

**CS-455: Internet Attacks**  
**Spring 2022 – 2023**

**Assignment 1**  
**Target profiling**

Uploaded: 20/02/23  
Deadline: 10/03/23, 23:59

---

## Introduction

Data profiling is the process of assembling information about a particular individual or group in order to generate a profile — that is, a picture of their patterns and behavior.

Information relating to many of these individuals is often easily available because it is generally not guarded in isolation, since the information, such as the title of a movie a person has rented, might not seem sensitive.

However, when many such pieces of information are aggregated they can be used to assemble a detailed profile revealing the actions, habits, beliefs, locations frequented, social connections, and preferences of the individual. Data profiling can be an extremely powerful tool for psychological and social network analysis. A skilled analyst can discover facts about a person that they might not even be consciously aware of themselves.

## Questions

1. [50%] Search online and collect information about one of your **classmates who has agreed to participate in this exercise** (based on a survey conducted by email).
  - You are **not supposed to intrude privacy to collect information.** You are only expected to expose information that is available online. It is **not legally allowed to misuse information retrieved**, even if that information is freely made available online.

- You can use the tables in the accompanying excel file as a guide for collecting information. The list included in the file mirrors what we discussed in class. You are not expected to collect information about everything listed as some of the items imply intrusive actions. Your report must include online links for each piece of information you collected.
2. [25%] Removing personal information from online sources
    - a. List and briefly discuss actions that should be taken to remove personal information from google searches (or another database).
    - b. List and briefly discuss some of the legal issues related to this matter.
  3. [25%] Impersonation based on stolen biometric data
    - List and briefly discuss uses of biometric data with respect to user authentication and impersonation
    - List and discuss the consequences of stealing someone else's DNA data.
    - **[BONUS 5%]** Fake your own fingerprint and test it in practice.

## Submission

- Submit a pdf document including all the information requested above.
- Submissions will be done through eLearn.
- This assignment is an individual creative process and students must submit their own work. You are not allowed, under any circumstances, to copy another person's work. You must also ensure that your work won't be accessible to others.
- You are encouraged to post any questions you may have in the eLearn forum. If however you believe that your question contains part of the solution or spoilers for the other students you can communicate directly with the course staff at [hy455@csd.uoc.gr](mailto:hy455@csd.uoc.gr).

## References

- Removing personal information
  - <https://support.google.com/websearch/troubleshooter/3111061?hl=en>
  - <http://justdelete.me/>
  - ...?
- Information privacy
  - [https://en.wikipedia.org/wiki/Information\\_privacy](https://en.wikipedia.org/wiki/Information_privacy)
  - [https://en.wikipedia.org/wiki/Right\\_to\\_be\\_forgotten](https://en.wikipedia.org/wiki/Right_to_be_forgotten)
- Personally identifiable information
  - [https://en.wikipedia.org/wiki/Personally\\_identifiable\\_information](https://en.wikipedia.org/wiki/Personally_identifiable_information)
  - [https://en.wikipedia.org/wiki/Identity\\_score](https://en.wikipedia.org/wiki/Identity_score)
- Privacy-enhancing technologies
  - [https://en.wikipedia.org/wiki/Privacy-enhancing\\_technologies](https://en.wikipedia.org/wiki/Privacy-enhancing_technologies)
  - [https://en.wikipedia.org/wiki/Privacy\\_engineering](https://en.wikipedia.org/wiki/Privacy_engineering)
  - [https://en.wikipedia.org/wiki/Privacy\\_software](https://en.wikipedia.org/wiki/Privacy_software)
- Data mining
  - [https://en.wikipedia.org/wiki/Data\\_mining](https://en.wikipedia.org/wiki/Data_mining)
- Faking fingerprints
  - <https://www.wikihow.com/Fake-Fingerprints>
  - [https://www.youtube.com/results?search\\_query=fake+fingerprint](https://www.youtube.com/results?search_query=fake+fingerprint)

## Disclaimer

It is **ILLEGAL** to attempt any type of attack against a target (individual, network, public/private entity, etc.) without authorization / explicit permission. Such actions are **prohibited and punished by law and university policies**.