Analytics for Deep Business Insight

21 May 2024

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The Objectives

1. To know advantages of analytics
2. To learn techniques for gaining business insights
3. Student can conduct deep analysis using BI tools

Overview

Unity's massive $110M+ ad revenue meltdown is a wake-up call for user acquisition

13th May 2022

Why Unity Software Fell 37.05%

The Fall of Kodak: How Ignoring Digital Technology Spelled Doom

The tragic tale of Kodak's downfall: an insightful examination of how failing to innovate and adapt in the face of digital photography advancements resulted in corporate collapse.

One of the biggest mistakes companies make about analytics is
the **disconnect** between the **technology** and **real business decisions**

Overview

product recommendations and styling suggestions

360-degree view of the customer program called "KnowMe.

Successful analytics organizations are always **decision-driven**
- They start by asking what business decisions they need data and analytics for
- Then investing resources to collect the right data and build the right analytics

Overview

It is equally important to have **the right talents** in the organization that speak both the language of **analytics** and **business**, so that they can be the bridge between the tech and the business decision-makers.

Overview

Data alone cannot provide the right solutions and outcomes. **The integration of business insight** and **data interpretation** leads to better decision-making, better outcomes, and ultimately, a more successful business.

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Business Insights

What is Business Insights?

Business Insights refers to the process of **extracting valuable information** and **meaningful patterns** from raw data in order to make **informed business decisions** related to the organization's operations, customers, and market trends

What is Business Insights?

Through the **application of analytical techniques**, such as data mining and statistical analysis, organizations can uncover hidden patterns and correlations within their data.

What is Business Insights?

Business insights help **business leaders** and **decision-makers** gain a better understanding of their business and make informed strategic choices

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Business Insights Advantages

1) Provide a clear understanding of customer behavior, preferences, and needs

analyze customer purchase history to identify popular products and trends

↓

adjust their inventory and marketing strategies to meet customer demands

↓

resulting in increased sales and customer satisfaction.

Retail company XYZ

2) Better decision making

Manufacturing
company XYZ

analyze production data to identify bottlenecks and inefficiencies in their manufacturing process

↓

implement process improvements and streamline operations

↓

cost savings and increased productivity

3) Enable organizations to stay ahead of the competition

Technology company
XYZ

analyze market data to identify emerging trends and consumer preferences

↓

develop innovative products and services that meet the evolving needs of their target market

↓

gaining a competitive edge.

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Business Insights Techniques

Data Mining

- Data Collection: Gathering relevant data from various sources
- Data Preprocessing: Cleaning and transforming raw data to prepare it for analysis
- Data Exploration: Examining the data to find initial patterns and relationships
- Data Modeling: Applying algorithms to discover deeper insights and predictions
- Evaluation: Assessing the model for accuracy and effectiveness
- Deployment: Implementing the model for practical business applications

Data Visualization

- Define Clear Objectives: focusing on specific questions you seek to answer or business challenges to address.
- Data Cleaning and Preparation: Thoroughly clean and prepare your data, addressing missing values and inconsistencies to ensure accurate results.
- Explore and Visualise: Utilise various charts and visualisations to explore data patterns and gain initial insights into your data.
- Interpret and Validate: Carefully interpret your findings in the context of your business, validating insights against real-world scenarios.

Statistical Analysis

- **Exploratory Data Analysis (EDA):** Before diving into complex statistical models, it is essential to explore and understand the data
- **Descriptive Statistics:** Descriptive statistics provide a summary of the data, allowing businesses to gain insights into central tendencies, variations, and distributions.
- **Hypothesis Testing:** Hypothesis testing enables businesses to draw conclusions about a population based on sample data

Statistical Analysis

- **Regression analysis:** Regression analysis explores the relationship between a dependent variable and one or more independent variables. It helps businesses understand how changes in independent variables affect the dependent variable.
- **Time series analysis:** Time series analysis focuses on analyzing data collected over time to identify patterns, trends, and seasonality.
- **A/B Testing:** A/B testing, also known as split testing, is a statistical technique used to compare two versions of a webpage, advertisement, or any other element to determine which performs better.
- **Predictive analytics:** Predictive analytics leverages statistical modeling and machine learning algorithms to forecast future events or behaviors.

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Hands On:
Business Insight
Project

Session Summary

- By leveraging data and applying analytical techniques, companies can **uncover patterns, trends,** and **correlations** that may otherwise go unnoticed.
- This enables them to **identify areas of improvement, seize new opportunities**, **identifying and addressing potential risks, making data-driven decisions,** and **adapting to changing market conditions.**
- Business Insights leverages a combination of **data visualization, data mining,** and **statistical analysis** techniques to explore complex datasets.
- It empowers decision-makers with **accurate and timely information**, enabling them to **stay ahead of the competition.**

References

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Thank you!

When we stop learning, we stop growing #neverstoplearning