requires a lot of effort as well. Accurate diagnosis of the employee behavior and enabling alerts highlight the employees at a risk defecting. This allows immediate addressing the satisfaction-related issues and churn prevention.

https://www.kaggle.com/hamzaben/employee-churn-model-w-strategic-retention-plan

1.3 Operations

Inventory Management

A poorly maintained inventory is every retailer's worst nightmare. Not only does it lead to a loss in sales over time, but also represents a poor indicator of inadequate demand for a product. Questions like what to store, what to discard and when to do so can all be answered. No one wants to hold on to products that are not yielding any sales and every retailer wants to keep replenished stocks of items that are popular with consumers. Predictive analytics removes the need to buy and remove stocks of products on a hunch.

https://farrago.ai/top-10-use-cases-for-predictive-analytics-in-retail/
https://github.com/treadwell/IPython-Notebooks/blob/master/Inventory%20Management%20Diagnostic.ipynb

1.4 Supply Chain

Operational Analytics and Supply Chain Analysis

Faster product life cycles and ever-complex operations cause retailers to use big data analytics to understand supply chains and product distribution to reduce costs. Data engineering allows you to quickly combine structured data such as CRM, ERP, mainframe, geo location and public data and combine them with unstructured data. Then, utilizing the right analytical tools, you can use this data to detect outliers, run time series and root cause analyses, and parse, transform and visualize data.

https://www.datameer.com/blog/five-big-data-use-cases-retail/

1.5 Finance and Accounts

Pricing

Pricing is one of the core areas of functionality of predictive analytics where its real-time machine learning and data science comes to the fore. Besides this, Predictive Analytics also takes factors like weather forecasting and real-time sales data into consideration to alter and induce the best pricing.

https://farrago.ai/top-10-use-cases-for-predictive-analytics-in-retail/

1.6 Marketing

Personalized Marketing

This is a system used by retailers to integrate personalized recommendations based on their users browsing history, past purchases, likes, and dislikes. It also lets retailers create highly targeted campaigns that increase ROI. All this is possible if retailers have data and they have the ability to extract meaningful insights from it.

https://data-flair.training/blogs/data-science-in-retail/
https://github.com/Prakhar-FF13/Customer-Analytics

1.7 Sales

Recommendation engines

Recommendation engines proved to be of great use for the retailers as the tools for customers' behavior prediction. The retailers tend to use recommendation engines as one of the main leverages on the customers' opinion. Providing recommendations enables the retailers to increase sales and to dictate trends.

https://activewizards.com/blog/top-10-data-science-use-cases-in-retail/
https://www.kaggle.com/tags/recommender-systems

1.8 Admin

Implementing Augmented Reality

The Retail Industry is slowly adapting to the idea of augmented reality for providing the customers with the experience of the product without actually owning it. The consumers can clear their doubts regarding the color, size, etc before purchasing the product. This helps the customers to be sure and make a better purchasing decision. So, the companies have to bear lesser returns and negative sales.

https://techvidvan.com/tutorials/data-science-in-retail/

Managing Real Estate

Data science can help large retailers optimize their real estate management spendings. Analyzing the maintenance data of different equipment in a building will prevent catastrophic failure events from happening. Retailers can save their money by efficiently using the

expenditure by analyzing historical data and predicting the parts of maintenance. Data science not only establishes a budget but also looks for improvements in properties like shopping malls.

https://data-flair.training/blogs/data-science-in-retail/

1.9 IT Support

Utilizing Social Media

Social Media is much more than just a medium of connecting with your friends. It provides a large amount of customer data to the retailers. Which helps them to understand the purchase pattern, customer behaviors, and trends. But while extracting this data you should not violate the privacy policy of the customers.

https://techvidvan.com/tutorials/data-science-in-retail/

1.10 Customer Service

Offering a smarter customer experience

A consumer expects companies to anticipate their needs, to have the products they want and to communicate with them in real time. This personalization also means offering incentives at the point of sale with loyalty rewards or promotions. The collected personal data also enable companies to send targeted direct mails to customers to boost sales.

https://www.margo-group.com/en/news/data-science-applied-to-the-retail-industry-10-essential-use-cases/
https://www.kaggle.com/general/129435

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2. E-Commerce

2.1 Research & Development

A/B tests using AI

A/B tests enable the product (eg website) to be adapted to consumers. Faster finding optimal options of pages / products through the use of self-learning AI algorithms instead of repetitive and tedious work. It allows online retailers to shorten orders of magnitude from months to days.

https://addepto.com/best-machine-learning-use-cases-ecommerce/

2.2 Human Resources

Fraud Protection

The larger the amount of data, the easier it gets to catch any anomalies. Machine learning can identify patterns in data, identify what's 'normal' behavior and notify admins when something is not 'normal'. The most common application of this is in fraud detection. The problem of customers buying with stolen credit cards, or retracting payments after the item has been delivered, is rampant in e-commerce. Detecting and preventing such fraud is nearly impossible without machine learning that rapidly processes the repetitive data to detect frauds before they happen.

https://blog.3dcart.com/machine-learning-ecommerce-industry
https://www.kaggle.com/arjunjoshua/predicting-fraud-in-financial-payment-services

2.3 Operations

Machine Learning for dynamic pricing in ecommerce

Machine Learning can be very helpful in case of dynamic pricing and can improve your KPI's. This helpfulness comes from ML algorithm ability of learning new patterns from data. Those algorithms continuously learn from new information and detect new demands and trends.

https://addepto.com/best-machine-learning-use-cases-ecommerce/
https://www.kaggle.com/viveknium/dynamic-pricing-with-feature-engineering

2.4 Supply Chain

Supply and Demand Prediction Using Machine Learning

Supply and demand prediction is the evolution of price adjustment combined with the recommender engine. There are various products the interest for which spikes at a specific time, and this is a perfect reason to take advantage of it.

https://theappsolutions.com/blog/development/how-ecommerce-uses-machine-learning/

2.5 Finance and Accounts

Optimized Pricing

Online shoppers are usually very price-sensitive. If a product costs as much as what it does in-store, customers may feel more comfortable going to the store and assessing it first-hand before purchasing it.

https://www.omnisend.com/blog/machine-learning/

2.6 Marketing

Omnichannel Marketing Boosted by Machine Learning

Given that machine learning works based on gathering data and improving algorithms over time as more data is added, your omnichannel marketing strategy can only be made more powerful with this constantly updating data.

https://www.omnisend.com/blog/machine-learning/

2.7 Sales

Image processing

Retailers invest in AI and image recognition systems to influence customers (buyers) behavior and also for process automatization. Investment into computer vision technology with visual search possibilities could help you to match customers photos e.g. with similar clothes sold online.

https://addepto.com/best-machine-learning-use-cases-ecommerce/
https://www.kaggle.com/tags/image-data

2.8 Admin

Improving the quality of the search engine using Machine Learning in Ecommerce

Users use search engines to quickly find what they need. They have less and less time and patience to formulate queries, wait for results and analyze them. That is why there is a need for personalized results of search queries.

https://addepto.com/best-machine-learning-use-cases-ecommerce/

2.9 IT Support

Malicious Returns

A problem that has occurred in e-commerce expansion to a very large scale is malicious returns. Some users buy the products and they return the package by putting fake items. In such cases, it is very hard to figure out whether it is the buyer or seller who supplied the fake product. To avoid such problems, we need to analyse user behaviour with respect to the purchases and then come up with a model which predicts the probability of a return being malicious. If you look closely, the problem is basically a machine learning problem.

https://cloudxlab.com/blog/use-cases-machine-learning-e-commerce/

2.10 Customer Service

Customer Support

In this competitive business environment, customers do not just expect a good product. They also assess the quality of customer support. Machine learning can be used in many ways to help customers and enhance customer satisfaction. A great example is the use of chatbots. Chatbots can identify and resolve issues by conversing with the customer in a natural manner. Machine learning can help businesses offer superior, personalized customer support on a large scale.

https://www.omnisend.com/blog/machine-learning/
https://www.kaggle.com/thoughtvector/customer-support-on-twitter

3. Pharma

3.1 Research & Development

Machine Learning for Clinical Studies and R&D

Finding the right active molecules that work on specific targets (and not on unintended ones) is a common challenge in R&D. Machine Learning is used in conjunction with chemical structures and related data to find the optimal methods of targeting. Algorithms such as deep learning / neural networks and Bayesian Machine Learning are well suited to handling such use cases that may often involve discovering latent factors.

https://www.rxdatascience.com/blog/top-use-cases-for-machine-learning-in-pharma

3.2 Human Resources

Personalized Treatment/Behavioral Modification

Personalized medicine, or more effective treatment based on individual health data paired with predictive analytics, is also a hot research area and closely related to better disease assessment. The domain is presently ruled by supervised learning, which allows physicians to select from more limited sets of diagnoses, for example, or estimate patient risk based on symptoms and genetic information.

https://emerj.com/ai-sector-overviews/machine-learning-in-pharma-medicine/
https://www.kaggle.com/c/msk-redefining-cancer-treatment

Improving Operations & Employee Training

Pharma companies can significantly reduce their costs by improving their existing operations & processes with data insights. By using advanced analytics, pharmaceutical businesses can understand how machine settings, operator training levels, or raw material inputs are going to affect the output quality.

https://polestarllp.com/analytics-in-pharmaceutical-companies

3.3 Operations

Risk-Based Monitoring in Clinical Trials

Risk-Based Monitoring (RBM) allows clinical trials related organisations (eg., CROs) such as IQVIA (Quintiles) to gather critical patient and subject information in real-time and react proactively to prevent adverse events before they occur. The use of machine learning in sensors and connected devices for EDC (Electronic Data Capture), such as devices for ECG, Actigraphy, Oximetry and others have been made possible, largely due to the advent of capabilities in consumer products such as Apple Watch and IOS/Android mobile devices.

https://www.rxdatascience.com/blog/top-use-cases-for-machine-learning-in-pharma
https://www.kaggle.com/ajrwhite/covid-19-clinical-trials-api-access

3.4 Supply Chain

Reduce Cost And Increase Drug Utilization

With increasing pressure on the pharmacy operating margins, it becomes essential to increase the efficiency of the whole process. Granular analysis of key metrics such as average ingredient cost per prescription, rebate as a percentage of total drug spending, drug utilization review savings per member per year, will help pharmaceutical businesses make smarter decisions to increase revenue and reduce costs.

https://polestarllp.com/analytics-in-pharmaceutical-companies

3.5 Finance and Accounts

Clinical Trial Design and Optimization

The most prominent use case for predictive analytics in pharmaceuticals is in the design and optimization of clinical trials. AI software solutions could analyze patient profiles and their medical histories to determine which patients will respond best to the drug being tested. This can help pharmaceutical companies save time when trying to find the best patients to inquire about enrolling in the trial.

https://emerj.com/ai-sector-overviews/predictive-analytics-in-the-pharma-current-applications/
https://www.kaggle.com/allen-institute-for-ai/CORD-19-research-challenge/discussion/140597

3.6 Marketing

Gain improved insight into marketing and sales performance

With increasing competition from generics, Big Pharma is getting smarter about analysing and driving effectiveness in its sales and marketing operations. New, niche and underserved markets may be spotted by analysing information from social media, demographics, electronic medical records and other sources of data. Equally, analysing the effectiveness of sales efforts and capturing the feedback received by the sales force during client visits and using it effectively can help pharmaceutical companies get an edge on their competition.

https://www.iqpc.com/media/1001534/35903.pdf

3.7 Sales

Drive Effective Sales & Marketing Operations

By capturing key data points, new markets can be identified, and the efficiency of the different marketing channels can be analyzed to prioritize efforts and gain a competitive edge. It will help to understand the performance of sales reps; helping to make better & faster decisions.

https://polestarllp.com/analytics-in-pharmaceutical-companies
https://www.kaggle.com/loveall/clicks-conversion-tracking
https://www.kaggle.com/c/competitive-data-science-predict-future-sales

Targeted Marketing and Sales

Drug companies are employing predictive methods to determine which consumers and physicians are most likely to utilize a drug and create more targeted on-the-ground marketing efforts.

https://www.mastersindatascience.org/industry/pharmaceuticals/
https://www.kaggle.com/femisonic/targeted-marketing-campaign-dataset/version/1

3.8 Admin

Patient Finder (or Rare Disease Patient Finder) using Claims Databases

Finding patients in claims databases, such as APLD (Anonymised Patient-Level Data) and Truven Marketscan can be accomplished by identifying patients that show characteristics that are similar to other patients with the same diagnosis codes. For eg., using a cohort of patients who have been confirmed to have diabetes, we can create ML models that can then be applied to other patients to identify potential undiagnosed cases / patients.

https://www.rxdatascience.com/blog/top-use-cases-for-machine-learning-in-pharma

https://github.com/muccg/rdrf

3.9 IT Support

Improve safety and risk management

Signals coming from a range of sources including social media, Google searches, etc. can act as an early warning signal for pharmaceutical companies about product safety issues and pharmaceutical companies have been thinking about how this type of unstructured data can be used more effectively.

https://www.iqpc.com/media/1001534/35903.pdf

3.10 Customer Service

Smart Electronic Health Records

Document classification (sorting patient queries via email, for example) using support vector machines, and optical character recognition (transforming cursive or other sketched handwriting into digitized characters), are both essential ML-based technologies in helping advance the collection and digitization of electronic health information.

https://emerj.com/ai-sector-overviews/machine-learning-in-pharma-medicine/
https://www.kaggle.com/data/92266

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4. Banking/ Financial Services

4.1 Research & Development

Operations, IT & Back-Office

Ever since the digitization of the bank processes IT and back-office support plays a major part in bank operations. Banks either have in-house teams or outsource these processes, in any case keeping a check on them is very crucial to maintain s superior end-consumer experience. Using

BI tools to predict the cash required at each of its ATMs across the country and combining this with route-optimization techniques, the banks can achieve ATM Rationalisation.

https://polestarllp.com/Top-Financial-Services-Banking-Analytics-Use-Cases

4.2 Human Resources

Compliance Requirements

Banking and financial services need to do regular compliance and audit for their data, finance, and other stuff. They come under a regulatory body which requires data privacy, security, etc. Big data analysis can again help in analyzing the data and finding the situation where financial crisis or security issues can occur. This will help the banks and financial sector to save from any compliance and regulatory issues.

https://www.hdfstutorial.com/blog/big-data-use-cases-in-banking-and-financial-services/
https://github.com/ioos/compliance-checker

4.3 Operations

Fraud detection

Machine learning is crucial for effective detection and prevention of fraud involving credit cards, accounting, insurance, and more. Proactive fraud detection in banking is essential for providing security to customers and employees. The sooner a bank detects fraud, the faster it can restrict account activity to minimize loses. By implementing a series of fraud detection schemes banks can achieve necessary protection and avoid significant loses.

https://activewizards.com/blog/top-9-data-science-use-cases-in-banking/
https://www.kaggle.com/c/ieee-fraud-detection

4.4 Supply Chain

Lending, Payment & Transaction Analysis

Banks can proactively harness their customers' transaction data to suggest products or services pertinent to them. It results in better conversion rate and customer satisfaction. Banks can use a BI tool to analyse set of customer-related information

https://polestarllp.com/Top-Financial-Services-Banking-Analytics-Use-Cases

4.5 Finance and Accounts

Risk Management & Investigation

The ever-increasing information about the customers presents an opportunity for the banks to reduce risk or take precautionary steps wherever possible. A BI system can give an early indication of these potential risks and help in mitigating them.

https://polestarllp.com/Top-Financial-Services-Banking-Analytics-Use-Cases

4.6 Marketing

Personalized marketing

The key to success in marketing is to make a customized offer that suits the particular client's needs and preferences. Data analytics enables us to create personalized marketing that offers the right product to the right person at the right time on the right device. Data mining is widely used for target selection to identify the potential customers for a new product.

https://activewizards.com/blog/top-9-data-science-use-cases-in-banking/
https://github.com/IBM/run-campaigns-target-customers

4.7 Sales

Recommendation engines

Data science and machine learning tools can create simple algorithms, which analyze and filter a user's activity in order to suggest to him/her the most relevant and accurate items. Such recommendation engines show the items that might interest the user, even before he searched for it himself. To build a recommendation engine, data specialists analyze and process a lot of information, identify customer profiles, and capture data showing their interactions to avoid repeating offers.

https://activewizards.com/blog/top-9-data-science-use-cases-in-banking/
https://github.com/dipanjanS/practical-machine-learning-with-python/blob/master/notebooks/Ch10_Analyzing_Music_Trends_and_Recommendations/Recommendation%20Engines.ipynb

4.8 Admin

Managing customer data

Banks are obliged to collect, analyze, and store massive amounts of data. But rather than viewing this as just a compliance exercise, machine learning and data science tools can transform this into a possibility to learn more about their clients to drive new revenue opportunities.

https://activewizards.com/blog/top-9-data-science-use-cases-in-banking/

4.9 IT Support

Lifetime value prediction

Customer lifetime value (CLV) is a prediction of all the value a business will derive from their entire relationship with a customer. The importance of this measure is growing fast, as it helps to create and sustain beneficial relationships with selected customers, therefore generating higher profitability and business growth.

https://activewizards.com/blog/top-9-data-science-use-cases-in-banking/
https://www.kaggle.com/shailaja4247/customer-lifetime-value-prediction

Algorithmic trading

This area probably has the biggest impact from real-time analytics since every second is at stake here. Based on the most recent information from analyzing both traditional and non-traditional data, financial institutions can make real-time beneficial decisions. And because this data is often only valuable for a short time, being competitive in this sector means having the fastest methods of analyzing it.

https://www.kdnuggets.com/2018/05/top-7-data-science-use-cases-finance.html
https://www.kaggle.com/c/algorithmic-trading/data

4.10 Customer Service

Customer support

Outstanding customer support service is the key to keep a productive long-term relationship with your customers. As a part of customer service, customer support is an important but broad concept in the banking industry. In essence, all banks are service-based businesses, so most of their activities involve elements of service. It includes responding to customers' questions and

complaints in a thorough and timely manner and interacting with customers. Data science makes this process better automated, more accurate, personal, direct, and productive, and less costly concerning employee time.

https://activewizards.com/blog/top-9-data-science-use-cases-in-banking/

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5. Insurance

5.1 Research & Development

Claims prediction

The insurance companies are extremely interested in the prediction of the future. Accurate prediction gives a chance to reduce financial loss for the company. The insurers use rather complex methodologies for this purpose. The major models are a decision tree, a random forest, a binary logistic regression, and a support vector machine. A great number of different variables are under analysis in this case. The algorithms involve detection of relations between claims, implementation of high dimensionality to reach all the levels, detection of the missing observations, etc. In this way, the individual customer's portfolio is made.

https://activewizards.com/blog/top-10-data-science-use-cases-in-insurance/
https://www.kaggle.com/c/claim-prediction

5.2 Human Resources

Smarter Labor and Finance

With the help of real-time analysis, insurers now can make daily adjustments to premium rates, premium strategies and underwriting limits by combining internal data (policy, regulations) with external data (social media, press, analyst comments) in order to optimize their finances and instant payouts. Overall, big data is undoubtedly a tool that brings positive outcomes such as enhanced customer experience, innovative products and better risk management leading the insurance industry to make better strategic decisions.

https://www.exastax.com/big-data/top-7-big-data-use-cases-in-insurance-industry/

5.3 Operations

Customer Insights

Gaining customer insight with big data analytics not only provides predictions about when a customer is likely to leave, or shapes a customer's policy; it can also help insurers to develop trusted relationships and engage customers in the right way with the accurate information. As a result of this strategic learning, insurers achieve positive outcomes such as solving customer problems real-time with the right approach and also upselling/ cross-selling products.

https://www.exastax.com/big-data/top-7-big-data-use-cases-in-insurance-industry/
https://www.kaggle.com/carrie1/customer-insights

5.4 Supply Chain

Automation

Insurers used to automate simple processes such as compliance checks, data entry, or repetitive tasks that require less-initiative taking skills. With the rise of big data technologies, these simple tasks gave way to more complicated skills; such as loan underwriting, reconciliation, property assessment, claims verification, receiving customer insights, customer interactions (chatbots) and fraud detection to name a few. With a move towards more intelligent automation, insurers can save a vast amount of time and money with the help of machine learning which trains data to improve algorithms and of course predictive analysis.

https://www.exastax.com/big-data/top-7-big-data-use-cases-in-insurance-industry/

5.5 Finance and Accounts

Price optimization

Price optimization procedure is a complex notion. Therefore it uses numerous combinations of various methods and algorithms. Despite the fact that it is still the disputable issue of applying this procedure for insurance, more and more insurance companies adopt this practice.

https://activewizards.com/blog/top-10-data-science-use-cases-in-insurance/

5.6 Marketing

Automating life-event marketing

Under conditions of the highly-competitive insurance market, the insurance companies face the everyday struggle to attract as many customers as possible via multiple channels. Thus, the companies need to use comprehensive marketing strategies to achieve their goals. The automated marketing reaches its peak in this respect. Tracking the customer moving through the life cycle, the insurance companies guarantee themselves a constant flow of clients matching a wide range of their suggestions.

https://activewizards.com/blog/top-10-data-science-use-cases-in-insurance/

Customer segmentation

Modern technologies have brought the promotion of products and services to a qualitatively new level. Different customers tend to have specific expectations for the insurance business. Insurance marketing applies various techniques to increase the number of customers and to assure targeted marketing strategies. In this regard, customer segmentation proves to be a key method.

https://activewizards.com/blog/top-10-data-science-use-cases-in-insurance/
https://www.kaggle.com/fabiendaniel/customer-segmentation

5.7 Sales

Policy Recommendation Engines

We have already learned that data science can assist insurers in developing personalized products which are more appealing to the customers. Recommendation engine algorithm can spot the preferences and peculiarities in a customer's choices from their account activity and instantly recommend personalized products to increase the upselling and cross-selling revenue.

https://nuvento.com/blog/data-science-use-cases-in-insurance-industry/

5.8 Admin

Risk Assessment

Risk assessment can significantly reduce the losses in insurance. Insurance underwriting is one area where risk assessment solutions can be implemented to reduce the losses. The underwriter's ability to identify the risks involved in insuring a customer or an asset will impact the business directly. Data science can pave way for AI and cognitive analytics enabled systems that can analyse the policy documents of a customer and identify the optimal premium

amount and coverage amount that can be proposed for that policy. This will significantly enhance the efficiency of underwriters and low risk policies can be quickly processed.

https://nuvento.com/blog/data-science-use-cases-in-insurance-industry/
https://www.kaggle.com/kvsivasankar/home-credit-default-risk-assessment

5.9 IT Support

Personalized Product Development

Digitization in insurance has enabled the insurers to extract valuable insights from the vast amount of demographic data, preferences, interactions, behavior, lifestyle details, interests, etc of the customers using artificial intelligence and advanced analytics. Customers love personalized policy offerings which suit their needs and lifestyle. Data science can provide detailed insights about product features and pricings that a customer segment finds appealing. The ability to develop such personalized products that suit the requirement of customer segments is what differentiates insurTechs from traditional insurance providers.

https://nuvento.com/blog/data-science-use-cases-in-insurance-industry/

5.10 Customer Service

Claim Segmentation and Triage Analytics

Claim segmentation and triage analysis is the process of analysing the complexity involved in each claim and assigning them a score based on the complexity level. This process largely helps the insurance companies to reduce the claim processing time by fast tracking the low complex claims and assigning the more complex claims to a suitable adjuster who have experience to deal with the complexity. This solution will also help insurers to efficiently utilize the claim adjusters.

https://nuvento.com/blog/data-science-use-cases-in-insurance-industry/

6. Manufacturing

6.1 Research & Development

Predictive analytics

Predictive analytics is the analysis of present data to forecast and avoid problematic situations in advance. Manufacturers are deeply interested in monitoring the company functioning and its high performance. Finding the best possible way to hold problematic issues, overcoming difficulties or preventing them from happening at all are marvelous opportunities for the manufacturers using predictive analytics. The implementation of predictive analytics allows dealing with waste (overproduction, idle time, logistics, inventory, etc.). Therefore, let's concentrate on the possible solutions brought by predictive analytics.

https://www.kdnuggets.com/2019/03/top-8-data-science-use-cases-manufacturing.html
https://www.kaggle.com/c/mercedes-benz-greener-manufacturing

6.2 Human Resources

Enterprise and Plant-Wide Sustainability

Many manufacturers are setting ambitious goals to reduce costs and save energy, including the complex calculations required for reducing overall carbon emissions. Global food manufacturers like Pepsico. have made sustainability and efficiency a key part of their long term strategy. By managing their supply chain and estimating their own energy usage, they use data science to meet and exceed these goals.

https://www.sensrtrx.com/how-is-data-science-used-in-manufacturing-companies/

6.3 Operations

Robotics, Automation and Smart Factory Design

The big push for automation means big investment. Engineers and systems integrators depend on data science to chart the path and make sure this investment will provide significant productivity gains. Data scientists crunch numbers to determine with engineers the best opportunities for cost savings on the line. For manufacturers investing millions in robotics and other automation, ensuring an ROI means they confidently implement industry 4.0 technology.

https://www.sensrtrx.com/how-is-data-science-used-in-manufacturing-companies/

6.4 Supply Chain

Demand forecasting and inventory management

Demand forecasting is a complex process involving analysis of data and massive work of the accountants and specialists. Moreover, it appears to have strong relations with inventory management. A simple fact may explain this interrelation - demand forecasting uses the data of the supply chain. Demand forecasting and inventory management take into account numerous factors, among which are external factors like the economy or markets, raw material availability, etc. In this way, you can get a more complex view of your manufacturing business performance and further planning.

https://www.kdnuggets.com/2019/03/top-8-data-science-use-cases-manufacturing.html
https://www.kaggle.com/c/grupo-bimbo-inventory-demand/discussion/21725

6.5 Finance and Accounts

Price optimization

Manufacturing and selling the product involves taking into account numerous factors and criteria influencing the product price. All the elements starting with the initial price of the raw material and up to the distribution costs contribute in the final product price. And what happens when the customer finds this price too high or too low? Price optimization is the process of finding the best possible price both for manufacturer and customer, not too high and not to low. Modern price optimization solutions can increase your profit efficiently. These tools aggregate and analyze pricing and cost data both from the internal sources and those of your competitors and derive optimized price variants. Under conditions of highly-competitive market and changes in customers' needs, price optimization becomes a must and grows into a continuous process.

https://www.kdnuggets.com/2019/03/top-8-data-science-use-cases-manufacturing.html

Marketing
Sales

6.8 Admin

Warranty analysis

The manufacturers spend a considerable amount of money every year on supporting warranty claims. Warranty claims disclose valuable information on the quality and reliability of the product. They help to reveal early warnings or defects of the product. Using this data, the manufacturer can make improvements to the existing products or develop new ones, more effective and efficient. Modern warranty analytics solutions help manufacturers to process vast volumes of warranty-related data from various sources and to apply this knowledge to discover where the warranty issues are rising and the reasons for their occurrence.

https://www.kdnuggets.com/2019/03/top-8-data-science-use-cases-manufacturing.html
https://www.kaggle.com/c/warranty-claims

6.9 IT Support

Fault prediction and preventive maintenance

Both these prediction models are aimed at forecasting the moment when the equipment fails to perform the task. As a result, the secondary goal may be achieved - to prevent these failures from happening or at least to reduce their number. This becomes possible due to the numerous predictive techniques.

https://www.kdnuggets.com/2019/03/top-8-data-science-use-cases-manufacturing.html

6.10 Customer Service

Improve product quality

Product quality maintenance is of top priority for manufacturers. Most of them already have the data needed to significantly improve quality levels and reduce quality-related costs, but just very few of them can connect their data sources in a way that it would provide actionable insights. Production line quality can also be significantly enhanced with big data analytics. Sensor data analysis can detect manufacturing defects early, which reduces the time and cost related to adjusting the production processes.

https://www.actify.com/industry-topics/10-big-data-use-cases-manufacturing/

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7. ITES

7.1 Research & Development

Risk Modeling

Risk comes in a number of forms, and can originate from a variety of sources. Predictive analytics can glean potential areas of risk from the massive number of data points collected by most organizations, and sort through them to identify potential areas of risk, and trends in the data that suggest the development of situations that can affect the business and bottom line. By combining these analytics with a cogent risk management approach, companies can capture and quantify risk issues, evaluate them, and decide on a course of action to mitigate those risk factors deemed most critical.

https://xmpro.com/10-predictive-analytics-use-cases-by-industry/

7.2 Human Resources

Sentiment Analysis

It's very difficult to be everywhere at all times, especially in the online world. Likewise, capturing and reviewing everything that's said about your company or organization is virtually impossible. However, by combining web search and crawling tools with customer feedback and posts, you can create analytics that give you a picture of your organization's reputation within your key markets and demographics, and provide you with proactive recommendations as to the best ways to enhance that reputation.

https://xmpro.com/10-predictive-analytics-use-cases-by-industry/
https://www.kaggle.com/janiobachmann/evaluating-customer-service-sentiment-analysis

7.3 Operations

Churn Prevention

When a business loses customers, it needs to bring new customers in to replace the loss in revenue. And that can get very expensive, because the costs of new customer acquisition is usually much more expensive than existing customer retention. Predictive analytics help to prevent churn in your customer base, by identifying signs of dissatisfaction among your

customers, and identify those customers or customer segments that are at the most risk for leaving. Using that information, companies can then make the necessary changes to keep those customers happy and protect their revenue.

https://xmpro.com/10-predictive-analytics-use-cases-by-industry/
https://www.kaggle.com/kmalit/bank-customer-churn-prediction

7.4 Supply Chain

Predictive Maintenance

In many industries, containing costs is as valuable a strategy and increasing revenue. And for companies with a major investment in infrastructure and equipment, the ability to manage that capital outlay is critical. By analyzing metrics and data related to the lifecycle maintenance of technical equipment, companies can predict both timelines for probable maintenance events and upcoming capital expenditure requirements, allowing them to streamline their maintenance costs and avoid critical downtime.

https://xmpro.com/10-predictive-analytics-use-cases-by-industry/

7.5 Finance and Accounts

7.6 Marketing

Customer Lifetime Value

One of the more difficult things to do in marketing is to identify those customers that are going to spend the most money, in the most consistent way and over the longest period of time. This kind of insight allows companies to optimize their marketing to increase their share of that segment of the business, and gain those customers that will have the greatest lifetime value to your company.

https://xmpro.com/10-predictive-analytics-use-cases-by-industry/
https://www.kaggle.com/dhimananubhav/e-commerce-predicting-customer-lifetime-value

7.7 Sales

Customer Segmentation

Different companies define their markets differently, and segment their markets according to those aspects that offer the most value to their particular industry, products and services. A good use of predictive analytics is to identify target markets based on real data and indicators, and further identify the segments of those markets that are most receptive to what your company offers. This same data can also help to identify segments and potentially even entire markets that you didn't even realize existed.

https://xmpro.com/10-predictive-analytics-use-cases-by-industry/
https://github.com/jalajthanaki/Customer_segmentation

7.8 Admin

Product Propensity

Product propensity analytics combine data on purchasing activities and behavior with online behavior metrics from things like social media and e-commerce, and perform correlations of that data to provide insight into the effectiveness of different campaigns and social media channels when it comes to your company's products and services. This allows your company to predict not only what customers are more likely to buy your products and services, but what channels are most likely to reach those customers, allowing you to maximize those channels that have the best chance of producing significant revenue.

https://xmpro.com/10-predictive-analytics-use-cases-by-industry/

7.9 IT Support

Next Best Action

Defining your primary market segments and customers is a critical use case for predictive analytics. But that only provides an incomplete picture of what your marketing approach should be. Analytics can also provide insight on the best way to approach individual customers within those segments, by analyzing everything from buying patterns to consumer behavior to social media interactions, giving you insight into the best times and channels to connect to those customers.

https://xmpro.com/10-predictive-analytics-use-cases-by-industry/
https://towardsdatascience.com/next-best-action-prediction-with-text-and-metadata-building-an-agent-assistant-81117730be6b

7.10 Customer Service

Quality Assurance

Quality control is key to not just the customer experience, but also to your bottom line and operational expenses as well. Over time, inefficient quality control will affect your customer satisfaction, buying behaviors, and ultimately impact revenues and market share. And the costs don't stop there. Poorer quality control leads to more customer support costs, warranty issues and repairs, and less efficient manufacturing. Good predictive analytics, however, can provide insight into potential quality issues and trends before they become truly critical issues.

https://xmpro.com/10-predictive-analytics-use-cases-by-industry/
https://www.kaggle.com/edumagalhaes/quality-prediction-in-a-mining-process

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8. Product

8.1 Research & Development

Image/Speech/ Character Recognition

Machine Learning uses iterative and redundant algorithms to learn data and allows systems to find information, hidden values that are not programmed. The repetitive aspect of Machine Learning is important because when these models are exposed to new data, they can adapt easily. Machine Learning and Data Science can apply easily to a large set of datasets to perform face recognition and speech recognition.

https://www.newgenapps.com/blog/5-amazing-use-cases-of-data-science/

8.2 Operations

Energy Management

To be honest, we exist in a scenario where the primary concerns related to energy are optimization, distribution, and building automation. Data Analytics comes to play here and concentrates on controlling and monitoring the dispatch crew or the network devices.

https://www.newgenapps.com/blog/5-amazing-use-cases-of-data-science/

8.3 Supply Chain

8.4 Finance and Accounts

Credit Scoring

Being one of the most traditional applications of data science, credit scoring was introduced in 1989 with a FICO score. The score is still one widely used score for peer to peer lending though new machine learning algorithms and capture innovative factors that traditional scoring absolutely cannot.

https://www.newgenapps.com/blog/5-amazing-use-cases-of-data-science/
https://www.kaggle.com/ajay1735/my-credit-scoring-model

8.5 Marketing

Customer churn prevention

Acquiring a customer is a challenging task. Keeping the customer engaged requires a lot of effort as well. Accurate diagnosis of the customer's behavior and enabling alerts highlight the customers at a risk defecting. Smart data platforms can bring together customer transactions data and data from real-time communication streams to disclose the insights concerning customers feelings about the services. This allows immediate addressing the satisfaction-related issues and churn prevention.

https://www.kaggle.com/blastchar/telco-customer-churn

8.6 Sales

8.7 Admin

8.8 IT Support

8.9 Customer Service

Gaming

Gaming giants like EASports, Zynga, Nintendo, and others have realized the importance of machine learning and how this tech can elevate their domain. It certainly escalates the gaming experience to another level. Games are now developed using Machine Learning algorithms so that they can upgrade as the user moves to higher levels.

https://www.newgenapps.com/blog/5-amazing-use-cases-of-data-science/

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9. Healthcare

9.1 Research & Development

Improve Diagnostic Accuracy

A recent survey has pointed out that 12 million adult patients in the US are misdiagnosed each year and 10% of deaths occur due to diagnostic errors. By unlocking the power of big data and analytics, healthcare providers can improve diagnostic accuracy and decrease mortality rates. Many data analytics companies now offer solutions to providers by making use of innovative data science technologies and machine learning algorithms to improve diagnostic accuracy. Predictive analytics methods analyze the historical data including patient data, clinical notes, symptoms, habits, diseases, genome structure, etc. to accurately predict the outcomes.

https://mobisoftinfotech.com/resources/blog/data-science-in-healthcare-use-cases/
https://www.kaggle.com/tentotheminus9/so-you-have-a-diagnostic-test-result

9.2 Human Resources

Make Use of EHR More Effective

Electronic Health Records are the systematic collection of patient data in digital format which can be made accessible anytime for authorized users. According to the latest data available, more than 95% of hospitals and nearly 90% of office-based physicians have already adopted an EHR system. The availability of digital versions of patient information has been a revolutionary change in the healthcare industry, and perhaps one of the widespread applications of big data.

https://mobisoftinfotech.com/resources/blog/data-science-in-healthcare-use-cases/

Simplify Internal Staffing Process

Staff managers in any healthcare organization find it challenging to determine the number of staff required at any given time. If the number of staff is more than what is needed, it contributes to loss of labor, and it leads to poor customer service reviews if the staff is less. By taking advantage of predictive analysis, it is possible to determine how many patients would be at the hospital daily and even hourly. This helps to streamline the whole process of staff management which leads to reduced waiting time for patients and improved quality of care.

https://mobisoftinfotech.com/resources/blog/data-science-in-healthcare-use-cases/
https://www.kaggle.com/c/intercampusai2019

9.3 Operations

Analyze Medical Images Efficiently

Another major area that benefits out of big data and analytics is medical imaging. It is estimated that each year about 600 million imaging procedures are performed in the US alone. It is hardly possible to store all this data manually without digital storage systems. The deep-learning algorithms are used to figure out the difference in modality, resolution, dimension of medical images obtained through X-ray, mammography, tomography, and other medical imaging techniques. This helps physicians to improve diagnostic accuracy, detect diverse conditions, and assist in finding better treatment options. Data science technologies are already being used in detecting tumors, artery stenosis, organ delineation, etc.

https://mobisoftinfotech.com/resources/blog/data-science-in-healthcare-use-cases/

9.4 Supply Chain

Reduce Visits to Doctor

With the help of artificial intelligence, mobile applications are capable of providing necessary healthcare support now. Patients can describe the symptoms, ask queries, and take tips and suggestions from the intelligent chatbots anytime instead of waiting for the doctor's appointment. It gives timely reminders about the medicines and treatment strategies and even helps in fixing an appointment with the doctor. AI-based apps are beneficial for both patients and physicians. While it saves time for physicians and they can attend more critical cases, patients get round-the-clock assistance. It assists the patient in following a healthy lifestyle which eventually leads to better health outcomes.

https://mobisoftinfotech.com/resources/blog/data-science-in-healthcare-use-cases/
https://www.kaggle.com/joniarroba/noshowappointments

9.5 Finance and Accounts

Managing customer data

In the data management area, machine learning allows the creation of comprehensive registers of medical data, where all the paperwork will be transferred to a much more promising digital form. The whole medical history of a person will be stored in one system. Techniques like the support vector machines and optical character recognition are great helpers in such digitalization. The constantly improving machine learning algorithms will make it possible to use and exchange the information to aid diagnostics and treatment decisions, a huge contribution using simple data. Next, comes the introduction of electronic cards for each patient, which would be available to every doctor who deals with different cases.

https://activewizards.com/blog/top-7-data-science-use-cases-in-healthcare/

9.6 Marketing

9.7 Sales

9.8 Admin

Reduce Risks in Prescription Medicine

Apart from contributing to diagnostic accuracy, data science technology is helping to reduce the risks involved in prescription medicine as well. When a drug is prescribed to the patient, deep-learning algorithms verify it with the available databases and alert the physician if it deviates from the standard treatment procedures. This benefits the healthcare provider by

enhancing better health outcomes and avoiding lethal complications associated with faulty prescriptions.

https://mobisoftinfotech.com/resources/blog/data-science-in-healthcare-use-cases/

9.9 IT Support

Create Effective Pharmaceutical Drugs in a Shorter Period

Finding a new pharmaceutical drug requires multiple processes and numerous testings, and a lot of time and money. It takes 12 years and US$350 million for a new drug to reach the pharmacy from the lab. With the advent of big data analytics, researchers can simplify and shorten this process. Furthermore, computational drug discovery is combined with genetic research to understand how chemical compounds react to possible combinations of different cell types, genetic mutation, etc. Thus, data science applications are a catalyst to a new era of pharmaceutical research.

https://mobisoftinfotech.com/resources/blog/data-science-in-healthcare-use-cases/

9.10 Customer Service

Improve Patient Engagement

Today's healthcare organizations follow a value-based care approach, and patient engagement plays a significant role in it. Hence it has become a top priority for healthcare providers to increase patient participation in the treatment plan. They invest primarily in developing strategies to meet the expectations of the tech-savvy patient community. Big data analytics can be effectively put into action by healthcare providers to ensure that patients actively participate in their care. Machine learning, artificial intelligence, and natural language processing can be used to draw actionable insights and develop predictive risk scores to improve care coordination. It primarily works with people who undergo chronic disease management plans.

https://mobisoftinfotech.com/resources/blog/data-science-in-healthcare-use-cases/
https://www.kaggle.com/c/bumedumo

Providing Virtual Assistance

With the help of the disease predictive modeling, data scientists have developed a comprehensive virtual platform that provides assistance to the patients. With the help of these platforms, a patient can enter his or her symptoms in the input and get insights about the various possible diseases based on the confidence rate.

https://data-flair.training/blogs/data-science-in-healthcare/

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10. Education

10.1 Research & Development

Using Data to Spot Plagiarism

Entire campuses and individual professors work hard to foster cultures of honesty among students. At some colleges, incoming learners sign honor codes to pledge that they won't cheat on tests or plagiarize when writing papers. Getting a reputation as a place where plagiarism is common hurts universities because it gives the impression they don't enforce rules to provide all students with a level playing field by weeding out the dishonest people. Today's intentional plagiarists use advanced techniques that go far beyond copying a passage of text from somewhere and tweaking it slightly. But data science and machine learning algorithms can make comparisons through a process called text mining. This approach allows educators to spot likely instances of plagiarism even when pieces of content seem unique at the surface level.

https://towardsdatascience.com/5-ways-data-science-is-improving-higher-education-b5bf402d50c4

10.2 Human Resources

Better Assessment of Teachers

Data Science in Education makes it easy for administrators to keep an eye on the activities and teaching methods of the teachers. This helps them in identifying the most effective teaching methodologies. The data can be analyzed in different ways to draw some meaningful insights that show the strong and weak areas of the teachers. This helps them improve accordingly. The analysis can be performed on the data collected from the student attendance records, results, feedback, etc.

https://techvidvan.com/tutorials/data-science-in-education/
https://www.kaggle.com/brarajit18/student-feedback-dataset

10.3 Operations

Improve Adaptive Learning

Every student is unique in his own way and has a different way of learning things. Thus, it becomes quite a difficult task for the educational organizations to select the methods to adapt in the classroom that will be best for all the students. Now, Big Data and Data Science can help the teachers to employ adaptive learning techniques. Big data can help teachers to discover the abilities of the students and use optimal teaching techniques according to them.

https://techvidvan.com/tutorials/data-science-in-education/

10.4 Supply Chain

Regular Updates in the Curriculum

Education is a very vast field and is only evolving with time. The main aim of the various educational institutions is to prepare their students to face the challenges of this competitive era. For this purpose, they need to keep themselves updated with the requirements of the market to design a better and efficient curriculum for their students. Thus, Educational organizations are moving towards Data Science for gaining insights from the data. And, for predicting future market trends and demand to provide the necessary knowledge to the students.

https://techvidvan.com/tutorials/data-science-in-education/

10.5 Finance and Accounts

Better Parent Involvement

The teachers can use a large amount of student data and apply various analytic methods for evaluating the performance of students. This helps to inform their parents about the issues that might affect their child's performance in different areas such as academics, sports, etc. This information can help the parents to keep an eye on their child's activities. The analysis not only helps the parents but also the institutions to take different initiatives for improving the educational system for enhancing the student learning experience.

https://techvidvan.com/tutorials/data-science-in-education/
https://www.kaggle.com/aljarah/xAPI-Edu-Data

10.6 Marketing

Digging Into Data for Better Alumni Engagement

Communicating with university alumni to encourage them to donate is an essential practice for most universities. Representatives know that financial support is instrumental in helping the campuses stay appealing to current and prospective students. But the people tasked with reaching out for donations could quickly get off track by spending too much time talking to individuals who are not likely to give. Applying data science to fundraising efforts could help universities succeed by figuring out the factors associated with the most generous alumni donors. Having that information should make it easier for universities to plan more enticing events for the alumni, as well as aid in crafting more appropriate messages in donation request materials.

https://towardsdatascience.com/5-ways-data-science-is-improving-higher-education-b5bf402d50c4

10.7 Sales

Career Prediction

Further, diving intensely into the performance report of the student will assist the authority with understanding his or her improvement and their weaknesses and strengths. The reports will recommend the regions in which a student is interested and this will help to know he/she can seek a profession in which field. In case that a student is enthusiastic about taking in a specific subject, at that point the decision ought to be valued and the student ought to be urged to follow what they desire to follow.

https://www.newgenapps.com/blog/5-dramatic-impacts-of-big-data-on-education/
https://www.kaggle.com/c/ci-nba-career-prediction

10.8 Admin

Improve Student's Performance

Data Science in Education helps you to have central control over the complete student data for evaluating the performance of the students and take suitable actions. This analysis will help you

to make the changes that will benefit the students and will help them in all possible ways to solve their problems.

https://techvidvan.com/tutorials/data-science-in-education/

10.9 IT Support

Student Recruitment

The Educational Institutes can use the student data for discovering the educational programs that are best suited for the students for attracting a large number of students to their institute. Data Scientists can help the institutions to understand the student requirements and provide the best possible facilities.

https://techvidvan.com/tutorials/data-science-in-education/
https://www.kaggle.com/kianwee/data-analysis-campus-recruitment

10.10 Customer Service

Better Organization

From the organizational perspective, the various Data Science techniques can help the Schools, Colleges, and Universities to better plan and organize their actions. Being better organized will also help them to make some important decisions concerning business operations. The different Data Science tools can help educational organizations to reshape their strategies.

https://techvidvan.com/tutorials/data-science-in-education/

11.Travel

11.1 Research & Development

Video, image, and voice recognition systems for travel purposes

Our human brains respond to stimuli coming from different senses. They are better adapted to understand natural forms of communication like images of sounds rather than textual written information. With the development of Deep Learning and other AI algorithms, the processing of this unstructured data is not Sci-Fi anymore. Machines are now able to understand images and sounds, and in some cases, even better than the human brains. This brings new opportunities for applications in the travel industry: from inspiration (where to go?) to automation of reservations.

https://amadeus.com/en/insights/blog/5-examples-predictive-analytics-travel-industry

11.2 Human Resources

Alerting and monitoring

The travel industry generates a huge volume of data. For example Amadeus processes more than 1 billion transactions per day in one of its data centres. New aircraft have close to 6,000 sensors generating more than 2 Tb per day. Obviously this data cannot be analysed by human beings. Using supervised machine learning algorithms, known defects can be anticipated when a combination of factors are observed much like how a set of symptoms helps doctors diagnose a particular disease (with some probability). On the other hand, unsupervised learning algorithms have helped detect anomalies to generate alerts when some data observation becomes suspiciously rare.

https://amadeus.com/en/insights/blog/5-examples-predictive-analytics-travel-industry

11.2 Operations

Flight fare and hotel price forecasting

Flight fares and hotel prices are ever-changing and vary greatly depending on the provider. No one has time to track all those changes manually. Thus, smart tools which monitor and send out timely alerts with hot deals are currently in high demand in the travel industry.

https://www.altexsoft.com/blog/datascience/data-science-and-ai-in-the-travel-industry-9-real-life-use-cases/
https://www.kaggle.com/stevezhenghp/airbnb-price-prediction

11.3 Supply Chain

Sentiment analysis in social media

According to Amadeus, 90 percent of US travelers with a smartphone share their experiences and photos in social media and reviews services. TripAdvisor has 390 million unique visitors and 435 million reviews. Every minute, about 280 traveler reviews are submitted to the site. This is a large pool of valuable data that brands can analyze to improve their services. While conventional statistical analysis of reviews subsets is possible, the computing power and underlying machine learning techniques allow for analyzing all brand-related reviews.

https://www.altexsoft.com/blog/datascience/data-science-and-ai-in-the-travel-industry-9-real-life-use-cases/
https://www.kaggle.com/seunowo/sentiment-analysis-twitter-dataset

Targeted offerings to address travel disruptions

Disruptions in travel, such as flight cancellation, can offer unexpected opportunities for hotel owners. After the worst winter of 2013, when 500 flights in the US were canceled every day, in March 2014, American hotel chain Red Roof Inn launched an event-based campaign. The hotel used public datasets on flight cancellations and weather information. The data were gathered via an API and processed through a conditional algorithm. With this data, hotel chain predicted canceled flights and targeted their advertising to travelers in areas that were likely to be affected. The brand`s paid mobile search campaign offered potential guests searching for last-minute booking ads with information about rooms and distance from an airport to an inn.

https://www.altexsoft.com/blog/datascience/data-science-and-ai-in-the-travel-industry-9-real-life-use-cases/

Optimising pricing strategies

As more players inundate the market, businesses are turning to predictive analytics to identify the optimum price for their service that will keep them competitive while also satisfying customers. These algorithms also factor in influential considerations such as industry trends, travel seasons, popular destinations, timings and demand. Higher volumes of customer data make finding these insights easier and more accurate and the integration with other technologies used for marketing and promotions increase revenue for travel providers.

https://www.mygreatlearning.com/blog/what-are-the-use-cases-for-the-predictive-analytics-in-the-travel-industry/

11.4 Finance and Accounts

UX personalization in airlines

According to the McKinsey 2016 report, travel companies and airlines, in particular, have 23x greater likelihood of customer acquisition, 6x customer retention, and 19x larger likelihood of profitability if they are data-driven. And the use cases of data science in the airline industry abound. While most of them relate to disruption management and delay predictions, some are purely oriented toward UX personalization. United Airlines, for instance, used to have a “collect and analyze” approach to their data. But now they’ve adopted a revamped version of this principle. Since 2014, they have applied “collect, detect, act” methods when working with their landing pages.

https://www.altexsoft.com/blog/datascience/data-science-and-ai-in-the-travel-industry-9-real-life-use-cases/

11.5 Marketing

Tailored offers for MVCs (most valuable customers)

The importance of loyalty programs for the travel and hospitality industry continues to grow. In 2016, the number of loyalty program members for major hotels chains increased by 13.1 percent (an estimated 344 million members). As this number will only increase, travel agencies and hotels already have enough legacy data from loyalty programs to apply the AI-based personalization. The members of loyalty programs, i.e. most valuable customers, are those users that the travel industry players should focus on first to avoid churn. And this is the low-hanging fruit for the machine learning application

https://www.altexsoft.com/blog/datascience/data-science-and-ai-in-the-travel-industry-9-real-life-use-cases/

11.6 Sales

Recommendation engines

Possibly the most mainstream use case for data science, some recommendation solution is currently incorporated in 99% of all successful products. Similar to personalized content suggestions on Netflix or the “Featured Recommendations” box on Amazon, online travel booking providers often provide tailored suggestions, based on your recent searches and bookings.

https://www.altexsoft.com/blog/datascience/data-science-and-ai-in-the-travel-industry-9-real-life-use-cases/

https://github.com/IBM/product-recommendation-with-watson-ml

Niche targeting & unique selling propositions

Data science isn't reserved for the big brands only. Smaller travel companies can leverage their existing data sets to become the best within their niche, instead of competing for every/any kind of customer.

https://www.vertical-leap.uk/blog/data-science-travel-industry/

11.7 Admin

Customer support

Not unlike personal travel assistants and intelligent disruption management, airlines can utilize the power of artificial intelligence to streamline the customer support process. Especially now, when almost half of all consumers agree that the speed of response to an inquiry is the most important component of successful customer service.

https://www.altexsoft.com/blog/datascience/data-science-and-ai-in-the-travel-industry-9-real-life-use-cases/
https://www.kaggle.com/c/santander-customer-transaction-prediction

11.8 IT Support

Optimized disruption management

While the previous case is focused mostly on planning trips and helping users navigate most common issues while traveling, automated disruption management is somewhat different. It aims at resolving actual problems a traveler might face on his/her way to a destination point. Mostly applied to business and corporate travel, disruption management is always a time-sensitive task, requiring instant response. While the chances to get impacted by a storm or a volcano eruption are very small, the risk of a travel disruption is still quite high: there are thousands of delays and several hundreds of canceled flights every day.

https://www.altexsoft.com/blog/datascience/data-science-and-ai-in-the-travel-industry-9-real-life-use-cases/

11.9 Customer Service

Intelligent travel assistants

As convenience is the king in today's world, smart concierge services, powered by artificial intelligence (AI) are gaining momentum in various industries. Travel booking is only one of the areas being heavily automated by algorithms. Intelligent programs, trained to perform a certain task on a user's request are usually referred to as "bots" or "chatbots." With the top four chat apps having over 4 millions of monthly active users just for April 2018, instant messaging platforms are widely adopted by some prominent brands as a great way to reach out to the clients and build better customer relations.

https://www.altexsoft.com/blog/datascience/data-science-and-ai-in-the-travel-industry-9-real-life-use-cases/
https://www.kaggle.com/tags/travel

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12. Consulting

12.1 Research & Development

12.2 Human Resources

12.3 Operations

Improved production efficiency

Fight low overall equipment effectiveness (OEE) by identifying the root causes for availability, performance and quality losses. We can apply machine learning techniques to achieve predictive maintenance, undisrupted functioning, and enhanced product quality.

https://www.scnsoft.com/services/data-science

12.4 Supply Chain

Optimized supply chain management

Data scientists can apply an ARIMA model or a deep neural network to generate reliable demand predictions. They can build neural networks or apply ML algorithms, such as hierarchical clustering and multi-class support vector machines, to evaluate suppliers and assess the risks associated with each of them.

https://www.scnsoft.com/services/data-science

12.5 Finance and Accounts

12.6 Marketing

12.7 Sales

Sales effectiveness

Can implement machine learning-based lead and opportunity scoring so that the sales team adheres to the chosen business strategy, as well as wisely prioritizes their efforts. Besides, create a machine learning model to make communication with customers stellar. Trained to detect attitude markers and recognize your customers' mood, the model will signal sales team if a particular customer experiences negative emotions.

https://www.scnsoft.com/services/data-science

12.8 Admin

Customer behavior prediction

Apply machine learning algorithms to provide accurate predictions of customers' behavior. For example, to assess whether it's likely that your customer is a late payer, how they will react to price changes or to promotions. Also identify potential churners so that we can design the strategies to prevent their loss.

https://www.scnsoft.com/services/data-science
https://www.kaggle.com/sangameshks/customer-behavior-prediction

12.9 IT Support

Predictive maintenance

Data scientists can analyze the data from sensors installed at monitored machinery parts to understand the patterns in machinery functioning so that you could plan its maintenance more efficiently. One of the ways to solve this task is to apply Naïve Bayes algorithm to classify normal and pre-failure events. To get more insights, we can further classify the cases based on the time left until a breakdown. For instance, a failure that can happen within 24 hours gets a red color, a failure within 24h – 72h – yellow, a failure in more than 72h – green color.

https://www.scnsoft.com/services/data-science

12.10 Customer Service

Personalized customer experience

Applying machine learning techniques, such as collaborative or content-based filtering (or both of them combined), we can design a recommendation engine to boost the sales of ecommerce stores. Such an engine can help make customers happier with relevant product offers. A web page showing personalized content, a mobile app with promo offers that spark customers' interest, as well as relevant email campaigns are also among the gains that can get with data science.

https://www.scnsoft.com/services/data-science

13.Telecom

13.1 Research & Development

Product innovation

Real-time data obtained from multiple resources can be used to improve the products offered by the telecom industry. Customer usage can be analyzed and this will help in coming up with new product bundles which help in saving money and identifying and serving customer needs. An example of an innovative service offered by telecom is the facility of using their Wi-Fi service from anywhere.

https://www.globaltechcouncil.org/data-science/top-10-data-science-use-cases-in-telecom/

13.2 Human Resources

13.3 Operations

Predictive Analytics

The Telecom industry has to manage and maintain a large number of devices that are continuously running all the time. The Telecommunication sector performs predictive analytics on the data collected by their devices for gaining valuable insights. These insights help them in making some smarter data-driven decisions for becoming faster and better.

https://techvidvan.com/tutorials/data-science-in-telecom-industry/
https://www.kaggle.com/zoupet/predictive-analysis-with-different-approaches

13.4 Supply Chain

Real-time Analytics

With the advancements in the telecom industry such as 2G, 3G, 4G, etc, the customers' needs and expectations are changing. To cope up with this, the Telecom industry is using modern analytical solutions for performing regular analysis of data collected from the diverse range of resources. This real-time analysis helps them to keep an eye on data related to network, traffic, customers, etc. This helps them in understanding the users' reactions towards their products and services.

https://techvidvan.com/tutorials/data-science-in-telecom-industry/
https://github.com/sridevibayyapuneedi/Real-Time-Data-Analytics

13.5 Finance and Accounts

Fraud Detection

The detection of fraudulent activities is one of the biggest challenges for the Telecom industry. The Telecom industry, along with having the most number of users also witnesses a large number of cases of fraud. According to a recent survey, the value of fraud losses faced by the

Telecom industry globally is around $40.1 billion which is around 1.88% of the total revenue. The most common fraudulent activities in the Telecom world are unauthorized access, fake profiles, misuse of credit/debit card information, etc. Thus the Telecom industries are using various unsupervised machine learning algorithms for detecting unusual user activities and preventing frauds.

https://techvidvan.com/tutorials/data-science-in-telecom-industry/

13.6 Marketing

Targeted Marketing

Data Science is helping the Telecom Industry to predict what customers might need in the future based on their usage of different services. Recommendation Engines are the biggest example of targeted marketing. The customers are always attracted to better and cheaper services. For example, if a customer makes frequent calls to some particular country, you can offer him a monthly plan with some exciting and attractive offers. It helps in maximizing customer satisfaction and revenue generation.

https://techvidvan.com/tutorials/data-science-in-telecom-industry/

13.7 Sales

Preventing Customer Churn

The various services offered by the Telecom industry are TV, internet, phone, etc. Making the customers believe that you are worth their time and money is a challenging task. Keeping them engaged for a longer time is even more challenging. Thus you need to apply proper and accurate analytics for understanding customer's behavior. They extract valuable insights about customers' feelings from the customer transaction data and analyze them. This helps the Telecom industry in building satisfactory solutions to customer issues. This helps them in ensuring better services and avoiding customer churns.

https://techvidvan.com/tutorials/data-science-in-telecom-industry/

13.8 Admin

Price Optimization

The competition between the industries in the Telecom sector is increasing day-by-day. Everyone over there is aiming to have the largest number of subscribers. Pricing of products plays a very important role whenever it comes to increasing subscribers or users. The Telecom industry is using advanced Big data and Data Science solutions for the real-time analysis of various aspects. This will help them in setting the optimal price of products according to customers of different segments.

https://techvidvan.com/tutorials/data-science-in-telecom-industry/
https://www.kaggle.com/dansbecker/airline-price-optimization-solution

13.9 IT Support

Increased Network Security

One of the biggest concerns of the Telecom Industry is to ensure the security of the networks. Data Science helps them to identify the problems. It also helps them to analyze the previous data and make predictions about any problem or complications that might appear in the near future. This analysis helps them to take suitable actions for any problem before it's severe consequences.

https://techvidvan.com/tutorials/data-science-in-telecom-industry/

13.10 Customer Service

Product Optimization

Providing the best-suited products according to the needs of the customers is a very important concern for any industry. The Telecom Industry is using Data Science to perform the real-time analysis of customer data for improving their products. Various factors like the customers' usage, feedback, etc are taken into consideration for coming up with new products that will benefit the customers as well as the industry.

https://techvidvan.com/tutorials/data-science-in-telecom-industry/
https://www.kaggle.com/c/bosch-production-line-performance

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14. Government

14.1 Research & Development

Cybersecurity

The federal government launched a cybersecurity research and development plan that relies on the ability to analyze large data sets in order to improve the security of U.S. computer networks. One such initiative involves the Department of Homeland Security, which is deploying an intrusion detection system of sensors that are capable of analyzing internet traffic entering Federal systems, as well as identifying malware and unauthorized access attempts. The MapR Converged Data Platform allows for building models that can detect and identify these unauthorized attempts and separate abnormal activities from regular activities.

https://mapr.com/solutions/industry/government-use-cases/

14.2 Human Resources

Health and Human Services Fraud Detection/Decision Support

The MapR Converged Data Platform can be used to enable health and human services agencies to perform data mining and predictive analytics in order to detect fraud. For example, a social services department can analyze data in order to uncover anomalies within a state childcare program, which can help investigators to prioritize their caseload.

https://mapr.com/solutions/industry/government-use-cases/

14.3 Operations

Traffic Optimization

Local government agencies need to have the ability to analyze traffic flow data on different roads or in different parts of the city. The MapR Converged Data Platform helps in aggregating real-time traffic data gathered from road sensors, GPS devices and video cameras and provides traffic managers with the ability to identify potential problems in a public bus network. These

potential traffic problems in dense urban areas can be prevented by adjusting public transportation routes in real time.

https://mapr.com/solutions/industry/government-use-cases/
https://www.kaggle.com/tags/transport

14.4 Supply Chain

Government Oversight and Education

The U. S. Department of Education is developing learning analytics and data mining systems that can monitor and correct an online student's study pattern and detect boredom from patterns of key clicks in real time. The Notice and Comment Project employs natural language processing and advanced analytics to track changes in laws, policies, and regulations so as to update the four million plus government documents that it avails to the public.

https://www.datasciencedegreeprograms.net/lists/five-ways-the-government-uses-data-science/

14.5 Finance and Accounts

Crime Prediction and Prevention

According to a UNODC (United Nations Office on Drugs and Crime) report, criminals laundered close to $1.6 trillion in 2009, or 2.7% of the global GDP. The Financial Crimes Enforcement Network (FinCEN), a bureau of the U.S. Treasury Department, uses an analytics tool that can be used to collect and analyze large numbers of bank transactions in order to combat domestic and international money laundering, terrorist financing, and other financial crimes. In addition, local agencies such as police departments can leverage advanced, real-time analytics to provide actionable intelligence that can be used to understand criminal behavior, identify crime/incident patterns, and uncover location-based threats. The MapR Converged Data Platform provides capabilities such as machine learning and anomaly detection that allows for identification of patterns that can reduce and reduce crimes.

https://mapr.com/solutions/industry/government-use-cases/
https://www.kaggle.com/tags/crime

14.6 Marketing

Government Customers

The US government is actively deploying the MapR Converged Data Platform to better process and analyze fast growing data in a much more cost effective method. Enterprise-grade features such as mirroring and snapshots allow Federal agencies to comply with Continuity of Operations (COOP) requirements. Direct Access NFS™ enables agencies to leverage existing applications.

https://mapr.com/solutions/industry/government-use-cases/

14.7 Sales

Improved trust in Government

Not all value that data leaders deliver is easily quantified. In fact, some types of public value are very difficult to measure or are measured very rarely, such as the contribution of government services to the wellbeing of individuals or society as a whole, or to environmental sustainability or economic mobility. Some promising efforts are bringing the voice of the customer into government operations, via 311 system customer satisfaction surveys, social media sentiment mining, and online feedback forms, but most of these efforts are narrowly focused on one task or department. A small number of state and local governments regularly measure public satisfaction with their results, but they are the exception rather than the rule.

https://datasmart.ash.harvard.edu/news/article/case-government-investment-analytics
https://www.kaggle.com/unsdsn/world-happiness

14.8 Admin

Pharmaceutical Drug Evaluation

According to a McKinsey & Co. report, big data technologies could reduce research and development costs for pharmaceutical makers by $40 billion to $70 billion. Both the FDA and NIH use big data technologies to access large amounts of data to evaluate drugs and treatment, and decide if warning labels are needed. In addition, researchers can use the MapR Converged Data Platform to analyze a much larger patient population, decide what treatments are most effective, and identify side effects patterns of drugs.

https://mapr.com/solutions/industry/government-use-cases/

14.9 IT Support

Weather Forecasting

The National Oceanic and Atmospheric Administration, or NOAA, collects data every minute of every day from land, sea, and space-based sensors. When you hear your local forecast about an incoming tornado or hurricane, that weather report is using data that's directly from the NOAA. On a daily basis, the NOAA uses big data approaches to collect, analyze and extract value from over 20 terabytes of data. Technologies such as the MapR Converged Data Platform are ideally suited to manage such large volumes of data that are varied in nature.

https://mapr.com/solutions/industry/government-use-cases/
https://www.kaggle.com/questions-and-answers/27537

14.10 Customer Service

Emergency Communications/Response

By consolidating data from many different local agencies, local governments can coordinate communications during city-wide emergency situations. In addition, responders can use technologies such as the MapR Converged Data Platform to analyze words, pictures, and hashtags on Twitter in order to decide where supplies such as food and water are needed the most.

https://mapr.com/solutions/industry/government-use-cases/

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15. Fashion

15.1 Research & Development

Uncovering new product categories

A brand needs to find new products that will be successful in the market and which product aren't very lucratively promising. Designers need to think whether making a unique new product will be accepted or rejected by customers. For example a creative bright print may work for yoga pants but may be deemed too gaudy for sneakers. Big Data can be used to decide which category to venture into and whether to continue selling a particular previous product.

https://www.kdnuggets.com/2018/03/data-science-fashion.html

https://www.kaggle.com/c/otto-group-product-classification-challenge

15.2 Human Resources

Modelling a reliance on new data

The traditional closed-book method of analysing retail data meant that a number of fashion brands missed out on a lot of crucial information, such as data related to pricing, trends, insights and other must-have details. This may seem baffling to us now, given the competitive nature of the fashion industry and the importance of staying relevant, but it took a long time for brands to start using technology to their advantage. In today's market, that has all changed, and the fashion industry is now more reliant on data science than ever before. For example, specially trained data scientists can now predict whether a new collection is likely to be a success or not, simply by assessing previous sales data. This, in turn, helps companies ensure their money is being spent wisely.

https://www.whichplm.com/the-importance-of-data-science-in-the-fashion-industry/

15.3 Operations

Modelling a reliance on new data

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https://www.whichplm.com/the-importance-of-data-science-in-the-fashion-industry/

15.4 Supply Chain

AI in Fashion and Sustainability

The fashion industry continues to be one of the biggest global polluters. It is responsible for 10% of global carbon dioxide emissions, 20% of the world's industrial wastewater, and 25% of all

insecticides used in the industry. It is unrealistic to think that this industry can continue mass-producing clothes to keep up with this fast fashion epidemic. However, artificial intelligence can be used at many stages of production to combat this dilemma, in turn reducing inventory levels. AI offers a sustainable solution to fashion, reducing overall inventory levels by 20–50% as well as improving working conditions in the fashion industry. The use of Artificial Intelligence alongside Machine Learning, Deep Learning, Natural Language Processing, Visual Recognition, and Data Analytics can be used to reduce errors in trend predictions and forecast trends more accurately which would reduce the amount of clothing produced and then unused.

https://towardsdatascience.com/artificial-intelligence-is-restyling-the-fashion-industry-c2ce29acae0d

15.5 Finance and Accounts

Garment Price

For each garment, the designers need to understand the prices the customer would be willing to pay given the quality, style, popularity and the brand value. Big Data should be used to average previous sales data to generate suggested pricing. Data from competing brands can also be used to set prices which aren't too high but still contribute to good revenues.

https://www.kdnuggets.com/2018/03/data-science-fashion.html
https://www.kaggle.com/tags/clothing

15.6 Marketing

Men's or Women's clothing?

Each designer targets a different demographic or gender to increase their popularity or sales. Designers need to decide how many items in each collection and the kind of variety they need to create. They have a fixed set of resources like budget and display space and they need data-backed guidelines to decide how much to allot to each category. It is common in many stores like Forever21, H&M, etc. to see two/three floors of space given for women's merchandise and only one for men's. These retailers know to provide more options for a particular category of customers to increase their sales. These insights are derived from historic sales data.

https://www.kdnuggets.com/2018/03/data-science-fashion.html

15.7 Sales

Color options

Using Big data, we can find the colors preferred by the customers to curate a best-selling collection. The range of colors for a particular style, the combination of colors purchased together, etc. can be mined from sales data and online retail data. Many times customers purchase a piece of clothing in one color and then exchange it for another. The data from the returns/exchange can be used to create more items of the preferred color.

https://www.kdnuggets.com/2018/03/data-science-fashion.html
https://www.kaggle.com/ayanzadeh93/color-classification

15.8 Admin

Turning runway styles to retails merchandise

Many styles featured on the runway are not “wearable” in real-life. Trends on the runway are exaggerated and too over-the-top for retail. The outfits need to be altered before they can be curated for sale in stores. Training algorithms to suggest which features to change like color, fabric, cut, length, combination, etc. can ensure that the product sells well when they hit the racks. Moreover each country/region has a different taste. Hence each product must be tweaked to suit the local preferences.

https://www.kdnuggets.com/2018/03/data-science-fashion.html

15.9 IT Support

Store arrangement

Customers exhibit a particular behavior while shopping which can be studied to arrange merchandise in a manner which increases the chances of sales of the majority of the pieces. Associative data mining can help us decide where to group products together so customers are likely to pick up most of them. You may have noticed that in many clothing stores, the accessories are placed when we stand near the billing area which causes the customers to pick them up. Wifi data can be used to track the customer movement in the stores to arrange the stock in an optimal manner.

https://www.kdnuggets.com/2018/03/data-science-fashion.html
https://www.kaggle.com/roshansharma/mall-customers-clustering-analysis

15.10 Customer Service

Actionable Product Intelligence

One of the biggest issues that continuously dogs the fashion industry is the risk of new product introductions. Whereas in the past, companies would rely on traditional focus groups, according to Forbes, major brands are now using predictive analytics to create what they call “actionable product intelligence”.

https://www.kdnuggets.com/2018/03/data-science-fashion.html

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16. Media & Entertainment

16.1 Research & Development

Object detection and classification

The internet encompasses loads of information, and these vast amounts are continually growing. It hosts thousands of websites and platforms dedicated to media and entertainment containing links, posts, video and audio files, films, games, and applications, etc. This fact may cause some difficulties in the search. Object detection and classification algorithms help to filter, match, classify data, recognize images, make link-building. Thus, the ads of an appropriate or irrelevant product will not appear on your way. Lot of inconveniences and misunderstandings may be avoided. As a result, a media or entertainment provider ensures a good content, attracts and retains users and promotes its services.

https://medium.com/activewizards-machine-learning-company/top-9-data-science-use-cases-in-media-and-entertainment-a5705231e228

Data analytics in media and entertainment for product innovation

With access to increased data, media companies understand their consumers better and deliver more personalized content and products. In the new media landscape, companies generate value by predicting appropriate content (movies, music, videos, and games) for various sets of

audiences. Moreover, media and entertainment companies could also micro-target channel preferences-based content for consumers.

https://www.sganalytics.com/blog/data-analytics-media-entertainment/

16.2 Human Resources

Collecting and analyzing employee insights

A general tendency of data science application brought numerous benefits to people in business all over the world. The algorithms help to collect and analyze the employee insights and make use of the output.

https://medium.com/activewizards-machine-learning-company/top-9-data-science-use-cases-in-media-and-entertainment-a5705231e228
https://www.kaggle.com/jacksonchou/hr-analytics

16. 3 Operations

16.4 Supply Chain

Leveraging mobile and social media content

Mobile and social media content is considered to be a fundamental to assure interaction between the company and the customer. Reports, passionate discussions of posts, likes and shares are all the media and entertainment companies hunt for.

https://medium.com/activewizards-machine-learning-company/top-9-data-science-use-cases-in-media-and-entertainment-a5705231e228

16.5 Finance and Accounts

16.6 Marketing

Personalized marketing

The attraction of customers' attention is a crucial prerogative of any company, primarily when it is involved in media and entertainment business. When a quick and impressive online experience becomes very familiar for many people, it is even more challenging to retain the attention of the customer gained.

https://medium.com/activewizards-machine-learning-company/top-9-data-science-use-cases-in-media-and-entertainment-a5705231e228

16.7 Sales

Content distribution on social media

The modern world of social networking offered the media and entertainment providers a fabulous chance to enforce their marketing strategies with a powerful tool of social media content distribution. General tendencies, users' behavior, preferences, experience, interests, and histories are now available in one click for huge media enterprises.

https://medium.com/activewizards-machine-learning-company/top-9-data-science-use-cases-in-media-and-entertainment-a5705231e228

16.8 Admin

Recommendation engines

Recommendation engines give the entertainment and media providers a chance to focus on the users' desires and feelings. Besides the history of a user within one company, a provider pays exceptional attention to the sensations related to this user.

https://medium.com/activewizards-machine-learning-company/top-9-data-science-use-cases-in-media-and-entertainment-a5705231e228

https://gist.github.com/abhijithch/c1200d5228cd557796f29e5c6a14c9cb

16.9 IT Support

Real-time analytics

Real-time analytics, by its very name, provides the data processing presenting the output in extremely short periods of time. As far as media and entertainment enterprises possess a vast amount of data provided by the customer with their every click, the speed of its analysis is a

valuable factor. Real-time analytics algorithms provide the output extremely fast. Therefore, crucial decisions and improvements to the content may be carried out immediately. Utilizing real-time analytics gives the company more chances to win the race with the competitors.

https://medium.com/activewizards-machine-learning-company/top-9-data-science-use-cases-in-media-and-entertainment-a5705231e228
https://github.com/ucbrise/confluo

16.10 Customer Service

Customer sentiment analysis

All the media and entertainment companies seek to distinguish how the visitors feel about their content, web page, or web apps. This knowledge gives a prospect to adjust to the viewer's taste. For this purpose, customer sentiment analysis is widely applied.

https://medium.com/activewizards-machine-learning-company/top-9-data-science-use-cases-in-media-and-entertainment-a5705231e228
https://www.kaggle.com/janiobachmann/evaluating-customer-service-sentiment-analysis

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