Reading: Case Study on Successful Implementations of Generative AI in Data Analytics

Estimated time needed: 10 minutes

Introduction

IBM watsonx is a powerful data analytics platform that helps businesses collect, analyze, and visualize data to gain insights and make informed decisions. It offers a comprehensive suite of tools and features for data scientists, business analysts, and data-driven decision-makers.

Key Features of IBM watsonx for Data Analytics

Data collection and integration

watsonx provides various tools for connecting diverse data sources, including databases, cloud storage, and real-time data streams. It seamlessly integrates data from different formats and structures, enabling a unified view of the organization's data landscape.

Data preparation and preprocessing

watsonx offers data cleaning, transformation, and wrangling capabilities to prepare data for analysis. It automates repetitive tasks, identifies and handles missing values, and transforms data into a format suitable for analysis.

Exploratory data analysis (EDA)

watsonx provides interactive data visualization tools to explore and understand patterns, trends, and anomalies within the data. It allows users to visually examine data distributions, correlations, and outliers, gaining insights into the underlying data patterns.

Machine learning and predictive analytics

watsonx offers a range of machine-learning algorithms and tools for building predictive models. It supports supervised, unsupervised, and reinforcement learning techniques, enabling businesses to forecast future trends, identify customer behavior patterns, and optimize decision-making.

Real-time data analytics

watsonx provides capabilities for real-time data ingestion, analysis, and visualization. It enables businesses to monitor events as they happen, identify potential issues, and make timely decisions based on real-time insights.

Explainable AI (XAI)

watsonx incorporates XAI features to explain machine learning models' reasoning and decision-making processes. It helps users understand the factors contributing to model predictions, ensuring transparency and accountability in AI-driven decisions.

Collaboration and knowledge sharing

watsonx supports collaborative data analysis workflows, enabling teams to share data, insights, and models. It facilitates knowledge sharing and fosters a data-driven culture within the organization.

Deployment and integration

watsonx provides tools for deploying data analysis models and integrating them into business processes and applications. It enables businesses to leverage data insights to drive operational efficiency, improve customer experiences, and gain a competitive edge.

Case Study: NatWest Group's Digital Mortgage Support Transformation

Background

Owning a home is a cherished dream for many, and a bank-issued mortgage is crucial in realizing this dream. However, obtaining a mortgage has become increasingly complex with evolving regulations and processes. Banks, including NatWest Group, are challenged to provide accurate real-time policy information tailored to each customer's unique needs throughout the home-buying process.

The challenge

To streamline the mortgage application process, NatWest collaborated with IBM® to develop a digital mortgage support tool. This tool aimed to enhance customer loyalty, reduce call duration, and provide real-time support to home buyers.

The solution

IBM Consulting™ and NatWest co-created "Marge," an AI-powered, cloud-based platform using IBM Watson Assistant technology on IBM Cloud®. Marge is intentionally personified as a member of the NatWest team, equipped with her evolving personality. Integrated into NatWest's existing data structures, Marge continually receives updates through content additions and customer interactions.

Implementation and impact

Increased customer loyalty

Since deploying the digital mortgage support tool, NatWest has witnessed a remarkable 20% improvement in customers' Net Promoter Score (NPS), a key metric for customer loyalty.

Time savings

Call durations have seen a significant 10% reduction attributed to the efficiency of the digital mortgage support tool.

Seamless support

During customer calls, NatWest employees now have a single access point for digital mortgage support. Marge assists by quickly providing relevant information when employees input keywords into a console.

Technological backbone

The platform leverages IBM Watson Assistant technology and is hosted on IBM Cloud. Marge, residing directly on the cloud, is intricately embedded within NatWest's data structures. This ensures she has real-time access to new data, contributing to her continuous learning and evolving capabilities.

Future prospects

As Marge evolves, NatWest aims to empower its employees further during the ongoing digital transformation. The ultimate goal is to align with IBM's vision for the next-gen business model - becoming a Cognitive Enterprise.

About NatWest Group

NatWest is a prominent banking and financial services company headquartered in the UK. Serving approximately 19 million people, families, and businesses in the UK and Ireland, NatWest is committed to innovation and customer-centric solutions. With a focus on becoming a Cognitive Enterprise, NatWest continues to shape the future of banking.

Key metrics

20% improvement in Customer NPS
10% reduction in Call Duration
Note: All metrics are based on data collected since the implementation of the digital mortgage support tool.

Ref: https://www.ibm.com/case-studies/natwest-group-watson

Various organizations across various industries are using IBM watsonx for data analysis. Here are a few examples:

Healthcare

Mount Sinai Health System

watsonx analyzes patient data to identify patterns and trends that can improve patient care.

Mayo Clinic

watsonx is being used to develop a new diagnostic tool for Parkinson's disease.
St. Jude Children's Research Hospital: watsonx analyzes genomic data to identify potential drug targets for cancer treatment.

Financial Services

Barclays Bank

watsonx analyzes financial data to identify fraud and other financial crimes.

Citibank

watsonx analyzes customer data to improve customer service and marketing campaigns.

HSBC

Watsonx is used to analyze risk data to make more informed lending decisions.

Retail

Walmart

watsonx is used to analyze sales data to optimize product placement and pricing.

Target

watsonx is used to analyze customer data to personalize marketing campaigns and recommendations.

Kroger

watsonx analyzes supply chain data to improve efficiency and reduce costs.

Manufacturing

Siemens

watsonx analyzes sensor data from manufacturing equipment to identify potential problems and prevent downtime.

GE

watsonx is being used to analyze data from aircraft engines to predict maintenance needs.

Ford Motor Company

watsonx is used to analyze vehicle data to improve fuel efficiency and safety.

Energy and Utilities

ExxonMobil

watsonx analyzes geological data to identify potential oil and gas reserves.

National Grid

Watsonx is being used to analyze energy consumption data to identify areas where energy efficiency can be improved.

Enel

watsonx analyzes weather data to predict energy demand and optimize power generation.

Conclusion

These are just a few examples of the many organizations using IBM watsonx for data analysis. watsonx is a powerful tool that can be used to gain insights from data and make better decisions across a wide range of industries.

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