Thesis Notes

# Goals

The main goal of this bachelor thesis is to measure the difference of the extent of dark patterns in cookie consent banners on [set of websites, e.g. news websites] in EU countries. The GDPR does not have very specific articles about dark patterns, but it does state that consent should be free and informed. Some countries, however, have their own data protection laws that transcend the GDPR. For example, France requires an “equivalency” requirement that mandates opting out of cookie consent be just as easy as opting in. This led to a fine of €150 million for Google and Facebook (<https://www.cpomagazine.com/data-protection/google-and-facebook-hit-with-fines-over-dark-patterns-allegedly-misleading-users-into-cookie-consent/>). Because different EU countries have different laws regarding cookie banners, it could be interesting to see how dark patterns in cookie consent banners differ in EU countries.

# Research questions

How do dark patterns in cookie consent banners differ in different countries in the European Union?

How many clicks does one need to get to a “deny all” if it exists?

What is the most prevalent dark pattern?

…?

How many websites have an option to “deny all” in the first layer of its banner?

Methods:  
There are two parts to this, the collecting of the cookie banners and the analyzing of those cookie banners.

**Collecting the data**

To collect data we can use a crawler that looks at links, buttons, etc. to see if they contain words from a list of accept words. If a match is found, we can look for a links, buttons, etc. that contain words from an un accept/deny all list.

**Analyzing the data**

Once the data is collected, we can quantify the number of deny all buttons on sites in different EU countries and compare them to see if there is a difference based on country. We could also quantify other questions.

# Sources

[1911.09964.pdf](https://arxiv.org/pdf/1911.09964.pdf) [Google and Facebook Hit With Fines Over "Dark Patterns", Allegedly Misleading Users Into Cookie Consent - CPO Magazine](https://www.cpomagazine.com/data-protection/google-and-facebook-hit-with-fines-over-dark-patterns-allegedly-misleading-users-into-cookie-consent/) [(Un)informed Consent: Studying GDPR Consent Notices in the Field - 3319535.3354212.pdf](https://dl.acm.org/doi/pdf/10.1145/3319535.3354212) [EDPL\_3-2017\_Article\_Borgesius et al.pdf - EDPL\_2017\_03.pdf](https://www.ivir.nl/publicaties/download/EDPL_2017_03.pdf) [Dark Patterns after the GDPR: Scraping Consent Pop-ups and Demonstrating their Influence - 2001.02479.pdf](https://arxiv.org/pdf/2001.02479.pdf) [Website Traffic - Check and Analyze Any Website | Similarweb](https://www.similarweb.com/) [(PDF) Dark and bright patterns in cookie consent requests](https://www.researchgate.net/publication/343120695_Dark_and_bright_patterns_in_cookie_consent_requests) [2104.05750.pdf](https://arxiv.org/pdf/2104.05750.pdf) [Dark Patterns in the Interaction with Cookie BannersDark Patterns in the Interaction with Cookie Banners - 2103.14956.pdf](https://arxiv.org/pdf/2103.14956.pdf) [rosca-conpro21.pdf](https://www.ieee-security.org/TC/SPW2021/ConPro/papers/rosca-conpro21.pdf)

<https://github.com/cavi-au/Consent-O-Matic>

<https://github.com/openwpm/OpenWPM>

<https://github.com/marty90/priv-accept>

<https://github.com/duckduckgo/tracker-radar-collector>

<https://edpb.europa.eu/system/files/2023-01/edpb_20230118_report_cookie_banner_taskforce_en.pdf>

Timeline:  
Week:

37 Finish project proposal

38 Theoretical framework & literature

39 Theoretical framework & literature

40 Develop crawler

41 Develop crawler

42 Develop crawler

43 Develop crawler

44 Run crawler & collect data

45 Analyze data

46 Analyze data

47 Analyze data

48 Analyze data

49 Write thesis

50 Write thesis

51 Write thesis

52 Write thesis

1 Buffer?

2 Buffer?

3 Buffer?