EVALUATING ALTMETRICS INFLUENCE AND SCHOLARLY ENGAGEMENT IN SCOPUS-INDEXED COMPUTER SCIENCE JOURNALS: A COMPREHENSIVE ANALYSIS

Mr. Gorakh Balu Shelke,

Research Scholar,

Kavayitri Bahinabai Chaudhari North Maharashtra University, Jalgaon-425001, India.

Dr. Vijay Uttamrao Barphe

Research Guide,

Vasantrao Naik Arts, Science & Commerce College, Shahada-425409, India.

ABSTRACT

For many years, researchers have been assessing the impact of journals using traditional citation counting methods. A large number of citations is considered an indicator of the importance of research and the impact of a journal. Recently, an alternative measurement system called 'altmetrics' has emerged due to the increased use of social media and online news sources. This study analyzes the altmetrics impact of high-impact journals in computer science. The popularity of journals was measured by assessing the attention of social media platforms, Dimensions, and Mendeley users. AAS and Dimensions citations of 3328 (57.1%) of 5832 articles in 10 major Scopus-

indexed journals from 2011 to 2024 were analyzed. This data was collected from Altmetric.com on December 9, 2024. Of the total 123,044 Altmetric attention, 81.6% were on X, making it the most effective platform for research dissemination. AAS had a combined 85% social impact for NBE (61.3%) and NMI (24%) journals. Some journals showed relatively low digital engagement. Altmetrics is a useful tool for measuring the social and immediate impact of research. This study helps to understand the relationship between Altmetric impact and academic engagement and provides guidance for research policy.

Cite this Article: Gorakh Balu Shelke, Vijay Uttamrao Barphe. (2025). Evaluating Altmetrics Influence and Scholarly Engagement in Scopus-Indexed Computer Science Journals: A Comprehensive Analysis. *International Journal of Library and Information Science (IJLIS)*, 14(2), 42-59.

https://iaeme.com/MasterAdmin/Journal_uploads/IJLIS/VOLUME_14_ISSUE_2/IJLIS_14_02_003.pdf

1. INTRODUCTION

In the current digital age, traditional citation cannot fully measure the impact of research. To understand the impact and significance of research after it is published, it is necessary to consider discussions on different online platforms. Against this backdrop, the concept of Altmetrics has emerged.(Priem et al., 2011) Altmetrics, recognizing the limitations of traditional metrics, uses mentions from Twitter, Facebook, blogs, Wikipedia, news portals, and online academic communities to measure the impact of research articles, data sets, software, preprints, and other academic materials.(Stefanie Haustein, Timothy D. Bowman, 2016) While traditional metrics rely solely on citations in journals, altmetrics help to understand the impact of research on society, policy, and various academic and non-academic sectors.(Sugimoto et al., 2017) Altmetrics is becoming more sophisticated with the help of technologies such as artificial intelligence (AI), big data, and machine learning.(Thelwall., 2020)This allows for a more effective understanding of the pace, impact, and scope of research.

Computer science research has connections to the public, media, policymakers, and industry in addition to academics. The importance of the research is traditionally measured by the number of citations it receives. However, the background of this research is often unrelated

to the public, media, industry, and policymakers. People in this field tend to assess the significance of research through social media, news, and other public platforms, rather than relying solely on academic citations. This highlights the need of study in evaluating how alternative metrics, such as Altmetrics, can provide a more comprehensive view of a research's impact beyond traditional citation counts

This study evaluating publishing research to investigate the top 10 computer science journals selected based on high impact factor in the Scopus dataset. The aim of this study is to analyze social media reactions tracked by Altmetric.com for computer science journals indexed by Scopus. Another important goal is to understand the relationship between Altmetric scores, Mendeley readership and dimensions, and Scopus citations.

2. LITERATURE REVIEW

A literature review is vital in research as it surveys existing studies, identifies gaps, and establishes a foundation for your work. It ensures relevance, prevents redundancy, and helps refine methodologies, shaping impactful, evidence-based contributions

The paper provides an altmetric analysis of AI-related dental research, highlighting the social impact of publications. It uses Altmetric Attention Scores (AAS) to measure online engagement, finding strong correlations between AAS and News Mentions. (Lu et al., 2025) The study highlights a moderate positive correlation between Altmetric Attention Scores and citation scores in medicine, surgery, and anesthesia, suggesting social media engagement influences research impact. (Koh et al., 2025) The study analyzes leading Indian medicine journals using altmetrics, revealing weak positive correlation between Altmetric Attention Score and citation counts, highlighting benefits of social media for research dissemination. (Dey & Sarmah, 2024) The study evaluates the link between open science practices and citation/Altmetric scores, revealing complex associations influenced by journal prestige and study quality(Cenci et al., 2024) The paper explores altmetric presence in DESIDOC Journal of Library and Information Technology, revealing low social media engagement, with Twitter and Wikipedia being primary platforms, and librarians as active Mendeley readers (Khatale & Raut, 2023) The paper evaluates the discourse power of Chinese academic journals using scientometrics and altmetrics, proposing a model to enhance academic influence, global visibility, and the development of open science practices (Wang, 2023).

The study evaluates Altmetric scores in anatomy journals, finding weak correlations with citation counts and impact factors, highlighting limitations in measuring article impact using

Altmetrics. (Nalbant, 2022) The study compares social media attention and citation rates of surgical technique articles versus research articles, revealing higher Altmetric scores for technique articles. (Vadhera et al., 2022) The study examines the association between social media activity and citations in hand surgery research, finding that social media dissemination significantly improves short-term citation rates for academic articles. (Yoshimura et al., 2021) The study explores open-access publishing in human electrophysiology, revealing increased citation and Altmetric scores for open-access articles compared to closed-access publications. (Clayson et al., 2021) The study links social media engagement with short-term citation increases in hand surgery research, emphasizing the effectiveness of platforms like Twitter in disseminating scientific findings globally(Murray et al., 2020). The study analyzes the altmetrics of *ARCHIVOS DE BRONCONEUMOLOGÍA* (2014–2018), finding weak to moderate correlation with citations. Pulmonology articles and consensus reviews achieved the highest media attention and website traffic(López-Padilla et al., 2020).

The paper evaluates altmetrics for Communication studies journals (2013–2017), finding Mendeley and Twitter most effective for tracking scholarly dissemination and visibility compared to traditional citation metrics. (Repiso et al., 2019) The study examines altmetrics for Iranian medical journals, revealing Twitter as the dominant platform and weak correlation between altmetric scores and citation counts. (Kolahi et al., 2019) The paper analyzes highly visible sepsis publications (2012–2017) using altmetrics and bibliometrics, revealing poor correlation between traditional citations and online attention but highlighting value in public awareness. (Jabaley et al., 2018) The paper investigates altmetrics in BibSonomy, revealing mild correlations between citations and user behaviors like posting and exporting publications, emphasizing potential predictive power for future scholarly impact metrics. (Zoller et al., 2016) (Das, 2015)The paper investigates how federal statistics are utilized in scholarly research through altmetrics, focusing on mortality data and linked datasets across disciplines

3. OBJECTIVE

The objectives of this study are as follows:

- To analyze Altmetric attention on social media platforms, tracked by Altmetric.com, for computer science journals indexed by Scopus.
- To explore the relationship between Altmetric attention scores and Mendeley readership of computer science research journals.

- To conduct a comparative analysis of Dimension citations and Scopus citations for computer science journals.

4. SCOPE AND LIMITATIONS OF THE STUDY

This study focuses on computer science journals indexed in Scopus, specifically the top 10 journals selected based on their high Impact factor (CiteScore) rankings for the metric year 2023. The research includes articles published between 2011 and 2023 that possess a Digital Object Identifier (DOI). The study is Altmetrics data tracked by Altmetric.com.

5. METHODOLOGY

The present study used a mixed-methods approach, applying qualitative outcomes with quantitative analysis of altmetric data. Included in the investigation are. This dual approach ensured that both traditional citation metrics from Scopus and alternative metrics from Altmetric.com were comprehensively covered in the study.

5.1 Primary Data Collection

Stage-1: To collect the primary data, a structured query was executed in the Scopus indexed database with the following criteria:

Subject Area: Computer Science

Source Type: Journal (SRCTYPE (j))

Metrics Year: 2023

CiteScore: Ascending order

A total of 10 journal records were retrieved by executing the above query in the Scopus database. The query was executed on 9th December 2024, and all the data was collected on the same date

Stage 2: For the collection of secondary data, another structured query was run in the Scopus indexed database with the following parameters:

Publication Year: 2010 < PUBYEAR < 2024, Source Type: Journal (SRCTYPE (j))

Document Type: Article (DOCTYPE: "ar") DOI: Digital Object Identifier (10*)

To retrieve information for each of the 10 selected journals, individual queries were run 10 times per journal using the following structure:

1. PUBYEAR > 2010 AND PUBYEAR < 2024 AND DOI (10*) AND SRCTITLE ("Foundations and Trends in Machine Learning") AND (LIMIT-TO (DOCTYPE, "ar"))
2. PUBYEAR > 2010 AND PUBYEAR < 2024 AND DOI (10*) AND SRCTITLE ("International Journal of Information Management") AND (LIMIT-TO (DOCTYPE, "ar"))

3. PUBYEAR > 2010 AND PUBYEAR < 2024 AND SRCTITLE ("Proceedings of the IEEE") AND (LIMIT-TO (DOCTYPE, "ar"))

4. PUBYEAR > 2010 AND PUBYEAR < 2024 AND DOI (10*) AND SRCTITLE ("Nature Biomedical Engineering") AND (LIMIT-TO (DOCTYPE, "ar"))

5. PUBYEAR > 2010 AND PUBYEAR < 2024 AND DOI (10*) AND SRCTITLE ("AI Open") AND (LIMIT-TO (DOCTYPE, "ar"))

6. PUBYEAR > 2010 AND PUBYEAR < 2024 AND DOI (10*) AND SRCTITLE ("Foundations and Trends in Information Retrieval") AND (LIMIT-TO (DOCTYPE, "ar"))

7. PUBYEAR > 2010 AND PUBYEAR < 2024 AND DOI (10*) AND SRCTITLE ("Nature Machine Intelligence") AND (LIMIT-TO (DOCTYPE, "ar"))

8. PUBYEAR > 2010 AND PUBYEAR < 2024 AND DOI (10*) AND SRCTITLE ("Information Fusion") AND (LIMIT-TO (DOCTYPE, "ar"))

9. PUBYEAR > 2010 AND PUBYEAR < 2024 AND DOI (10*) AND SRCTITLE ("ACM Computing Surveys") AND (LIMIT-TO (DOCTYPE, "ar"))

10. UBYEAR > 2010 AND PUBYEAR < 2024 AND DOI (10*) AND SRCTITLE ("Computer Science Review") AND (LIMIT-TO (DOCTYPE, "ar"))

Table 1 Scopus Indexed Journal-Profile.

Sr. No.	Name of Journal	Frequency	Impact Factor (2023)	Publisher	ISSN	Scopus articles
1	Foundations and Trends in Machine Learning	Bio-monthly	108.5	Now Publishers Inc	1935-8237/1935-8245	29
2	International Journal of Information Management	Bio-monthly	53.1	Elsevier	0268-4012	1285
3	Proceedings of the IEEE	Monthly	46.4	IEEE	0018-9219/1558-2256	1133
4	Nature Biomedical Engineering	Monthly	45.3	Springer Nature	2157-846X	685
5	AI Open	Yearly	45	KeAi Communication.Co.	2666-6510	51
6	Foundations and Trends in Information Retrieval	Bio-monthly	39.1	Now Publishers Inc	1554-0669/1554-0677	25
7	Nature Machine Intelligence	Monthly	36.9	Springer Nature	2522-5839	421
8	Information Fusion	Monthly	33.2	Elsevier	1566-2535/1872-6305	1382
9	ACM Computing Surveys	Bio-monthly	33.2	Association for Computing Machinery	0360-0300/1557-7341	801
10	Computer Science Review	quarterly	32.7	Elsevier	1574-0137	20

Table 1 show a total of 5832 bibliographic records of scholarly articles were retrieved from the Scopus indexed database through the above queries. All data were collected on 9th December 2024.

5.2 Secondary Data:

Altmetric Explorer was used to verify the primary bibliographic information of 5,832 articles in the Scopus indexed database. As of December 10, 2024, the DOIs of these articles were retrieved by Altmetric.com by adding them to the DOI identifier box in the "Advanced Search" option. In this process, 3,806 (65.3%) of the total articles were tracked by Altmetric.com, and 3,328 (57.1%) of them received at least one Altmetric Attention Score. All these details were recorded in an Excel file and stored for further analysis.

Table 2 Journal wise article tracked by Altmetric.com

Sr.No	Name of Journal	Articles Scopus Indexed	Articles Tracked by Altmetric	Articles with AAS
1	Computer Science Review	20	10	5
2	Foundations and Trends in Machine Learning	29	22	18
3	Foundations and Trends in Information Retrieval	25	19	19
4	AI Open	51	42	42
5	Information Fusion	1382	535	403
6	Nature Machine Intelligence	421	416	416
7	ACM Computing Surveys	801	568	485
8	International Journal of Information Management	1285	692	542
9	Nature Biomedical Engineering	685	681	681
10	Proceedings of the IEEE	1133	821	717

Table 2 show The analysis showed that the journals Nature Biomedical Engineering and Nature Machine Intelligence are at the forefront of Altmetric tracking and attention, indicating their excellent visibility. In contrast, high-volume publications such as the International Journal of Information Management and Information Fusion have relatively low Altmetric participation. This suggests that influence depends not only on the number of publications, but also on their social and digital reach. Strategic efforts are needed to increase reach, especially for low-visibility journals such as F&T in Information Retrieval and Computer Science Review.

6. STATISTICAL ANALYSIS

6.1. Altmetric Mentions Online Data Sources

Table 3 show X (formerly Twitter) is the most effective medium for research dissemination, with 81.4% of mentions, with 100,417 mentions. This allows for rapid and broad discussion of research. News (8.9%) and patents (3.8%) are the next most important sources, with news providing a place for scientific developments in the mainstream media, while patents highlight the commercial value of research. Mentions on Facebook (2.9%) and blogs (1.4%) are comparatively low. Blogs are used for expert writing, while Facebook is used for limited academic discussion. Other mentions are on Wikipedia (0.5%), Policy (0.3%), and Reddit (0.2%), while mentions in some media, such as clinical guidelines, peer review, and F1000, are negligible.

Table 3 Altmetric Mentions Online Sources wise to Journal

Data sources	Nature Biomedical Engineering	Nature Machine Intelligence	Proceedings of the IEEE	ACM Computing Surveys	International Journal of Information Management	Information Fusion	Foundations & Trends in Machine Learning	AI Open	Foundations & Trends in Information Retrieval	Computer Science Review
X mentions	65048	22349	2350	4537	2656	1947	1010	303	207	10
News mentions	7011	2924	265	212	434	91	2	5	1	0
Facebook mentions	2897	119	513	30	29	14	7	0	1	0
Blog mentions	1221	327	85	27	55	10	1	1	0	0
Patent mentions	855	98	2706	670	47	314	22	4	9	4
Wikipedia mentions	118	42	175	119	86	66	21	6	9	1
Reddit mentions	99	91	10	21	6	4	5	1	0	0
Google+ mentions	78	9	53	10	6	8	3	0	0	0
F1000 mentions	45	7	0	0	0	0	0	0	0	0
Video mentions	44	26	8	0	3	2	0	0	0	0
Bluesky mentions	39	16	0	0	1	1	0	0	0	0
Policy mentions	18	33	50	44	144	26	1	1	0	1
Clinical guidelines mentions	6	1	1	1	0	0	0	0	0	0
Peer review mentions	2	0	0	0	3	3	0	0	0	0
Q&A mentions	0	2	2	1	0	2	4	0	0	0
Syllabi mentions	0	0	0	0	0	0	0	0	0	0
Weibo mentions	0	0	1	30	0	0	0	0	0	0
LinkedIn mentions	0	0	0	0	0	0	0	0	0	0
Pinterest mentions	0	0	0	0	0	0	0	0	0	0

6.2. Metrics received Journal wise.

Table 4 Most AAS-awarded Journal: Nature Biomedical Engineering (85342) This means that articles in this journal have been widely discussed on social media. Dimensions and Scopus Citation: Proceedings of the IEEE and International Journal of Information Management are the two journals that lead in traditional citations. These journals are highly cited in the research field. Mendeley Readers: International Journal of Information Management has the largest readership (269,608 readers), making it the most widely studied journal. Journals with low scores: AI Open, Foundations & Trends in Info Retrieval, and Computer Science Review have low AAS and Citation, indicating that they have relatively low social and scientific impact.

Table 4 Journal Evaluation Metric wise.

Name of Journal	Articles	AAS	Dimensions Citations	Scopus Citations	Mendeley readers
Nature Biomedical Engineering	681	85342	71316	63290	84930
Nature Machine Intelligence	416	33402	32699	27927	44253
Proceedings of the IEEE	717	6153	96668	115928	98411
International Journal of Information Management	542	5551	76491	123057	269608
ACM Computing Surveys	485	5266	60729	70875	87417
Information Fusion	403	2475	53015	105589	66092
Foundations & Trends in Machine Learning	18	584	7869	10269	12515
AI Open	42	224	2229	2035	4836
Foundations & Trends in Information Retrieval	19	162	1143	1576	2362
Computer Science Review	5	25	300	1437	401
Grand Total	**3328**	**139184**	**402459**	**521983**	**670825**

6.3. Journal Metrics Correlation

**Figure 1 Journal Metrics Correlation**

Figure 1 shows the profile of each journal based on Altmetric Score, Dimensions Citations, Scopus Citations, and Mendeley Readers. The International Journal of Information Management performs highly across all metrics. Nature Biomedical Engineering and Proceedings of the IEEE also rank highly across several metrics. The profile of smaller journals (such as AI Open and Computer Science Review) is relatively narrow.

6.4. Altmetrics attention score.

Figure 2 show Nature Biomedical Engineering 85,342 (61.34%) is the journal with the highest Altmetric impact, meaning it is the most discussed journal in digital media. Nature

Machine Intelligence 33,402 (24.01%) is also highly discussed, especially in the field of artificial intelligence. Nature Biomedical Engineering and Nature Machine Intelligence are the most popular journals in digital discussions. Proceedings of the IEEE 6,153 (4.42%), International Journal of Information Management 5,551 (3.99%), and ACM Computing Surveys 5,266 (3.78%) are also influential. Research from IEEE, ACM, and Information Fusion 2,475(1.78%) also has a high level of discussion. Foundations & Trends in Machine Learning 584 (0.42%), AI Open 224 (0.16%), Foundations & Trends in Information Retrieval 162 (0.12%) and Computer Science Review 25 (0.02%) have the lowest Altmetric scores, meaning they have minimal influence in digital media. AI Open and Computer Science Review need more publicity.
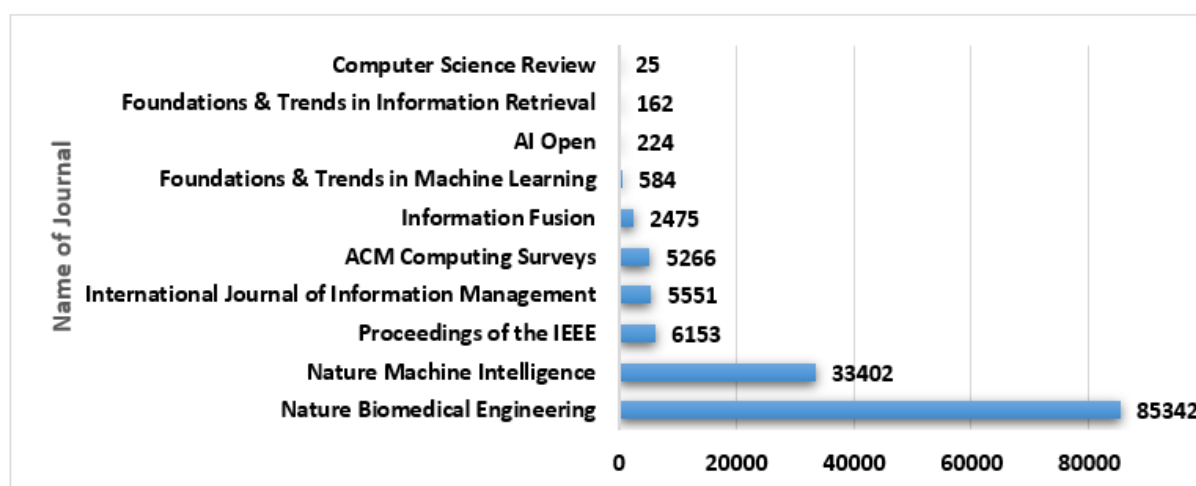
Figure 2 Journals wise Altmetric Attention Score

6.5. Number of Mendeley Readers:

Figure 3 show The International Journal of Information Management leads with the highest readership (269,608–40.19%). Proceedings of the IEEE (14.67%), ACM Computing Survey (13.03%), and Nature Biomedical Engineering (12.66%), which are popular in the fields of computer science, engineering, and medical research, respectively. Information Fusion (9.85%) and Nature Machine Intelligence (6.60%) are at the middle level. The remaining journals have relatively low readership, with foundations and trends journals and AI Open having limited readership.
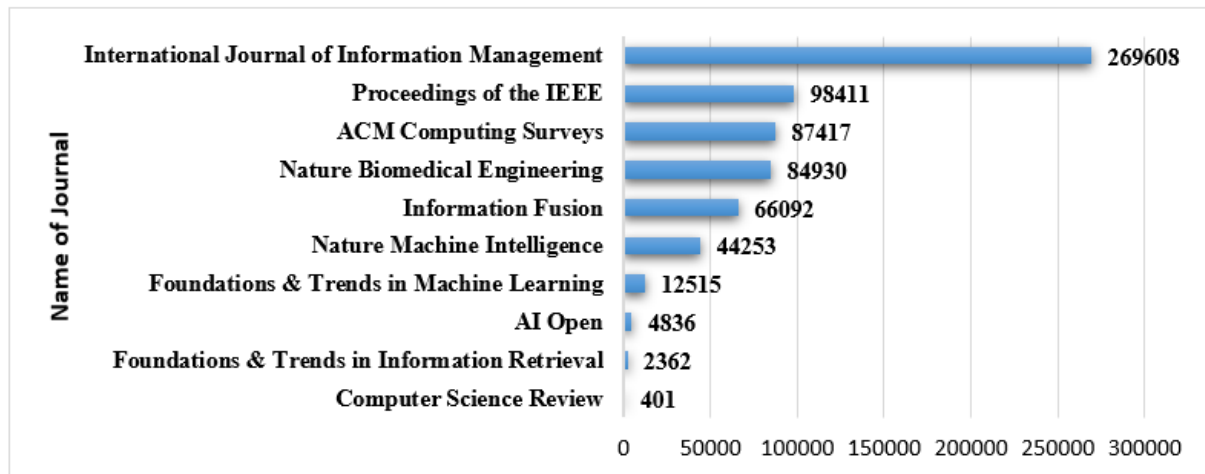
Figure 3 Number of Mendeley readers Journal wise Profile.

6.6. Number of Dimension citations by Journal

Figure 4 Proceedings of the IEEE" is the journal with the highest number of citations, with 96,668 (24.03%). It is highly ranked in the engineering and computer science fields. It is followed by International Journal of Information Management (19.01%), Nature Biomedical Engineering (17.72%), ACM Computing Surveys (15.09%), and Information Fusion (13.17%). Nature Machine Intelligence (8.13%) is influential in the field of artificial intelligence. Other journals such as F&T in Machine Learning, AI Open, and F&T in Information Retrieval have relatively low citation counts, while Computer Science Review is the least cited journal on the list with only 0.07% citations.
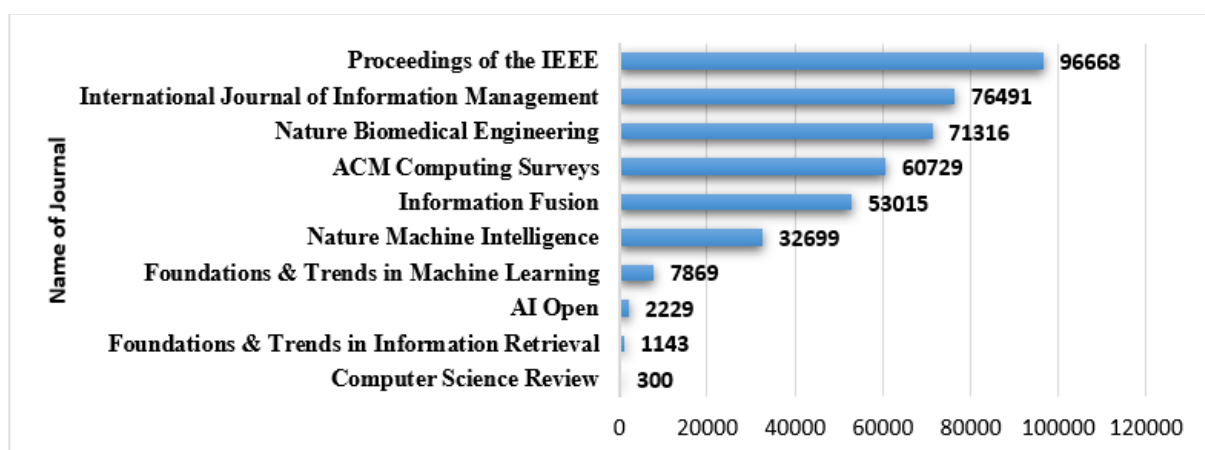
Figure 4 Dimension citation Journal Wise Profile

6.7. Number of Scopus citations by Journal:

Figure 5 show International Journal of Information Management 123,057 (26.90%) have the highest citations and are of great importance in the Computer Science fields. and Proceedings of the IEEE 115,928 (25.34%) Information Fusion 105, 589 (23.06%) are important journals in the field of computer science and information fusion. and ACM Computing Surveys 70, 875 (15.49%)   Nature Biomedical Engineering 63, 290 (13.82%) is a leading source in biomedical engineering. Nature Machine Intelligence 27,927 (6.10%) have moderate citations, especially in the field of machine learning and intelligence. And Foundations & Trends in Machine Learning 10,269 (2.24%)AI Open 2,035 (0.44%), Foundations & Trends in Information Retrieval 1576 (0.34%) and Computer Science Review 1,437 (0.31%) have low citations and are cited relatively rarely.
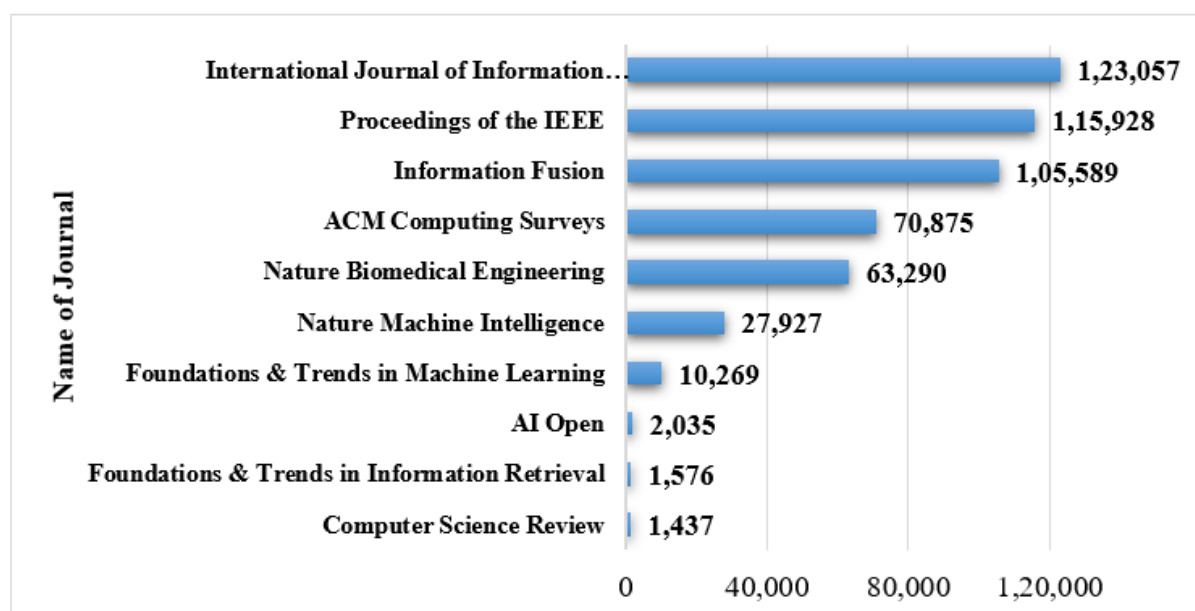

Figure 5 Scopus Citation Journal Wise-Profile.

7. FINDINGS

This study comprehensively analyzes Altmetric impact and academic engagement in Computer Science journals indexed in Scopus. The key findings of the research are as follows:

Altmetric Tracking and Scholarly Engagement. Altmetric.com tracked 3,806 (65.3%) of the 5,832 Scopus-indexed articles in the top 10 computer science Journal. An Altmetric Attention Score (AAS), which measures interaction on social media and other online platforms, was tracked to 3,328 articles (57.1%) out of these. Journals such as Nature Biomedical

Engineering and Nature Machine Intelligence indicated high levels of engagement significant online visibility and social impact.

Altmetric Attention Scores (AAS): Nature Biomedical Engineering had the highest Altmetric Attention Score of 85,342 (61.34%), followed by Nature Machine Intelligence with 33,402 (24.01%). Journals such as Proceedings of the IEEE (4.42%), International Journal of Information Management (3.99%), and ACM Computing Surveys (3.78%) also showed notable Altmetric engagement. Lower AAS values were recorded for journals like AI Open (0.16%) and Computer Science Review (0.02%), highlighting limited online engagement.

Altmetric Mentions by Platform X (formerly Twitter) accounted for the highest proportion of mentions (81.4% of total mentions), confirming its role as the dominant platform for research dissemination. Mentions in news sources (8.9%), patents (3.8%), and Facebook (2.9%) also contributed to the Altmetric scores. Platforms like Wikipedia (0.5%), policy documents (0.3%), and Reddit (0.2%) had limited but notable Contributions.

Mendeley Readers: The International Journal of Information Management had the highest number of Mendeley readers (269,608; 40.19%), indicating strong readership and scholarly influence. Other journals with high readership included Proceedings of the IEEE (14.67%), ACM Computing Surveys (13.03%), and Nature Biomedical Engineering (12.66%). Journals like AI Open (0.72%) and Computer Science Review (0.06%) had the lowest readership, suggesting lower research engagement.

Dimension Citations: Proceedings of the IEEE recorded the highest number of citations on Dimensions with 96,668 (24.03%), underscoring its influence in engineering and computer science research. Other journals with high Dimension citations included the International Journal of Information Management (19.01%) and Nature Biomedical Engineering (17.72%). Lower citation counts were noted for journals like AI Open (0.55%) and Foundations & Trends in Information Retrieval (0.28%), indicating lower academic impact.

Relationship Between Altmetrics and Citations: A weak positive correlation was observed between Altmetric scores and traditional citation metrics (Scopus and Dimensions citations). High Altmetric scores do not always correlate with high citation counts, highlighting that online engagement and academic recognition are influenced by different factors.

8. CONCLUSIONS:

Altmetric impact and immediate use: Altmetric metrics make it possible to measure the use and impact of research on platforms such as social media, blogs, news portals, etc.

Communication tools and social impact: Twitter, Facebook, blogs, Wikipedia, etc. show the impact of research on society and various sectors.

Popularity of the topic: Twitter is the largest source in this analysis, where 81.4% of the research is mentioned.

Altmetric is an effective tool for measuring the impact of research, which makes it possible to measure social, economic and industrial impacts.

Journals and articles with high Altmetric scores are more popular in society, which indicates the global impact of the research. Journals with low Altmetric scores need to be given more publicity.

9. RECOMMENDATIONS

- Increase engagement strategies for low-visibility journals such as AI Open and Computer Science Review to enhance their online and scholarly impact.
- Develop targeted social media outreach campaigns to boost Altmetric scores and increase research visibility on platforms like X and news media.
- Encourage authors to engage with policy and mainstream media to improve Altmetric tracking and societal impact.

REFERENCES

[1] Cenci, J., Mendes, F. M., Bouter, L., Pereira Cenci, T., Acosta, C. de P., Brondani, B., Moher, D., Huysmans, M. C., & Cenci, M. S. (2024). Are open science practices in dentistry associated with higher Altmetric scores and citation rates? Journal of Dentistry, 151(October), 105393. https://doi.org/10.1016/j.jdent.2024.105393

[2] Clayson, P. E., Baldwin, S. A., & Larson, M. J. (2021). The open access advantage for studies of human electrophysiology: Impact on citations and Altmetrics. International Journal of Psychophysiology, 164(November 2020), 103–111. https://doi.org/10.1016/j.ijpsycho.2021.03.006

[3] Das, T. (2015). Measuring scholarly use of government information: An altmetrics analysis of federal statistics. Government Information Quarterly, 32(3), 246–252. https://doi.org/10.1016/j.giq.2015.05.002

[4]   Dey, P., & Sarmah, M. (2024). Measuring the Social Attention of the Leading Medicine Journals of India. DESIDOC Journal of Library & Information Technology, 44(6), 365–373. https://doi.org/10.14429/djlit.44.6.20239

[5]   Jabaley, C. S., Groff, R. F., Stentz, M. J., Moll, V., Lynde, G. C., Blum, J. M., & O'Reilly-Shah, V. N. (2018). Highly visible sepsis publications from 2012 to 2017: Analysis and comparison of altmetrics and bibliometrics. Journal of Critical Care, 48, 357–371. https://doi.org/10.1016/j.jcrc.2018.09.033

[6]   Khatale, S., & Raut, A. (2023). Altmetric analysis of scholarly articles published in DESIDOC Journal of Library and Information Technology. Library Herald, 61(4), 49–64. https://doi.org/10.5958/0976-2469.2023.00031.3

[7]   Koh, A., Lewis-Lloyd, C. A., Wong, T., & Lobo, D. N. (2025). Correlation between Altmetric Attention Scores and citation scores across the high impact-factor journals each in Medicine, Surgery, and Anaesthesia. British Journal of Anaesthesia, 134(3), 703–712. https://doi.org/10.1016/j.bja.2024.09.034

[8]   Kolahi, J., Khazaei, S., Bidram, E., & Kelishadi, R. (2019). Altmetric analysis of contemporary Iranian Medical Journals. International Journal of Preventive Medicine, 10(1), 112. https://doi.org/10.4103/ijpvm.IJPVM_134_19

[9]   López-Padilla, D., García-Río, F., Alonso-Arroyo, A., Pérez Gallán, M., Puente Maestú, L., Segrelles-Calvo, G., & de Granda-Orive, J. I. (2020). Altmetrics analysis of Archivos de Bronconeumología from 2014 to 2018. Archivos de Bronconeumología (English Edition), 56(5), 298–305. https://doi.org/10.1016/j.arbr.2020.03.005

[10]   Lu, W., Yu, X., Li, Y., Cao, Y., Chen, Y., & Hua, F. (2025). Artificial Intelligence–Related Dental Research: Bibliometric and Altmetric Analysis. International Dental Journal, 75(1), 166–175. https://doi.org/10.1016/j.identj.2024.08.004

[11]   Murray, G., Hellen, R., Ralph, J., & Ni Raghallaigh, S. (2020). Comparison of Traditional Citation Metrics and Altmetrics Among Dermatology Journals: Content and Correlational Analysis Study. JMIR Dermatology, 3(1), e15643. https://doi.org/10.2196/15643

[12] Nalbant, A. (2022). Does altmetric score affect the impact factor of anatomy journals? European Journal of Anatomy, 26(3), 263–272. https://doi.org/10.52083/UXMV4266

[13] Priem, J., Taraborelli, D., Groth, P., & Neylon, C. (2011). altmetrics: a manifesto altmetrics: a manifesto Cameron Neylon Science and Technology Facilities Council. Scholary Communication, 185. https://digitalcommons.unl.edu/scholcom/185

[14] Repiso, R., Castillo-Esparcia, A., & Torres-Salinas, D. (2019). Altmetrics, alternative indicators for Web of Science Communication studies journals. Scientometrics, 119(2), 941–958. https://doi.org/10.1007/s11192-019-03070-7

[15] Stefanie Haustein, Timothy D. Bowman, and R. C. (2015). Interpreting "altmetrics": viewing acts on social media through the lens of citation and social theories. Theories of Informetrics and Scholarly Communication, 372–405. https://doi.org/10.1515/9783110308464-022

[16] Sugimoto, C. R., Work, S., Larivière, V., & Haustein, S. (2017). Scholarly use of social media and altmetrics: A review of the literature. Journal of the Association for Information Science and Technology, 68(9), 2037–2062. https://doi.org/10.1002/asi.23833

[17] Thelwall., M. (2020). The Pros and Cons of the Use of Altmetrics in Research Assessment. Scholarly Assessment Reports, 2(1), 2. https://doi.org/10.29024/sar.10

[18] Vadhera, A. S., Lee, J. S., Veloso, I. L., Singh, H., Trasolini, N. A., Kunze, K. N., Gursoy, S., Geeslin, A. G., Verma, N. N., & Chahla, J. (2022). Technique Articles Are More Effective at Increasing Social Media Attention in Comparison With Original Research Articles: An Altmetrics-Based Analysis. Arthroscopy, Sports Medicine, and Rehabilitation, 4(3), e989–e995. https://doi.org/10.1016/j.asmr.2022.02.002

[19] Wang, X. (2023). Evaluation of the discourse power in Chinese academic journals: A multi-fusion perspective. Data and Information Management, 7(4), 100026. https://doi.org/10.1016/j.dim.2022.100026

[20] Yoshimura, R., Grant, M. C., Gardiner, M. D., & Wade, R. G. (2021). Disseminating Hand Surgery Research Using Social Media: The Relationship Between Altmetrics and

Citations. The Journal of Hand Surgery, 46(9), 740–747. https://doi.org/10.1016/j.jhsa.2021.03.028

[21]   Zoller, D., Doerfel, S., Jäschke, R., Stumme, G., & Hotho, A. (2016). Posted, visited, exported: Altmetrics in the social tagging system BibSonomy. Journal of Informetrics, 10(3), 732–749. https://doi.org/10.1016/j.joi.2016.03.005

[22]   Scopus index Database (2024, December 9) https://www.scopus.com/

[23]   Altmetric. (2024, December 10). Reveal online attention to research - Altmetric. https://altmetric.com/