Tutorial 1: Exploring Internet Data Collection

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?

Over 200 in just the first few seconds. After about a minute, it had pulled nearly 500.

Q2. How many different servers (i.e. domains) did your browser communicate with (just estimate)?
I noticed 29 that showed up fairly frequently, although there were numerous others that showed up only once or twice. I would estimate that my browser communicated with nearly 70 different servers in just the first few minutes of the website being open.

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

Just over half.

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

I would say anywhere from 15-20 companies have a presence on the CNN website other than CNN itself.

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

I was surprised to see how many websites and companies have an unseen presence on the website. I was also surprised – and troubled – to see just how many of those companies were actively receiving my data and information as I scrolled and clicked.

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?

If I completely disabled my cookies I would most likely be subjected to marketing and advertisements that do not align with my interests and/or shopping trends. I, personally, don't see much of a downside to disabling cookies as it just means less

information companies have about me. If it means I won't be seeing advertisements that appeal to me as often, then great, more money for me. In terms of using documents and doing research, cookies may be useful in keeping your "paper trail" as you progress.

Part 2. How do platforms see you?[1]

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?

As far as I can tell Snapchat doesn't really "see" me as much of anything. I seem to get the same ads and stuff as other people my age. I would assume that Snapchat is tailored more towards people my age anyway.

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?

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

I would expect Snapchat to know my age, location, name and who I am talking to. I was a little surprised to see that they had my support history, reported content and the lenses I have used. Although it makes sense that they would keep track of these things to better tailor my experience to me and my preferences, I had never thought about just how deep the "paper trail" goes.

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

Snapchat chooses to know these things about me in order to best tailor my experience using their app to me and my preferences. They want to maximize the amount of time I spend using and interacting with their app and this data helps them do just that.

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

Ideally, I'd like these platforms to know as little about me as possible, but I signed that option away when I joined. I'm not entirely comfortable with it, but as long as I'm not doing anything wrong then what do I really have to worry about?

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?

I would – and do – turn off as many of these settings as I can. Information such as my exact location and age are things I don't understand their use for. Turning these settings off doesn't change much about my user experience, but it provides me with peace of mind.

Q12. Why should we care about this?

We should care because these companies are storing and sharing much of our data seemingly without our knowledge. The information they get from this data only pushes us further and further into the internet-reliant society in which we already live. Social media is a plague and should be treated as such.

THE PLATFORMS

Google[2]

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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[2] 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[3]

What does Facebook know about you?

Check out the following links with your account:

1. 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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[3] 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[4]

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

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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[4] 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[5]

What does Twitter know about you?

Check out the following links with your account:

1. 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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[5] 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[6]

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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[6] 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