

Protocol for searching for links and statements about partial disclosure or non-disclosure of research artifacts.

Due to the large number of papers included in our study, it was not feasible to read each paper in its entirety. Therefore, similar to the approach taken by Heumuller et al. (2020), we conducted a heuristic search that consisted of three steps to identify any indications of available artifacts or statements regarding artifact disclosure.

If statements or data availability information could not be found with the **Mandatory phase** (steps 1 and 2), you must do the **Extra phase** (steps 3 and 4).

All the **primary keywords** (step 2) are always searched, independently if relevant information was already found through the **section reading** (step 1).

The **secondary keywords** (step 3) and **specific keywords** (step 4) are only used in case no link to external material or justification for non-disclosure (or partial disclosure) was found with the section reading (step 1) and the targeted search with the primary keywords (step 2). So, if you need to start the Extra phase, you must do the target search with all the secondary (step 3) and specifics keywords (step 4), to ensure consistency in executing the same procedures for all papers.

Mandatory phase

(1) Read paper's relevant sections.

- **Abstract**
- **Final paragraphs of the Introduction**
- **Conclusion**
- **Data Availability section** or similar (if provided), such as Artifacts, Replication Package, Replication, Reproducibility, Verifiability and Replicability.

(2) Target search using **primary keywords**.

Primary Keywords	
http*	http, https
availab*	available, availability
releas*	release, released, releasing
publi*	public, publicly, published
appendix	appendix
material*	material, materials
supplement*	supplemental, supplementary
replic*	replication, replicability
reprod*	reproduction, reproducibility
repo*	repository, report, reported
reason*	reason, reasons
due to	due to

Extra phase

(3) Target search using **secondary keywords**.

Secondary Keywords	
disclos*	disclosed, non-disclosure, disclose
detail*	detail, detailed, details
priva*	privacy, private
confident*	confidential, confidentiality
request*	request, requested
artif*, artef*	artifact, artefact
web*, site, home*, page	website, web site, webpage, web page, homepage, home page
online	online
git*	github, gitlab, git.io
bitbucket	bitbucket
figshare	figshare
zenodo	zenodo
arxiv	arxiv
goo*	google, goo.gl
doi	doi

(4) Target search using **specific keywords**.

Specific Keywords
Authors' last names
Paper title
Names of any developed approaches, tools, or similar (presented in the paper)

Fields to be filled

Is there an artifact link in the paper?	<p>Is there an artifact link in the paper? Answer: Yes or No.</p> <p>Some papers have more than one research repository, copy all repositories links on the paper. But remember that we are looking for the artifacts of this research.</p>
Argument to justify the non-disclosure of all the artifacts	<p>What is the argument to justify the non-disclosure of all research artifacts? If the artifacts are not available or partially available, are there arguments to justify the non-disclosure of artifacts? If the artifacts are available, but they have any kind of restriction (cited by the author), you must describe their justifications here.</p>
Artifacts link	<p>How can we access the research artifacts? Fill out all available links to access the research artifact repository.</p> <p>Sometimes the research has more than one repository link available in the paper (each with different artifacts, for example).</p> <p>To make sure this link is correct, you must check the repository for: mentions of the title of the paper or the year and venue of publication. In general, the name, venue, or reference of the paper is usually clearly cited in the repository.</p> <p>Sometimes the same repository link is available in different places of the paper, so once you find the link(s), use the search (CTRL + F) to see if the link is available in another place in the paper, in order to answer the next fields.</p>
It talks about the artifacts link in the footnote.	<p>Is the paper talking about the artifacts link in the footnote? Answer: Yes or No.</p>
It talks about the artifacts link in the References section	<p>Is the paper talking about the artifacts link in the References section? Answer: Yes or No.</p>
It talks about the artifacts link in the Introduction section	<p>Is the paper talking about the artifacts link in the Introduction section? Answer: Yes or No.</p>
It talks about the artifacts link in the Conclusion section	<p>Is the paper talking about the artifacts link in the Conclusion section? Answer: Yes or No.</p>
It talks about the artifacts link in a highlight	<p>Is the paper talking about the artifacts link in a highlight? Answer: Yes or No.</p>
It talks about the artifacts link in a specific section	<p>Is the paper talking about the artifacts link in a specific section (e.g. Data Availability, Artifacts, Replication Package, Replication, Reproducibility, Verifiability and Replicability)? Answer: Yes or No.</p>
It talks about the artifacts link in another uncited section	<p>Is the paper talking about the artifacts link in another uncited section? Answer: Yes or No.</p>
Where the article is talking about the artifacts link?	<p>Detail where the article is talking about the artifacts link?</p> <p>If there are one or more artifacts links available elsewhere than those mentioned in the previous fields, describe them here.</p> <p>If there are artifacts link is in a highlight, in a specific section or in another uncited section, described them here.</p>
Comments	<p>Is there any important information about this paper that you noticed during the extraction process?</p> <p>Write down problems and atypical situations/information identified.</p>