CHANDIGARH UNIVERSITY

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Apex Institute of Technology

Department of Computer Science & Engineering

Introduction to Data Science

Topic: Types of Analytics (Examples)

Part-4

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EXAMPLES OF DESCRIPTIVE ANALYTICS

5 EXAMPLES OF DESCRIPTIVE ANALYTICS

1. Traffic and Engagement Reports

2. Financial Statement Analysis

3. Demand Trends

4. Aggregated Survey Results

5. Progress to Goals

1. Traffic and Engagement Reports

- One example of descriptive analytics is **reporting**. If your organization tracks engagement in the **form of social media analytics or web traffic**, you're already using descriptive analytics.

- These reports are **created by taking raw data**—generated when users interact with your **website, advertisements, or social media content**—and using it to **compare current metrics to historical metrics** and **visualize trends**.

- For example, you may be responsible for **reporting on which media channels drive the most traffic to the product page of your company's website**. Using descriptive analytics, you can **analyze the page's traffic data to determine the number of users from each source**.

- You may **decide to take it one step further and compare traffic source data to historical data** from the same sources. This can enable you **to update** your team on **movement; for instance, highlighting that traffic** from paid advertisements increased 20 percent year over year.

2. Financial Statement Analysis

- Another example of descriptive analytics that may be familiar to you is **financial statement analysis**. Financial statements are **periodic reports that detail financial information about a business** and, together, give a holistic view of a **company's financial health.**

- There are several types of financial statements, including the **balance sheet, income statement, cash flow statement, and statement of shareholders' equity.** Each caters to a specific audience and conveys different information about a company's finances.

- **Financial statement analysis can be done in three primary ways: vertical, horizontal, and ratio.**

- **Vertical analysis** involves reading a **statement from top to bottom and comparing each item** to those above and below it. This helps determine relationships between variables. For instance, **if each line item is a percentage of the total**, comparing them can provide insight into which are **taking up larger and smaller percentages** of the whole.

- **Horizontal analysis** involves reading a statement from **left to right and comparing each item to itself from a previous period**. This type of analysis **determines change over time**.

- Finally, **ratio analysis** involves **comparing one section of a report to another based on their relationships to the whole**.

- This directly **compares items across periods**, as well as your **company's ratios to the industry's,** to gauge whether yours is **over- or underperforming**.

- Each of these financial statement analysis methods are examples of descriptive analytics, as they **provide information about trends and relationships** between variables **based on current and historical data.**

3. Demand Trends

- Descriptive analytics can also be used **to identify trends in customer preference and behavior and make assumptions about the demand for specific products or services**.

- Streaming provider **Netflix's trend** identification provides an excellent use case for descriptive analytics. Netflix's team—which has a track record of being heavily data-driven—gathers data on users' in-platform behavior. They analyze this data to determine which TV series and movies are trending at any given time and list trending titles in a section of the platform's home screen.

- Not only does this data allow Netflix users to see what's popular—and thus, what they might enjoy watching—**but** it allows the Netflix team to know **which types of media, themes, and actors are especially favored at a certain time**. This can drive **decision-making about future original content creation, contracts with existing production companies, marketing, and retargeting campaigns.**

4. Aggregated Survey Results

- Descriptive analytics is also **useful in market research**. When it comes **time to collect insights from survey** and **focus group data**, descriptive analytics can help **identify relationships between variables and trends**.

- For instance, you may **conduct a survey and identify that as respondents' age increases**, so does their **likelihood to purchase your product**. If you've conducted this survey multiple times over several years, **descriptive analytics can tell you if this age-purchase correlation has always existed or if it was something that only occurred this year**.

- Insights like this can cover the **way for diagnostic analytics to explain why certain factors are correlated**. You can then leverage **predictive and prescriptive analytics to plan future product improvements or marketing campaigns based on those trends.**

5. Progress to Goals

- Finally, descriptive analytics can be applied **to track progress to goals.** Reporting on progress toward **key performance indicators (KPIs)** can **help your team understand if efforts are on track or if adjustments need to be made.**

- For example, if your **organization aims to reach 500,000 monthly unique page views**, you can **use traffic data to communicate** how you're tracking toward it.

- Perhaps **halfway through the month, you're at 200,000** unique page views. This would be underperforming because you'd like to be halfway to your goal at that point—at 250,000 unique page views. **This descriptive analysis of your team's progress can allow further analysis to examine what can be done differently to improve traffic numbers and get back on track to hit your KPI.**

Homework

- Discuss any three examples of descriptive analytics.

Thank you

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