Transactional Data

Idea In Short

Transactional data is information that is captured from transactions. Transactional data relates to the transactions of an organization and includes data that is captured, for example, when a product is sold or purchased.

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Structure

Each transaction is automatically assigned a unique identifier, known as transaction ID by the system originating the transaction. This ID is accompanied by additional details that are a part of a complete transaction, such as:

- counterparties (buyer and seller) information
- time of the transaction
- location where the transaction occurred
- price points of the items bought or sold
- payment method used
- discounts if any, and
- other quantitative and qualitative information associated with the transaction

Source

Various applications that run or support daily business processes, such as sales or purchase of goods and services, generate transactional data. Today, completing a simple business transaction requires a large and intricate network of specialized point-of-sale servers, security applicances (hardware and software), Automated Teller Machines (ATM), and payment gateways. Every device and interface used to complete a transaction generates

transacton data.

Challenges

Given the sheer number of touchpoints and transactions a typical business conducts every single day, systems that generate or capture transaction data should do so both, in real-time and accurately. Due to the different systems and processes involved, capturing transaction data is challenging. Systems processing transactional data should be engineered to handle peak transaction volumes and ingestion rates.

Peak transaction volume denotes the maximum of the number of transactions that occur or have occured on a business day. The organization's systems should handle the volume of transactions as measured by the system throughput i.e., the number of transactions the systems could handle in parallel. Ingestion rate denotes the number of transactions approaching these systems that the systems could successfully receive, process and store, without dropping any transaction.

In addition, transaction data is difficult to read due to different systems and data formats involved. Sometimes, transactional data contains unnecessary information, letters, symbols, numbers, etc. that should be cleansed before this data could be further processed. Hence, a clean capture of transactional data is extremely important to run business processes, reporting, analytics, prevent frauds, avoid expensive customer support calls, etc.

Another defining characteristic of transactional data is the temporal (time) aspect. In other words, transactional data is highly volatile and loses its relevance over time. Hence, processing and analyzhing transactional data quickly is important to leverage this data for a competitive edge. Historical transactional data can help identify patterns and is an important source of business intelligence.

Types of transactional data

Transactional data usually falls under the structured data category. Some examples of transactional data are:

- **Financial data:** purchase or sale, accounting, insurance and claims, bank transactions, etc.

- **Logistical data:** shipping status, suppliers, customers and logistics partner data, etc.
- **Work-related data:** employee information, compensation, work hours tracking, etc.

In this context, transactional data uses the reference and master data, including time, to document transactions. Data processing applications and systems that support key business processes of an organization, such as Online Transaction Processing Systems (OLTP) record this data. Depending on the type of transactions, the data gets grouped within master data with associated product information and billing information.

Business value drivers

Information technology operations monitor transactions in real time. They use the data and streaming products to locate, diagnose, and fix any performance issues that may cause serious service disruptions. This saves both money and time.

IT value drivers

Business managers and data analysts use real time transaction data to understand buyer behavior and get an idea of how their products and services are adopted. In this instance, the transaction data yields valuable insights that help improve the service offering. Transaction data serves to deliver better customer experiences, acquire new business, and boost profitability of the business.

Benefits

Well-managed transactional data yields many advantages:

- Enhanced customer experience by delivering more consistent services
- Reduced transaction failures
- Optimized real time data gathering across a variety of payment processes or gateways
- Faster diagnostics and troubleshooting
- Reduced cost-to-serve
- Increased cash forecasting insights
- Optimized credit and debit card management
- Rapid detection of fraudulent transactions

- Improved threat detection
- More accessible insights
- Developed adaptive-behavioral algorithms
- Improved machine learning
- Reduced old, obsolete, and error-prone workflows
- Detected transaction anomalies, firewalls, blocking, and risk-scoring in real time

Summary

Transactional data provides a unique, albeit time-sensitive, advantage in keeping business operations smooth and optimized. It is valuable to a company both, for business continuity as well as operational processes improvement. Ultimately, insights provided by transactional data are intuitive and can be harnessed for delivering superior customer experiences.