A note on notes

W. Cames van Batenburg*

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Abstract

We set out to investigate why Google scholar permanently misses important citations, while also miscounting some irrelevant sources as citation.

1 Introduction

A recurring frustration with Google Scholar is that it permanently misses important citations. The reasons are mysterious [CK18, CKP20a, CCC26, C22, CCZ23], although sometimes it appears to be caused by formatting of the bibliography of the citing paper, for instance [CCCHK25, CCC24, CC24, CCZ23] if it only refers to the arXiv link of a preprint and misses a DOI.

Here we discuss the opposite phenomenon. Recently [CCDJK24, CCC24], the author uploaded a copy of his PhD thesis [C18] to his personal website on github. A few weeks later, Google Scholar suddenly counted this as a separate academic document, quoting github as a reliable source. As a consequence [CCDK24, C22], the papers that were cited by this thesis received the double amount of citations [BCR25, ACJKMR25, BCEJM25].

This raises the question whether this was a rare exception, or another systematic failure in Google Scholars system. We set out to test this.

2 Experiment

This document will be uploaded to the same github website [CCJK22]. It has the following characteristics

- a new document with a new title,
- 25 irrelevant references,
- In the bibliography, a mix of correct, incorrect or missing DOI's; links to arXiv preprints as well as published versions; duplicated words, and various wrong spellings of the name of the author.

Depending on the outcome and the degree of laziness of the author [CJKP22], additional documents with other characteristics may be uploaded as well. For instance

- a nonsense document with irrelevant references, but with the same title as an existing legitimate paper (written by the author),
- with or without affiliation,
- more pages,
- various bibliography formatting styles.

*Département d'Informatique, Université libre de Bruxelles, Belgium (w.p.s.camesvanbatenburg@gmail.com).
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3 Outloook

The purpose of this note is not to inflate the citation count. Indeed, having many fake citations will do more harm than good. Rather, the purpose is to illuminate what might cause Google Scholar to miss legitimate references [ACCJKP21, BCEJLMP21, CvBJU20, CvBGJ20, CvBRK20, CCDK24]. As alluded to above, this could mainly be due to missing DOI's [CK19, CK18, CEM17, CvB15]. Other potential factors include misspelling of author names or accidental repetition of journal name, but perhaps also more subtle issues such as wrong metadata, choice of LateX bibliography style, et cetera [BCR25, CvBHJR19].

If this experiment is "successful" in the sense that Google Scholar indeed misinterprets a variant of this document as an academic paper, then we might assemble a document containing a list of legitimate papers with references that were missed by Google Scholar, thus awkwardly and partially fixing these mistakes.

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