

# Tutorial 1: Exploring Internet Data Collection

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In today's tutorial, you are going to do a few activities and answer a few questions about how servers and browsers communicate, collect, and store information about their users. Please make a copy of this document and answer the questions (Q1-Q12). When you're done, please upload your document to Moodle under "Tutorial 1."

## Part 1. Analyzing Browser ↔ Server Communication

For your first activity, you are going to observe Browser-to-Server communications. First-hand. Please do the following:

### A. HTTP Requests

- Open a web browser (use Chrome, Edge, or Firefox) and navigate to <https://www.cnn.com/>
- Right-click on the page and select "Inspect" from the context menu
- Navigate to the network panel (tab)
- Right-click on one of the column headers (like Name), and when the context menu appears, ensure that both "Domain" and "Method" have a checkmark next to them.
- Turn off your ad blocker (if you have one)
- Reload the page

When you're done, please answer the following questions

**Q1.** How many resources did your browser pull down from a server?

- If you have an ad blocker, turn it back on and then reload the page. What changes?

**Q2.** How many different servers (i.e. domains) did your browser communicate with (just estimate)?

**Q3.** How many of those communications were "POST" requests (meaning that data is transmitted from the browser to the server)?

**Q4.** If you were to take a guess, how many companies have some presence on this website (besides CNN)?

**Q5.** Does any of this surprise you? Or did you already know all of this?

## **B. Cookies**

Navigate to the **Application** panel (tab) in the browser inspector / developer tools. In the left-hand panel, scroll down to the Storage section and then click maximize the following (one by one):

- “Local Storage”
  - “Session Storage”
  - Cookies
- For each, notice how many items there are (and from how many different domain names).
- Delete them all.
  - If you do have an ad blocker, turn it back on and then reload the page. What changes?
- Reload the page and see what happens

**Q6.** What do you think would happen if you completely disabled your cookies? Why might you want / not want to do this?

## Part 2. How do platforms see you?<sup>1</sup>

Tech companies (including but not limited to social media companies) collect, analyze and act on the data they collect about their users. Whenever you accept terms of agreement, you ‘give permission’ for this data to be collected and used. For the second part of this tutorial, you are going to examine this phenomenon by choosing one of the following platforms (below) and explore the data they collect:

[Google](#) | [Facebook](#) | [Instagram](#) | [Twitter](#) | [Snapchat](#) | [TikTok](#)

If you don’t use any of these platforms, you can either:

- Investigate a different platform of your choice, or
- Skim the following article on various platforms’ data collection, and note your reactions: <https://www.security.org/resources/data-tech-companies-have/>

### A. [On Your Own] Explore the Links Provided

Navigate to the platform of your choice (by clicking the name of the platform above) and examine the links provided. Then answer the following questions:

**Q7.** How does the platform you analyzed “see” you? In what ways does this represent you, and in what ways does it mis-represent you?

**Q8.** What’s a piece of data you would expect the platform to know? What’s a piece of data you’re surprised they know? Why?

**Q9.** Why are these the things these platforms choose to know about you? What do they do with this information?

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<sup>1</sup> Credit: This activity was designed in collaboration with Natalie Melo (Ph.D. student) & Bijal Mehta (while she was an undergraduate).

**Q10.** How much do you want these platforms to know? Are you comfortable with what's being collected on you currently?

**Q11.** Note that you can turn off these settings. Would you want to do that? Why or why not? What are the consequences for you and for the platform?

**Q12.** Why should we care about this?

## THE PLATFORMS

## Google<sup>2</sup>

What does Google know about you?

Check out the following links with your account:

1. <http://www.google.com/settings/ads/>
2. <https://maps.google.com/locationhistory>
3. <https://myactivity.google.com/activitycontrols/webandapp>

If time allows,

- Read some of Google's Privacy Policy: <https://policies.google.com/privacy>
- Browse through other categories within Google's MyActivity page: <https://myactivity.google.com/more-activity>
- Read this article on Google: <https://gizmodo.com/everything-google-knows-about-you-and-how-to-delete-it-1834633034>

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<sup>2</sup> If you have previously turned off the following features, you may not see any information or data. If you would still like to get a general sense of the information Google tracks or need additional help with the following steps you can read this article: <https://gizmodo.com/everything-google-knows-about-you-and-how-to-delete-it-1834633034>

## Facebook<sup>3</sup>

What does Facebook know about you?

Check out the following links with your account:

1. [https://www.facebook.com/adpreferences/ad\\_settings](https://www.facebook.com/adpreferences/ad_settings)
2. Look at the “Categories used to reach you” section
3. Look at the “Audience-based advertising” section

If time allows,

- Read some of Facebook’s Privacy Policy:  
<https://www.facebook.com/policy>
- Read this article on Facebook:  
<https://www.wired.com/story/ways-facebook-tracks-you-limit-it/>

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<sup>3</sup> If you have previously turned off the following features, you may not see any information or data. If you would still like to get a general sense of the information Facebook tracks or need additional help with the following steps you can read this article: <https://www.wired.com/story/ways-facebook-tracks-you-limit-it/>

## Instagram<sup>4</sup>

What does Instagram know about you?

Check out the following links with your account:

1. If you're on your phone: Settings > Security > Access Data > Ads
2. Or you can use the following link:  
[https://www.instagram.com/accounts/login/?next=/accounts/access\\_tool/ads\\_interests](https://www.instagram.com/accounts/login/?next=/accounts/access_tool/ads_interests)

If time allows,

- Read some of Instagram's Privacy Policy:  
<https://help.instagram.com/519522125107875>
- Read this article on Instagram:  
<https://vpnoverview.com/privacy/social-media/what-does-instagram-know-about-me/>

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<sup>4</sup> If you have previously turned off the following features, you may not see any information or data. If you would still like to get a general sense of the information Instagram tracks or need additional help with the following steps you can read this article:

<https://vpnoverview.com/privacy/social-media/what-does-instagram-know-about-me/>

## Twitter<sup>5</sup>

What does Twitter know about you?

Check out the following links with your account:

1. [https://twitter.com/settings/your\\_twitter\\_data/ads](https://twitter.com/settings/your_twitter_data/ads)
2. Look at “Interests from Twitter”, “Inferred interests from partners”, and “Tailored audiences”

If time allows,

- Read some of Twitter’s Privacy Policy: <https://twitter.com/en/privacy>
- Read this article on Twitter:  
<https://www.cnbc.com/2018/04/04/everything-twitter-knows-about-you-how-to-download-a-copy.html>

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<sup>5</sup> If you have previously turned off the following features, you will not see any information or data. If you would still like to get a general sense of the information Twitter tracks or need additional help with the following steps you can read this article:  
<https://www.cnbc.com/2018/04/04/everything-twitter-knows-about-you-how-to-download-a-copy.html>

## Snapchat<sup>6</sup>

What does Snapchat know about you?

Check out the following links with your account:

1. Use the “Download My Data” feature under Settings:  
<https://support.snapchat.com/en-US/a/download-my-data>

If time allows,

- Read some of Snap Inc’s Privacy Policy:  
<https://snap.com/en-US/privacy/privacy-policy>
- Read this article on Snapchat:  
<https://vpnoverview.com/privacy/social-media/what-does-snapchat-know-about-me/>

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<sup>6</sup> If you have previously turned off the following features, you will not see any information or data. If you would still like to get a general sense of the information SnapChat tracks or need additional help with the following steps you can read this article:  
<https://vpnoverview.com/privacy/social-media/what-does-snapchat-know-about-me/>

## TikTok

Log into TikTok and see if you can find whether you're able to opt-in / opt-out of particular kinds of targeted marketing, or whether it shares the categories and data it has inferred about you. If you don't have access to this information, see what you can learn from the links below, or from your own Google searches.

Relevant articles:

- <https://www.wired.co.uk/article/tiktok-data-privacy>
- <https://www.cnbc.com/2022/02/08/tiktok-shares-your-data-more-than-any-other-social-media-app-study.html>