

Analytics Fundamentals

Case study from last session

I am an american e commerce retail company and would want to increase my revenue from 12bn \$ to 20bn\$. Your product area is seller acquisition, how would you go about defining the following

- Goal
- Objective
- Key Results
- KPI and Metrics

Go back do some research on seller process and give me an overview of how you would do that.

The Role of Analytics in Product Development

What role does data play in your organization?

Can you think of some example outside of your org?

Amazon's recommendation engine - Its one of my favourite :)

Amazon utilizes customer data to suggest products, enhancing user experience and driving sales.

<https://www.amazon.science/the-history-of-amazons-recommendation-algorithm>

How are they connected Metrics and Analytics

Analytics involves systematically analyzing defined metrics to inform decisions.

Which means using data to?

- Guide product development
- Marketing strategies
- User experience enhancements

How does these Data-First Strategies Help: Netflix have transitioned to data-driven approaches, using predictive analytics to personalize content recommendations, thereby increasing user engagement.

<https://d3.harvard.edu/platform-digit/submission/netflix-a-personalized-viewing-experience/>

I don't know analytics are there any types

Descriptive Analytics: Examines historical data to understand what has happened.

Example: Tracking metrics like Daily Active Users (DAU) to assess user engagement over time or measuring acquisition rates.

Diagnostic Analytics: Investigates reasons behind past outcomes.

Example: Using funnel analysis to determine why users drop off during the onboarding process.

Predictive Analytics: Forecasts future trends based on historical data.

Example: Predicting sales basis clicks on a specific ads during big billion days

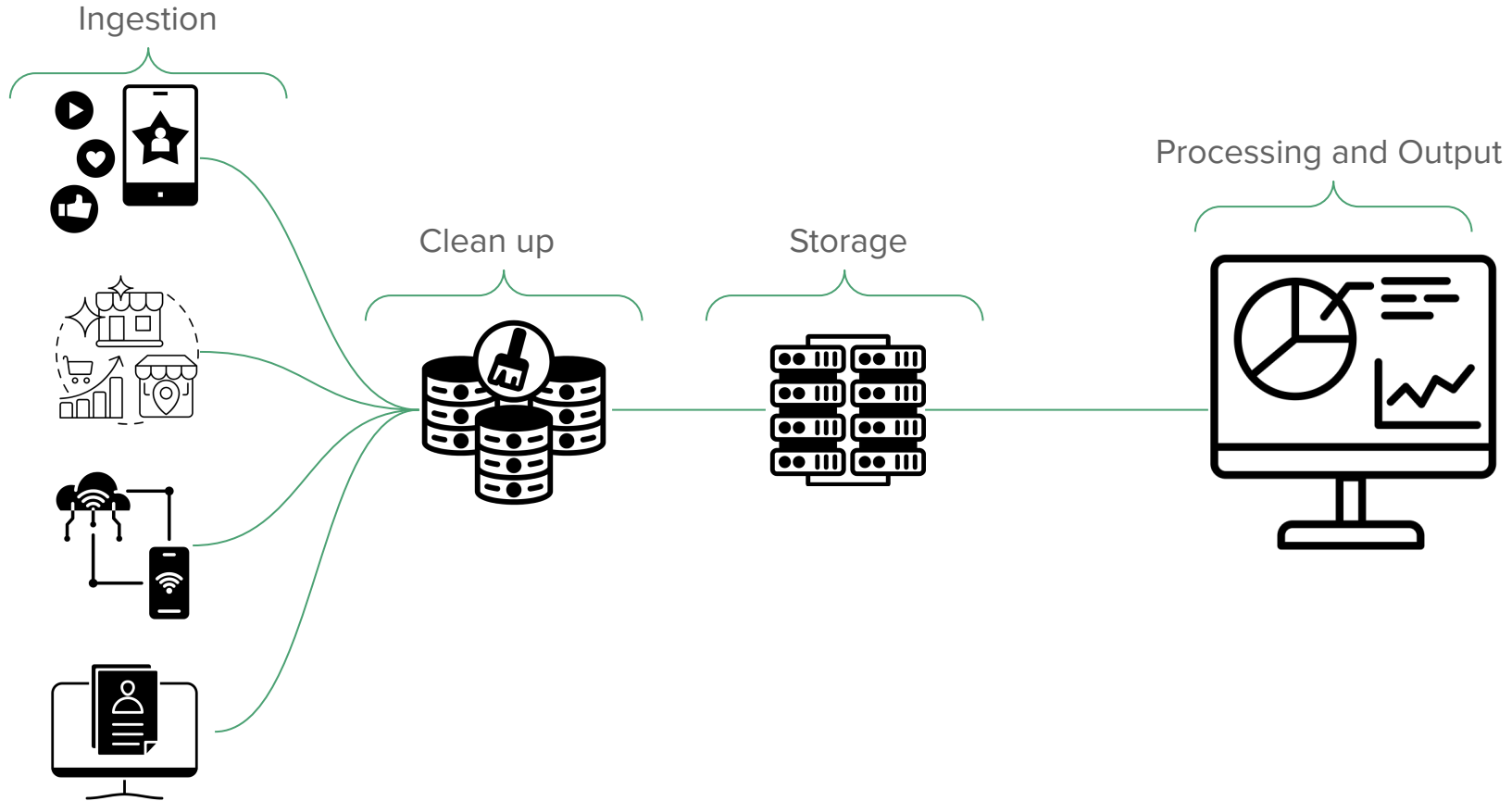
Prescriptive Analytics: Suggests actions to achieve desired outcomes.

Example: Implementing dynamic pricing models in retail.

Does it really benefit

- Reduces reliance on intuition, leading to more objective and effective strategies - Decision backed with solid data
- Identify Trends: Helps in recognizing emerging user behaviors and market shifts
- Risk Reduction: Enables early detection of potential issues, allowing for timely interventions
- Find Opportunities: Reveals areas for innovation and improvement

How does it work?



What are the data sources?

- Internal Sources:
 - User Behavior Analytics: Tools like Google Analytics track user interactions on platforms.
 - Sales Data: Transaction records providing insights into purchasing patterns.

- External Sources:
 - Market Research Reports: Studies offering industry trends and consumer behavior insights.
 - Social Media Insights: Data from platforms like Twitter and Facebook reflecting public sentiment.

What are the types of data?

Structured Data: Organized in a predefined manner, such as databases and spreadsheets.

- Example: Customer Relationship Management (CRM)

Semi-Structured Data: Partially organized but lacking a fixed schema.

- Example: JSON files containing user interaction logs.

Unstructured Data: Lacks a specific format or structure.

- Example: Customer reviews and social media posts

So data collected can be used directly?

No, structured and data mostly has duplicates, wrong data and also wrong entries hence a clean up is required

So what are the challenges?

- **Duplicate Entries:** Multiple records of the same data point can skew analysis.
- **Missing Values:** Incomplete data hampers comprehensive insights.
- **Outliers:** Data points significantly different from others can distort results.

Building and Using Dashboards

Tableau: A data visualization tool that helps create interactive and shareable dashboards.

Looker: A business intelligence platform that allows users to explore, analyze, and share real-time business analytics.

Google Data Studio: A free tool that turns data into informative, easy-to-read, and customizable dashboards and reports.

Best Practices

Best Practices:

- Avoid clutter
- Focus on critical KPIs.
- Use color-coding for trends and alerts.

Data Set Exercise

You are the PM for XBOX 360, what is the inference that you pick from this - What would be your strategy for increasing your market share in the Gaming market considering you have only 23% market share Globally.

The global gaming console market is expected to grow at a compound annual growth rate (CAGR) of 5.4% from 2024 to 2033, reaching a value of around USD 69.7 billion by 2033. The residential sector accounts for 67% of the market share, while the commercial sector accounts for the remaining 33%

Thank You

Next session is going to be better