

Prepared by Dr. Karim Ahmed

MKT631

Digital Analytics



The background features five vertical panels of varying heights and widths. The first panel on the left is dark blue. The second panel is dark brown and shows hands typing on a laptop. The third panel is dark brown and shows a laptop screen with a play button icon. The fourth panel is light brown and shows a target icon, a book icon, and a magnifying glass icon. The fifth panel is light brown and shows a book icon. The text 'MKT631 Digital Analytics' is centered on the right side of the slide.

MKT631 Digital Analytics

Lecture 3

Prepared by
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Digital Analytics

Industry Players

Objectives:

- Distinguish between first-party, second-party, and third-party data sources.
- Explain the role of cookies, tags, and sign-ins in digital data collection.
- Evaluate the functions of third-party data aggregators.
- Compare leading analytics platforms (Google Analytics, Adobe Analytics, WebTrends).
- Critique key challenges in web data collection.
- Appraise the role of demographic data providers in supplementing first-party analytics with industry benchmarks.

Lecture Content

- Three Types of Data
- Stories about Converging First-, Second and Third-Party Data
- Digital Data Collection: Cookies, Tags and Sign-Ins
- Third-Party Data and Analytics
- Third-Party Data Aggregators—What They Do
- Analytics Platforms vs. Data Integration Software
- Demographics Data
- Web Data Collection Issues
- AI transforms data into actionable intelligence

Three Types of Data

First-Party Data

First-party data focuses on the concepts of ownership, control, and privacy. It is an extension of the types of operational and customer information organizations already collect. It is extremely valuable data for mining consumer insights because it is the relevant information that a marketer has collected from his or her audience. First-party data is collected on past actions taken by consumers, so it is limited to current or past consumers.

Three Types of Data

First-Party Data

Examples of first-party data include email lists, customer relationship management, purchasing data stored within in-house databases, data on social media channels, such as Facebook pages, Twitter accounts, LinkedIn company pages, Instagram, Pinterest, and Snapchat.

Marketers use first-party data to retarget visitors who came to their websites or are connected on Facebook with display ad campaigns. As more information is extracted from consumers, the content became more personalized and website conversion rates increase.

Three Types of Data

Second-Party Data

Second-party data is data collected through other organizations, companies, or individuals and shared with other marketers. The marketer may have little or no control of the relevance or depth of the information collected with the second-party data which is being shared with them from their business partners and affiliates. An example of second-party data is seen in banking and credit card agreements. In the small print of most banking and credit card agreements, statements detail the permitted uses of customer data. Among the clauses, there is usually a statement about the information gathered from customer activities and shared with affiliates and business partners. Sometimes, customers can opt out of these second party arrangements, but often they cannot.

Three Types of Data

Third-Party Data

Third-party data covers the data available to marketers that is aggregated, and sold by market research companies.

Many third-party data companies use predictive modeling via sampling and other statistical methods to prepare their data sets.

Third-Party data provides intelligence that could be used for behavioral and contextual targeting. Ideally, marketers use first-party data in their strategies, but third-party data can supplement the strategy or provide groundwork when first-party data is insufficient.

Stories about Converging First-, Second and Third-Party Data

Macy's

Suppose a shopper is looking for a new dress shirt. The shopper enters his or her requirements for the shirt into a Google search. The shopper lands on a website, such as Macys.com, and looks for available dress shirts.

Through Macy's point of view, they would not have enough information to identify the shopper, but they can recognize their past behavior if the consumer visited the website previously, or suggest styles based on in-house, first-party data previously collected about the customer.

Stories about Converging First-, Second and Third-Party Data

Macy's

However, if Macy's combined third-party data collected by the vendors—i.e., data brokers, and data management platforms—with Macy's first-party data collected by Web Analytics, information may converge and provide insights, such as hovering activity on different shirts and shirt colors and point-of-sale (POS) data. Macy gains knowledge of who to prospect to (i.e., demographics and psychographic information) and the other merchandise the individual may be interested in purchasing. It may also use its intelligence to predict time-sensitive purchases and price adjustments for the shopper.

Stories about Converging First-, Second and Third-Party Data

Macy's

Thus, Macy's can create an engagement strategy that meets the needs of a specific customer, while using the same technologies to handle thousands of customers with similar needs every moment. To include second-party data, this information may be purchased from AMEX and Citibank on credit card activities of Macy's online shoppers. Then, it can be combined with local store POS data to predict what shirts to show a shopper from a specific region, such as Jersey City, New Jersey. Ultimately, Macy's needs partners in the Digital Analytics ecosystem to help it align its internal data with third-party data.

Digital Data Collection: Cookies, Tags and Sign-Ins

How do brands (or systems working on behalf of brands) collect consumers' digital information? Historically, the three important tools are:

- Digital Cookies
- Tags
- Sign-Ins

Digital Data Collection: Cookies, Tags and Sign-Ins

Digital cookies

Digital cookies are text files that sit in an internet browser's cache on your device, typically a desktop computer or laptop, and allow websites and servers to identify you through a unique cookie ID: a string of characters that is associated with the browser storing the cookie. Think of a digital cookie as a name tag. Lou Montulli, a 24-year-old programmer, invented cookies in 1994 and digital cookies have played a central role in the collection of digital data since then. They are particularly relevant in the collection of third-party data.

Digital Data Collection: Cookies, Tags and Sign-Ins

Digital cookies

- **Purpose:** Cookies are small pieces of data stored on a user's device (typically in their web browser) to track and store information about their online activity.
- **Functionality:** They are commonly used for various purposes, including session management, personalization, tracking user behavior, and remembering user preferences.
- **Privacy Implications:** Cookies can raise privacy concerns as they can be used to collect and share user data. However, regulations like GDPR and CCPA have imposed restrictions on how cookies can be used.

Digital Data Collection: Cookies, Tags and Sign-Ins

Tags

Tags are strings of code that initialize when someone performs an action in a browser, such as loading a webpage or clicking an object displayed on that page. When activated, tags allow analytics tools or marketing partners to collect data related to consumer behaviors on the tagged website. Analytics platforms, such as Google Analytics and Adobe Analytics; testing tools, such as Adobe Target and Optimizely; market research companies, such as comScore, IRI, and Nielsen; and marketing partners, such as Google and Facebook, use tags. Tags are critical for the collection of second-party data.

Digital Data Collection: Cookies, Tags and Sign-Ins

Tags

- **Purpose:** Tags, often referred to as tracking tags or web tags, are snippets of code added to a website's HTML to collect data on user interactions and send it to analytics or marketing platforms.
- **Functionality:** Tags are used for tracking website or app performance, user behavior, and conversions. They help in monitoring and optimizing digital marketing campaigns and the user experience.
- **Privacy Implications:** Tags, when used in compliance with privacy regulations, are generally less intrusive than cookies as they focus on tracking website behavior rather than individual user data.

Digital Data Collection: Cookies, Tags and Sign-Ins

Sign-Ins

Giving consumers the opportunity to create accounts and sign in is a common practice among online content providers. From The New York Times to Travelocity to Facebook, digital accounts are everywhere. Sometimes, those sign-ins are required and used to control access to subscriber-only information kept behind a sign-in paywall (think NYTimes.com's premium content), sensitive financial information, such as credit card numbers (think Travelocity), or private personal data (think Facebook). Other content providers, including Google, give consumers the option to create accounts and sign in or access content without those steps.

Digital Data Collection: Cookies, Tags and Sign-Ins

Sign-Ins

By tying activities to accounts, content providers can connect consumers to behaviors on their platforms without cookies and tags. Sign-ins are an important tool in the collection of first-party data.

Digital Data Collection: Cookies, Tags and Sign-Ins

Sign-Ins

Purpose: Sign-ins or logins are mechanisms that allow users to access secure areas of a website or application by providing their credentials, such as a username and password.

Functionality: They are used for user authentication, granting access to personalized content, and securing user accounts.

Privacy Implications: Sign-ins involve users willingly sharing their data with the website or application, and it's crucial to maintain data security and privacy for user accounts.

Third-Party Data and Analytics

Web Analytics, an example of first-party data, provides data on what is happening in the organization or business website by placing cookies into a visitor's browser.

Web Analytics often lacks competitive or industry data outside of the tracked website. Most organizations would like to know how well they are competing in the major areas connected to their business goals and revenue with a few exceptions.

Third-Party Data and Analytics

Taking competitive analysis information into consideration, Google Analytics provides anonymous benchmark data collected that can be useful to provide some idea of how well a website is performing against others in similar industries and locations. It also provides second- and third-party data from the DoubleClick Ad Network. Other platforms, such as IBM Coremetrics and Adobe Analytics, include industry-wide metrics gathered from customers running the analytics platform. Third-Party audience data from ComScore and Nielsen has been combined with Adobe Analytics in some customer implementations.

Third-Party Data Aggregators—What They Do

1. Aggregate behavioral data of audience members from online publishers, such as the *New York Times*, and Web portals, such as *Yahoo*, that repackage and resell them to other organizations.
2. Provide data collection scripts for publishers to run on their sites, allowing third-party data aggregators to collect data from publishers and portals as part of an ad network (e.g., Audience Science) or revenue share agreement (e.g., BlueKai).
3. Provide third-party cookie lists for sale to advertisers and agencies that are used for ad targeting. The cookie list is available for bidding within minutes (particularly for in-market audiences) and has a shelf-life of up to two months.

Third-Party Data Aggregators—What They Do

Every third-party data aggregator has their way of combining data—that is why it is better to assemble the data side by side but not intermix it, which will degrade data quality. Third-party data collection is similar to an “uncontrolled laboratory” where platform vendors are mixing up their formulations of data, interpretations, and context with no regulation authority to monitor them.

Analytics Platforms vs. Data Integration Software

Third-Party Data Providers							
Specialty Compilers for Lifestyle Events	Credit Score, Credit Card Data, Purchase Data	Segmentation Tool Providers for Geodemographics	International Data Providers	Compilers, Demographics and Firmographics	Digital and Web Data aimed at Data Aggregators and Analytics Vendors	Syndicated Research focused on Third-Party Consumer Data	List Management for Direct Marketing and Response Data
First American Core Logic, Home Data	Equifax	Claritas, True Strategic Solutions	Assesso, ABase	Experian	BlueKai	Simmons, Arbitron	Millard Group, Walter Karl Company, Infinite Media
Fidelity Data, Epsilon, iBehavior	Experian	Experian, Acxiom, Equifax	Dataminer, NewDbase	Acxiom	Exelate, Lotame	NPD	Direct Media INC, MerritDirect, Take5
Student Marketing	Transunion	XL, Nielsen	Bertelsmann, Callcredit	Epsilon, Knowledgebase Publishing	Targus Info	Comscore	BeachList Direct, Noble Ventures, WorldData
Wiland Direct	Visa	Spectra Intelligent Marketing	Veda, Tangram, Infocore	D&B, Compass Marketing Group	Experian and Epsilon	Scarborough Research	MediaSource Solutions, Fasano, The List Experts
Datalogix	American Express		Experian	INFOusa, V12 Group	Datalogix, Comscore, Nielsen, PeekYou	MRI	Edith Roman

Analytics Platforms vs. Data Integration Software

Combining Digital Analytics with media measurement and attribution has become one of the hottest trends in digital marketing and analytics. According to Gartner, traditional Web Analytics is a mature discipline dominated by a few players such as Adobe, Google, and IBM. The need for much more accurate measurement led to a vast influx of analytical talent moving into marketing departments and led to an evolutionary change in these tools, so they provided what stakeholders needed. Prime examples are Adobe Analytics and Google Analytics. Both are working hard to combine Digital Analytics with media measurement and attribution.

Analytics Platforms vs. Data Integration Software

Google Analytics: This is one of the most widely used web analytics services globally. It's a free tool offered by Google. Google Analytics provides insights into website traffic, user behavior, and various metrics, including the number of visitors, pages viewed, session duration, and conversion rates. It's commonly used for tracking and optimizing website performance, understanding user interactions, and measuring the effectiveness of online marketing campaigns.

Analytics Platforms vs. Data Integration Software

Adobe Analytics: Adobe Analytics, previously known as Omniture, is a comprehensive web analytics solution offered by Adobe. It's a paid service known for its robust capabilities. Adobe Analytics provides in-depth data on user behavior, segmentation, and marketing performance. It's often used by large enterprises and organizations to gain precise insights into customer journeys and engagement across digital channels.

Analytics Platforms vs. Data Integration Software

WebTrends: WebTrends is another web analytics tool that helps businesses and organizations track website traffic and user behavior. It provides data on website visits, conversions, and other metrics. WebTrends is suitable for businesses looking for detailed analytics to make informed decisions about their online presence.

Analytics Platforms vs. Data Integration Software

Cost:

- **Google Analytics:** Offers a free version (Google Analytics Standard) with basic features. Also, has a premium version (Google Analytics 360) with advanced capabilities that comes at a cost.
- **Adobe Analytics:** Typically comes with a substantial cost, especially for larger enterprises.
- **WebTrends:** Costs can vary, and it offers different pricing plans depending on the specific needs of the organization.

Analytics Platforms vs. Data Integration Software

Ease of Use:

- **Google Analytics:** Known for its user-friendly interface and is relatively easy to set up and use.
- **Adobe Analytics:** Offers powerful capabilities but may have a steeper learning curve and require more technical expertise to set up and utilize effectively.
- **WebTrends:** Generally user-friendly and straightforward, making it a good choice for businesses looking for a balance between features and ease of use.

Analytics Platforms vs. Data Integration Software

Customization and Scalability:

- **Google Analytics:** Offers a high degree of customization and is scalable, but more advanced features are available in the paid version.
- **Adobe Analytics:** Highly customizable and scalable, making it suitable for large enterprises with complex data needs.
- **WebTrends:** Provides some level of customization but may not be as flexible as Adobe Analytics.

Analytics Platforms vs. Data Integration Software

Data Accuracy:

- **Google Analytics:** Provides accurate data for most websites and is considered reliable.
- **Adobe Analytics:** Known for its accuracy and is used by many large enterprises for precise data analysis.
- **WebTrends:** Offers reliable data accuracy for tracking website performance.

Analytics Platforms vs. Data Integration Software

Integration:

- **Google Analytics:** Easily integrates with various Google services and third-party tools, offering a wide range of possibilities.
- **Adobe Analytics:** Integrates well with Adobe's marketing suite and other Adobe products, creating a seamless marketing ecosystem.
- **WebTrends:** Offers integration options, but may not have as extensive a network of third-party integrations as Google Analytics.

Analytics Platforms vs. Data Integration Software

Advanced Features:

- **Google Analytics:** Google Analytics 360 offers advanced features, but the free version is somewhat limited in this regard.
- **Adobe Analytics:** Known for its advanced features, extensive segmentation, and sophisticated analysis capabilities.
- **WebTrends:** Provides a range of features, but it may not have the same level of advanced analytics capabilities as Adobe Analytics.

Analytics Platforms vs. Data Integration Software

Ultimately, the choice between these tools will depend on your organization's specific needs, budget, and the level of data analysis and customization required. Smaller businesses may find Google Analytics to be a cost-effective and user-friendly choice, while larger enterprises may prefer the advanced capabilities of Adobe Analytics. WebTrends provides a balanced option for those looking for a middle ground.

Demographics Data

comScore MyMetrix provides a wealth of data on many of the top websites in a region. comScore gains its data through a panel comprising millions of users who agree to run metering software on their Internet-connected devices. Once the data is collected and de-duplicated, it can be applied against official census numbers in a location/geography. comScore publishes an estimation of the actual traffic, behavior, geographic, psychographic, income/gender, and cross-visiting behavior. This third-party information can be valuable to businesses, particularly for advertisers and publishers, who are otherwise unable to gather the data.

Demographics Data

Other providers of information are similar, but have a different cut or view of the data (and different methods to collect and tabulate it) including Quantcast and SimilarWeb, to name a few. Some of this third-party data is surfacing in newer analytics platforms such as IBM Watson Analytics along with the different marketing clouds from Salesforce, Adobe, Oracle, and IBM.

Web Data Collection Issues

- Users in Web Analytics platforms are not identical to people. Users are cookie value (first-party data), and an accurate count of Web users is not the same as actual users—as the same user might be accessing the website through multiple devices (each having its own IP address and cookies). The remedy for this problem is to have users log in to the site, so it is counted accurately, but that is not always possible.
- Web Analytics can no longer capture the variety of traffic produced by the customer's journey. In fact, no single piece of software does it all in one place.

Web Data Collection Issues

- Meaningful information is hard to isolate due to excessive amounts of generated data. It is also tempting to use the wrong key performance indicators, such as likes, shares, and followers, because they are easier to gather than others—which might be better suited but are harder to collect.
- To reinforce the confusion about which metrics to use, there is no consensus on the right metrics for consumer activities on the Web.

AI transforms data into actionable intelligence

Data Collection & Quality

Low-quality aggregated data

Traditional data collection relies on **cookies** (tracking user activity), **tags** (capturing interactions), and **sign-ins** (linking behaviors to identities). However, these tools create isolated sources:

First-party data (e.g., CRM, email lists) is confined to owned channels.

Third-party data (e.g., ComScore) often lacks context or accuracy (.).

Cross-device gaps make "users" $\neq$ real people, while regulations (GDPR/CCPA) restrict cookie-based tracking.

AI transforms data into actionable intelligence

AI transforms collection and quality through:

Unified ID Systems: Using ML to analyze **behavioral fingerprints** (e.g., browsing patterns) replaces cookies, linking user activity across devices *without personal data*.

Automated Cleansing: AI in platforms like **Adobe Experience Platform** merges 1st/2nd/3rd-party data, resolving conflicts (e.g., duplicate user profiles) and generating **synthetic datasets** to fill gaps while preserving privacy.

*Result: High-quality, compliant data for hyper-personalized strategies (e.g., Macy's regional demand forecasts).

In this lecture, we discussed:

- **Three Types of Data**
- **Stories about Converging First-, Second and Third-Party Data**
- **Digital Data Collection: Cookies, Tags and Sign-Ins**
- **Third-Party Data and Analytics**
- **Third-Party Data Aggregators—What They Do**
- **Analytics Platforms vs. Data Integration Software**
- **Demographics Data**
- **Web Data Collection Issues**
- **AI transforms data into actionable intelligence**



Thank You