Data Collection Techniques

Saptarshi Pyne

Assistant Professor
Department of Computer Science and Engineering
Indian Institute of Technology Jodhpur, Rajasthan, India 342030

What is a data collection technique?

A data collection technique is a **methodological** process of gathering information about **a specific aspect** of your **consumers**.

We should aim to collect the consumer data **legally** and **ethically**.

We should also make sure that the collected data is as **complete** and as **accurate** as possible.

Types of Consumer Data

- **First-party data:** Data you have collected directly from the consumers of **your organization**.

- **Second-party data:** First-party data of another organization that they have **shared** with you.

- **Third-party data:** Consumer data you have **purchased** or **rented** from another organization.

Consumer data collection techniques for Business Analytics

There are **seven** well-tested techniques for collecting consumer data that can help you take **better business decisions**.

1. Surveys
2. Transaction tracking
3. Interviews and focus groups
4. Observation
5. Online tracking
6. Forms
7. Social media monitoring

- **Subject bias:** Your subjects know that their responses will be read by you. Hence, they might change their answers.
    - Resolution: Pair survey data with behavioural data.

- **Collection bias:** The way you word your question may sway the responders to a particular answer.
    - Resolution: Word your question in an unbiased manner.

- Examples: https://online.hbs.edu/blog/post/3-survey-question-mistakes-and-how-to-fix-them

2. Transaction tracking

Keep track of every transaction.

Very useful if you are running e-commerce businesses, like Amazon.

3. Interviews and focus groups

Interview: Collect data from one consumer at a time.

Focus group: Collect data from a small group of consumers on the same topic at a time.

It may involve **verbal interviews** or you letting your interviewees **interact with your product** and collecting feedback from them in real time.

Drawback: Interviews and focus groups are time consuming.

Resolution: Hire a market research company.

Track users' reaction in natural settings, e.g., add gaze tracker plugins to your product and take users' consent for allowing it.

Gaze point
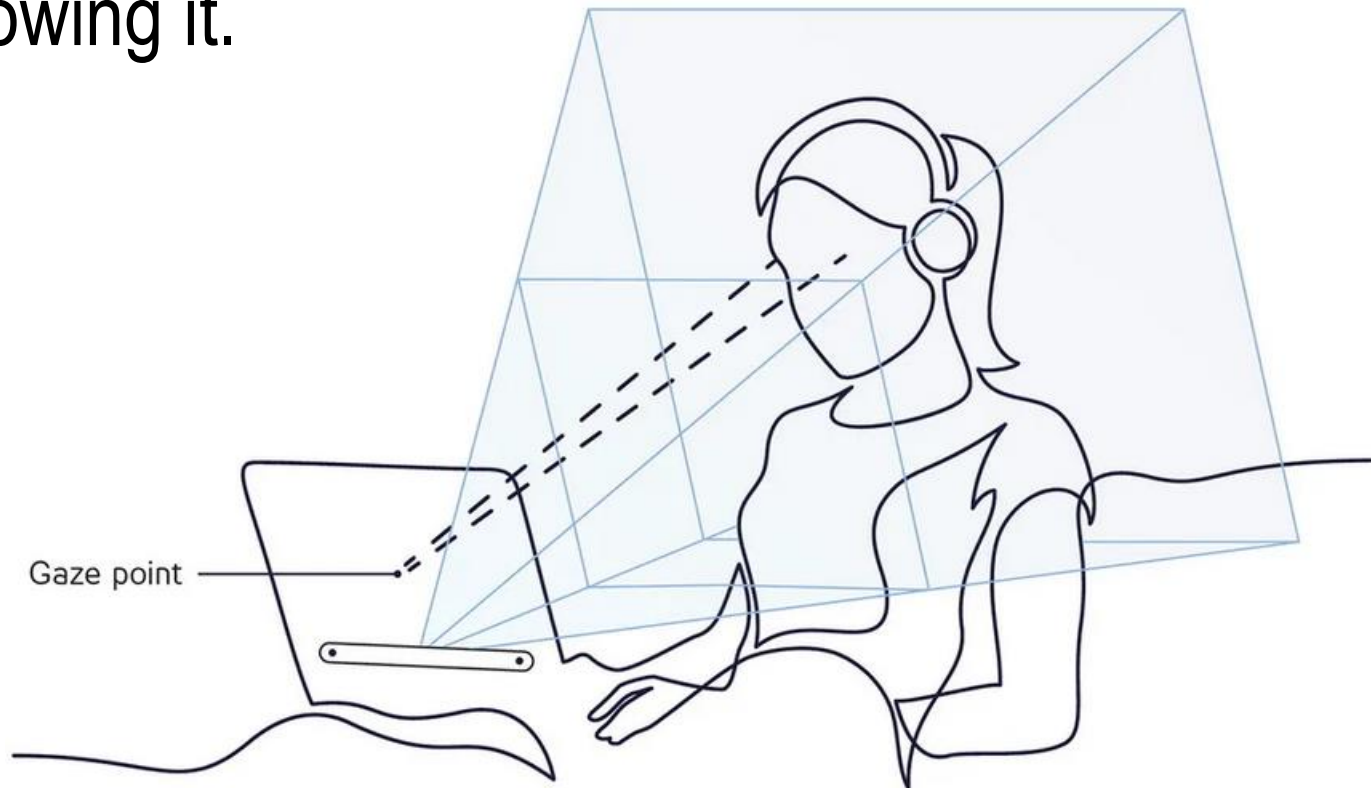
Insert **cookies** and **tracking pixels** to your websites and business emails.

Tracking pixels are pixels camouflaged in the background color and loaded when a user visits a website or opens an email.

Make sure you are complying with the **local** and **industrial "Data Privacy Standards"**.

Ask your users to fill up an **online form** for collecting more information about them, e.g., their demographic details.

Very useful if you are running webinars and email newsletters.

Monitor the social media behaviour of your target users to learn about their **interests** and **motivations**.

Deploy **web crawlers**.

Example: Googlebot (https://developers.google.com/search/docs/crawling-indexing/googlebot?hl=en&ref_topic=9426101&visit_id=638267335141983930-1459937590&rd=1)

The Root

Seeds

The Horizon
- Deduplication of seeds

Web crawlers vs. Web scrapers

You need to deploy a web scraper on **each webpage individually** you want to scrape data from.

Web crawlers will automatically crawl all the webpages linked from the starting webpage.

References

- https://online.hbs.edu/blog/post/data-collection-methods

Thank you