🎬 Video 21 – Using Data Aggregation

📌 What is Data Aggregation?

- **Definition**: Aggregation is the process of gathering and summarizing data to make it more manageable and insightful.
- **Purpose**: Helps reduce data clutter, improve accessibility, and reveal trends.

⚙️ Why Aggregation Matters

1. Managing Data Volume

- Modern data comes from many sources (websites, devices, social media) and often in real time.
- Not all data is relevant — storing everything increases costs and complexity.
- **Aggregation reduces irrelevant data**, saving storage and simplifying analysis.

2. Making Data Accessible

- Aggregated metrics (e.g., average clicks per hour) are easier to query and use.
- Saves time by avoiding repeated calculations on raw data.

3. Spotting Trends

- Aggregated data helps visualize patterns over time.
- Example: Tracking hourly link clicks helps marketing teams optimize ad timing and forecast traffic.

🧠 Example Scenario

- A website generates multiple data points per click (IP, browser, timestamp).
- Only **click count per hour** and **timestamp** are relevant for marketing.
- Aggregation simplifies this into a single metric: **average clicks per hour**.

💼 Business Benefits

- Reduces storage needs.
- Improves data usability.
- Enables better decision-making through trend analysis.

💡 Key Takeaway

Aggregation is a powerful and versatile transformation technique that supports efficient data management and insightful analysis.