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The AI-Powered Revolution in Academic Publishing: A Holistic Toolchain for Enhanced Efficiency and Quality

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Abstract:

The integration of artificial intelligence and associated digital technologies is causing a significant shift in the academic publication landscape. This paper addresses the changing issues faced by authors, editors, reviewers, and publishers by giving a thorough summary of the AI-powered toolchain spanning the whole scholarly publishing lifecycle. We investigate a broad range of current and emerging artificial intelligence tools, including deep learning and machine learning models, along with their specific advantages for each type of stakeholder. These tools enhance manuscript quality for writers by providing writing support, grammar and style checking, citation management, and plagiarism detection. AI-driven solutions for layout analysis, quality control, reviewer recommendations, and manuscript screening help editors and reviewers. AI enables publishers to automate processes, ensure ethical compliance, and enhance the distribution of their content. We also explore the possibilities and approaches for creating customised artificial intelligence models tailored to specific publishing requirements, highlighting how these individualised solutions can maximise quality and efficiency in scholarly communication. Synthesised from a broad spectrum of research, this comprehensive view emphasises the transformative power of artificial intelligence in shaping a more transparent, efficient, and high-quality future for academic publishing.

Keywords: Artificial Intelligence (AI), Machine Learning, Deep Learning, Academic Publishing, Scholarly Communication, Manuscript Preparation, Peer Review, Editorial Workflow, Publication Process, Automation, Natural Language Processing (NLP), Generative AI, Custom AI Models.

Introduction

The academic publishing industry has seen an unprecedented rise in the number of research paper submissions over the past few decades, with substantial growth observed in databases like Scopus from 1900 to 2020 [1]. Today, more than a million research papers are published each year across various disciplines. While this growth reflects the global expansion of research activity, it also introduces several critical challenges for publishers, editors, and reviewers. The increasing volume of submissions has led to an overwhelming workload for editorial teams [2], many of which are not sufficiently staffed to manage the growing demand. This often results in delays in the review process, inconsistent quality control, and pressure on peer reviewers.

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Simultaneously, many authors—especially early-career researchers—face difficulties in preparing their manuscripts according to academic standards. A lack of understanding of proper research writing techniques, formatting guidelines, and language precision can lead to high rejection rates.[3] Moreover, navigating the technical expectations of journal submissions without guidance or support tools can be discouraging and time-consuming.

In response to these issues, the adoption of Artificial Intelligence (AI) and modern digital tools is becoming increasingly valuable in the publishing ecosystem. These technologies offer significant support at various stages of the publication process. For authors, AI-powered writing tools, grammar checkers, and formatting assistants can enhance the quality of submissions before they reach editorial review. For editors and reviewers, intelligent screening systems can help with early-stage evaluation, reducing the time spent on low-quality or off-topic papers [4].

Furthermore, generative AI presents new opportunities for researchers and institutions to develop their own customized tools tailored to specific publishing needs. These innovations can reduce dependence on costly commercial platforms while promoting efficiency and consistency in research dissemination.

This paper explores how AI and related technologies are reshaping the academic publishing landscape. It aims to provide insights into existing tools, their benefits for different stakeholders, and how the development of personalized AI-based solutions can further strengthen the quality and productivity of scholarly communication.

Interestingly, the application of AI in academic publishing mirrors its successful use in personalized e-learning systems. In education, AI tailors content and assessments to individual learners based on their comprehension levels and learning preferences [5]. Similarly, in publishing, AI tools are increasingly being used to create personalized experiences for different stakeholders. For authors, intelligent writing assistants, journal recommendation engines, and formatting tools provide tailored guidance that aligns with their writing style, research focus, and target journal requirements. For editors and reviewers, AI-powered screening systems can analyze manuscript structure, originality, and relevance—offering summarized insights that allow reviewers to make faster and more informed decisions. These personalized AI-driven solutions not only enhance efficiency but also improve the overall quality and accessibility of the scholarly publishing process. This paper investigates the growing role of such technologies, highlighting current tools, their benefits, and how personalized AI applications can further optimize academic publishing.

Literature Review: Challenges and Opportunities in Scholarly Publishing

Four basic pillars support scholarly publishing: authors, editors, reviewers, and publishers. Each is absolutely important for preserving the integrity, quality, and distribution of scholarly research. Every stakeholder, meanwhile, also has unique difficulties that could compromise research standards and publishing processes overall.

Authors and Manuscript Preparation

Lack of structural coherence, poor flow of content, unethical writing practices, weak presentation, and poorly designed figures and tables are among the challenges authors face during manuscript

preparation [6]. Many times, these difficulties produce poor quality submissions. Authors can now use technologies, including writing enhancement platforms, reference management systems, style guides, and document formatting tools, to improve the quality and clarity of their work by means of artificial intelligence and digital tools. Generative artificial intelligence also presents fresh chances to create tailored models supporting writing, content improvement, structural editing, citation recommendations, so enabling authors to produce stronger, more interesting papers.

Editors and Manuscript Evaluation

Editors have duties in evaluating manuscripts for scope relevance, originality, ethical compliance, and general quality. Common challenges include scope mismatches, poor manuscript quality, plagiarism, trouble finding suitable reviewers, conflicts of interest, small datasets, inconsistent reviewer comments, and delayed decisions [7]. Journal editors are already under a lot of pressure to maintain high standards, and the number of submissions is only going up. Several editing tools that use artificial intelligence (AI) automate content analysis, plagiarism checks, and manuscript triage systems, which speed up these processes. Additionally, editors may use generative AI to help with content summarisation, identifying inconsistencies, and making editing decisions.

Reviewers and the Peer Review Process

Time restrictions, lack of formal training, limited institutional recognition, unconscious prejudices, and unclear evaluation policies are among the several pressures peer reviewers must deal with. Furthermore, they sometimes battle inconsistent review criteria and too heavy review loads, so compromising review quality and objectivity.[8] While Generative AI can help reviewers analyse content more effectively, verify citations, and identify ethical concerns—so improving the justice and consistency of the peer review process—AI-based tools can offer structured evaluation frameworks, bias detection, and summarising capabilities.

Publishers and Systemic Challenges

Maintaining journal quality and ethical standards among mounting institutional demands falls to publishers. Rising publication costs, open-access funding challenges, peer review bottlenecks, the emergence of predatory journals, a decline in research quality, and ethical concerns about the use of artificial intelligence comprise these challenges. Data privacy, market consolidation, digital transformation, and long-term sustainability raise other issues. Driven by an excessive volume of submissions, the unbridled expansion of low-quality and predatory journals aggravates the problem even more. [8] Generative artificial intelligence technologies offer publishers transformative possibilities in this regard: they enable them to automate editorial processes, flag predatory content, ensure metadata accuracy, and uphold ethical standards. Furthermore, custom AI models catered to publisher requirements, enhance operational efficiency and content integrity.

Evolving AI-Driven Toolchain Across the Scholarly Publishing Lifecycle: Bridging Gaps in Existing Research

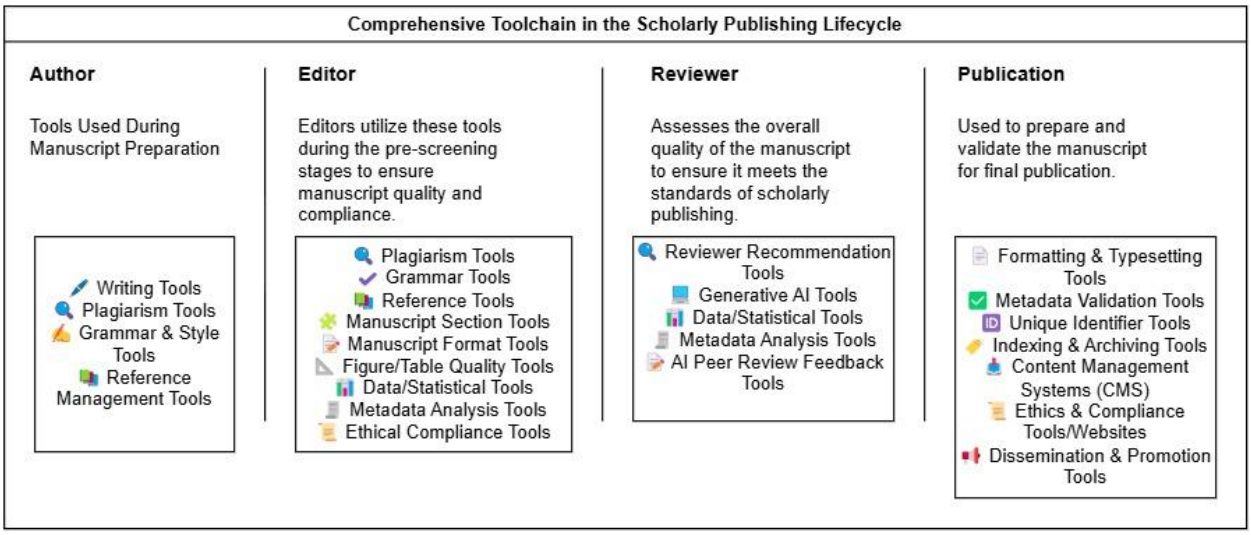

Fig. 1. Comprehensive AI-Enhanced Toolchain Across the Scholarly Publishing Lifecycle

Prior research, including [10] and [11], has investigated the use of AI-assisted tools in academic publications; however, their coverage is selective and limited in breadth.

A systematic review of the tools that support various phases of the publishing workflow, including target journal selection, plagiarism prevention, peer review, editorial production, bibliography and citation management, and manuscript preparation, is provided in Study [10]. Although these categories are crucial, the study overlooks essential elements such as metadata validation, reviewer recommendation systems, manuscript layout formatting, and tools that promote data integrity and transparency.

Study [11], on the other hand, focuses on specialized detection and validation tools—such as iThenticate[3] for plagiarism detection, ZeroGPT[4] for AI Text Detector, SciScore[5] and RobotReviewer[6] for methodological validation, StatReviewer[7] and Penelope.ai[8] for statistical and structural checking, Recite[9] for reference matching, and broader AI evaluation tools like UNSILO and the Frontiers AI Assistant[10]. While this toolbox is robust, it does not explore the development of adaptable solutions built using generative AI technologies to meet the specific requirements of individual publishers or journals.

In contrast, the illustrated (Fig. 1) framework introduces a holistic, stage-wise AI-driven toolchain that spans the entire scholarly publishing lifecycle—from authoring and submission to final publication. It integrates both standard solutions and novel, generative AI-powered tools designed for deeper metadata analysis, secure and transparent editorial processes, automated manuscript layout validation, reviewer recommendation engines, and custom-built

[3] https://www.ithenticate.com/
[4] https://www.zerogpt.com/
[5] https://sciscore.com/
[6] https://www.robotreviewer.net/
[7] StatReviewer
[8] https://www.penelope.ai/
[9] https://reciteworks.com/
[10] Frontiers AI Assistant

functionalities to meet emerging needs. This expanded scope addresses the key gaps left unfilled by prior research and offers a more future-ready infrastructure for scholarly publishing.

Manuscript Writing Tools

Poor sentence structure, lack of coherence, limited literature coverage, and weak content flow—all of which contribute to the likelihood of manuscript rejection—are among the significant difficulties authors sometimes face during the manuscript writing process [3]. By enhancing clarity, structure, and depth in scholarly writing, generative artificial intelligence technologies offer compelling solutions to address these challenges [12,13].

Advanced generative AI writing tools, including ChatGPT[11] (OpenAI), Gemini[12] (Google DeepMind), Microsoft Copilot[13] (Microsoft), Qwen[14] (Alibaba), Mistral[15], DeepSeek[16], LLaMA 2.0[17] (Meta), Claude[18] (Anthropic), Perplexity AI[19], and SciSpace Copilot[20], enable researchers to draft, organize, and effectively edit their manuscripts. These instruments aid in enhancing logical structure, sentence framing, literary integration, and section-level coherence.

Utilizing this diverse toolkit will enable writers to significantly enhance the quality, depth, and readability of their manuscripts, thereby aligning them more closely with the standards of peer-reviewed academic publishing.

Grammar, Paraphrasing, and Style Tools

Authors of a manuscript may encounter several language-related issues that could compromise the quality and clarity of their work as they develop it. Typical mistakes include grammatical errors (such as subject-verb disagreement, tense inconsistency, and article misuse), punctuation mistakes, awkward or redundant phrasing, repeating sentences, improper sentence structure, lack of coherence, and general stylistic discrepancies.[14]

Many advanced tools are available to help one overcome these difficulties and guarantee polished writing. By automatically identifying and correcting grammar, punctuation, and stylistic errors, popular grammar and style guides, such as Grammarly[21], Microsoft Editor[22], ProWritingAid[23], Hemingway Editor[24], LanguageTool[25], Ginger[26], Writefull[27], and Trinka[28]. These instruments help to increase general fluency, clarity, and sentence structure.

[11] https://chatgpt.com/
[12] https://gemini.google.com/
[13] https://copilot.microsoft.com/
[14] https://chat.qwen.ai/
[15] https://mistral.ai/
[16] https://www.deepseek.com/en
[17] https://www.llama.com/llama2/
[18] https://claude.ai/
[19] https://www.perplexity.ai/
[20] https://scispace.com/
[21] https://www.grammarly.com/
[22] Microsoft-Editor
[23] https://prowritingaid.com/
[24] https://hemingwayapp.com/
[25] https://languagetool.org/
[26] https://www.gingersoftware.com/
[27] https://www.writefull.com/
[28] https://www.trinka.ai/

Tools such as QuillBot[29], Paraphrasing.io[30], Wordtune[31], Spinbot[32], and Rephrase.info[33] offer automated assistance in rewording sentences, removing repetition, and professionalizing text for paraphrasing and rewriting projects.

Large Language Models (LLMs) enable the creation of custom grammar correction and paraphrasing tools, in addition to these commercial solutions. Through the fine-tuning of these models on academic or domain-specific datasets, one can create intelligent systems that not only identify language problems but also propose contextually relevant corrections and better-phrased sentences.

References and Citation Management Tools:

Academic writing depends critically on proper referencing. It not only honours original writers but also enhances the validity of the paper. Managing references in the appropriate style (APA, MLA, Chicago, IEEE, etc.), organising a lot of sources, handling citation duplicates, or translating references from one style to another during submission to different journals presents several difficulties, though, for writers.[15]. Meanwhile, editors have to make sure references follow the style sheet of their publishing and are clean and consistent.

Many different citation management systems have been created to handle these problems and provide all-encompassing solutions to expedite referencing. Often with integration into Microsoft Word[34] or Google Docs[35] for seamless in-text citation, researchers make extensive use of tools including Zotero[36], Mendeley[37], EndNote[38], and RefWorks[39] for their capacity to store, arrange, and correctly cite references [16]. For major research projects especially Citavi[40] is helpful since it supports both task planning and citation management, so adding value. For researchers using LaTeX[41], **JabRef**[42] is a dedicated solution for managing BibTeX [43]entries with precision.

Especially for research teams, cloud-based tools including Paperpile[44] and Papers App[45] streamline cooperation and let users manage PDF libraries alongside references. Students and early-stage researchers who need quick, simple, fast referencing without software installation will find quick citation generators including CiteThisforMe[46], BibGuru[47], and MyBib[48].

Furthermore, unique among smart citation tools is Scite.ai[49], which offers contextual insights by displaying how a citation has been used—that is, whether it supports, contrasts, or just notes the referenced work.[17] This makes it especially helpful for evaluations of critical literature and guarantees the calibre of references in academic writing.

[29] https://quillbot.com/
[30] https://www.paraphrasing.io/
[31] https://www.wordtune.com/
[32] https://spinbot.com/
[33] https://www.rephrase.info/
[34] Microsoft Word
[35] Google Docs
[36] https://www.zotero.org/
[37] https://www.mendeley.com/
[38] https://endnote.com/
[39] https://refworks.proquest.com/
[40] https://lumivero.com/products/citavi/
[41] https://www.overleaf.com/
[42] https://www.jabref.org/
[43] https://www.bibtex.org/
[44] https://paperpile.com/
[45] https://www.papersapp.com/
[46] https://www.citethisforme.com/
[47] https://www.bibguru.com/
[48] https://www.mybib.com/
[49] https://scite.ai/

Moreover, tools like Bibcitation[50] and DOI Citation Formatter[51] let one create citations in more than 100+ various styles just entering a DOI (Digital Object Identifier). These especially help when preparing academic presentations or turning in the same research to several publications with different formatting requirements. Furthermore, tools like Zotero, Mendeley, and CiteThisforMe let users translate current references from one citation style—such as APA to IEEE—such as so lowering the handwork required to follow different submission policies.

Authors and editors can save time, reduce formatting mistakes, and maintain high standards of academic integrity over many phases of publication by including these strong tools into their research process.

Plagiarism and AI-Generated Content Detection: Online, Offline, and Custom Tools

In recent years, there has been a notable surge in both plagiarism and AI-generated content within academic and scientific manuscripts.[18] This trend underscores the urgent need for robust detection tools to ensure the integrity of scholarly publications. While many research papers focus solely on online plagiarism tools, *[10,11]*, a broader understanding reveals that there are **three primary categories** of detection solutions: **Online Tools, Offline Tools, and Custom-Built Systems**.

1. Online Plagiarism Detection Tools

Online tools are the most commonly used due to their ease of access and cloud-based functionality. Popular examples include Turnitin[52], Quetext[53], Copyscape[54], PlagiarismDetector[55], and DupliChecker[56]. Notably, platforms like Turnitin, Quetext, and Copyscape also offer **AI-generated content detection**, adding an extra layer of scrutiny for modern manuscripts.

2. Offline Plagiarism Detection Tools

Offline tools are installed on local machines and are ideal for users who require data privacy or work in restricted environments. Examples include Plagiarism Checker X[57], Plagius[58], Plagiarism Detector[59], and AntiPlagiarism.NET[60]. These tools allow authors and editors to check content without uploading data to third-party servers, ensuring greater confidentiality.

3. Custom-Built Plagiarism and AI Content Detection Tools

[50] https://www.bibcitation.com/
[51] https://citation.doi.org/
[52] https://www.turnitin.com/
[53] https://www.quetext.com/
[54] https://www.copyscape.com/
[55] https://plagiarismdetector.net/
[56] https://www.duplichecker.com/
[57] https://plagiarismcheckerx.com/
[58] https://www.plagius.com/en
[59] https://plagiarism-detector.com/
[60] https://antiplagiarism.net/

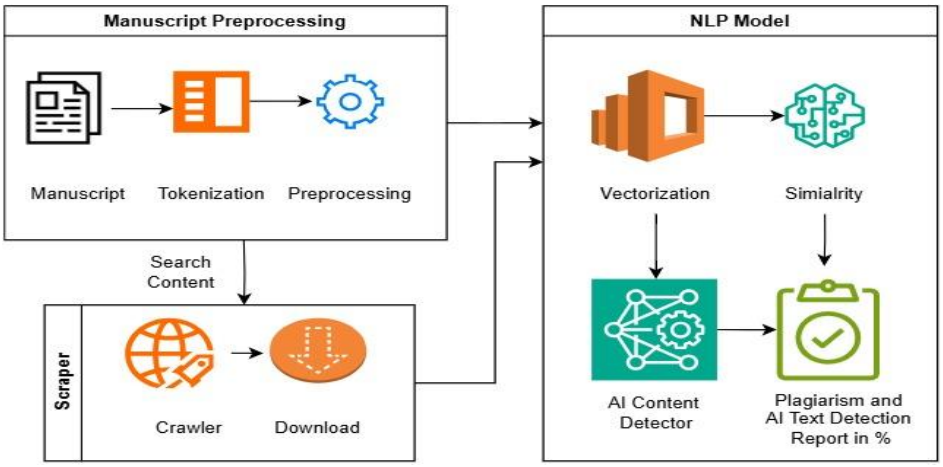

Fig 2. Architecture of a Custom Plagiarism and AI Content Detection System

For organizations requiring high levels of security and tailored functionality, custom plagiarism detection systems can be developed. These systems typically follow the architecture illustrated in Figure 2.

- **Tokenization**: Sentences from the manuscript are split into meaningful units.
- **Search and Retrieval**: These tokens are searched across online sources to collect comparable content.
- **Vectorization**: Both original and retrieved content are transformed into vector representations using language models (LLMs).
- **Similarity Analysis**: Techniques such as **cosine similarity** are applied to evaluate content overlap.
- **AI Content Detection**: A custom-trained LLM is employed to understand sentence structure and context, helping identify AI-generated content.

These systems can be hosted on-premise or on secure cloud infrastructure, giving complete control over data. They are particularly valuable for journals, universities, and publishers where data confidentiality and high precision are critical. This type of reporting is extremely useful for both authors and editors in maintaining the originality and authenticity of scholarly content.

Manuscript Section and Formatting Analysis Tools

Challenges Faced by Editors

Journal editors often encounter several formatting-related issues during the initial screening of submitted manuscripts. While assessing scientific quality is the primary goal, a significant amount of time is consumed in identifying and correcting formatting errors. Common challenges include incorrect font family or size, improper margin settings, inconsistent line spacing, and missing or misaligned headers. Additionally, many authors submit manuscripts in a single-column layout despite the journal requiring a double-column format. Critical sections—such as the Abstract, Introduction, Methodology, Results, and Conclusion—may be missing, mislabeled, or improperly

ordered. Visual elements like figures, tables, and charts are frequently embedded incorrectly or are not labeled and formatted according to the journal's guidelines. These issues can lead to immediate desk rejections and unnecessary delays in the editorial workflow.[7,19]

Role of Layout Models for Streamlining Editorial Workflows

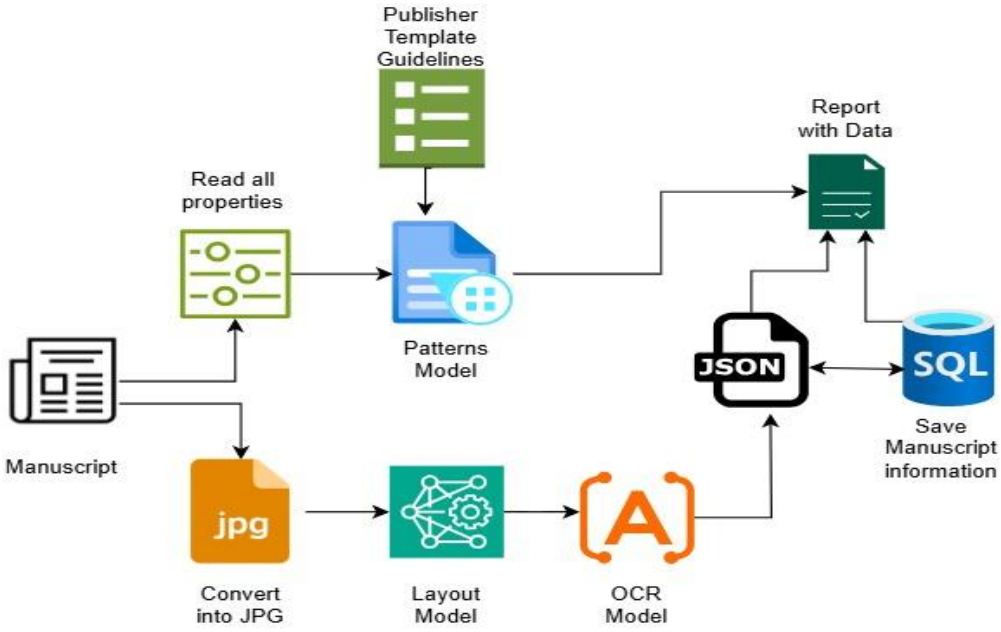

Fig 3. Automated Manuscript Processing Pipeline

Figure 3 illustrates a modern editorial automation system. It begins by converting a manuscript into an image or PDF format, which is then processed using layout analysis and OCR models. These models extract structural and visual elements of the document, which are then validated against predefined publisher guidelines. The output is saved in a structured format, such as JSON or XML, for downstream editorial and publishing tasks.

How Layout Models Enhance Editorial Workflows

- **Pre-submission Validation:** Automatically checks if the manuscript conforms to journal-specific layout requirements (e.g., double column, proper heading structure).
- **Section Tagging and Extraction:** Identifies core manuscript components like Abstract, Introduction, Methods, Results, and Conclusion, making it easier to assess completeness and coherence.
- **Visual Content Structuring:** Detects tables, charts, and figures; checks for placement, labels, and references within the text.
- **Time Efficiency:** Reduces the burden of manual formatting checks, allowing editors to focus more on the scientific content.
- **Structured Reporting:** Converts unstructured manuscripts into structured formats (like XML or JSON), useful for downstream tasks like peer review, digital publishing, and indexing.

- **Multilingual and Multiformat Support:** Handles diverse document types and international submissions efficiently, promoting consistency and scalability across global journals.

The usefulness of these layout models in editorial workflows is summarized in Table 1.

Table 1. layout models in editorial workflows

Model	Description	Editorial Usefulness
PubLayNet [61][20] (Detectron2, YOLOv5)	Trained on scientific papers with labeled regions (Title, Text, List, Table, Figure).	Accurate layout classification; section-wise segmentation.
LayoutLMv2[62] [21] / LayoutLMv3[63]	Combines text and layout (spatial) understanding using Transformer architecture.	Extracts structured sections like Abstract, Methods, Results.
Donut[64] [22] (Document Understanding Transformer)	OCR-free model that directly processes images to output structured data.	Converts poorly scanned documents into structured JSON/XML.
LayoutXLM[65] [23]	Multilingual layout-aware model built for multi-language documents.	Supports international submissions across languages.
DocFormer[66] [24] / TILT / LiLT	Vision-language models that understand both layout and textual semantics.	Useful for segmenting complex documents with mixed formats.
LayoutParser[67] [25] (Library)	Provides APIs for document layout detection using pre-trained models.	Allows quick deployment and visualization for editorial checks.
DocTR[68] [26]	OCR and layout model with visual transformer backbone.	Extracts text and layout from scanned PDFs or images.
TableBank[69] [27]	Dataset and model specifically for detecting and parsing tables.	Ensures tables are formatted, structured, and labeled correctly.

[61] PubLayNet
[62] layoutlmv2
[63] layoutlmv3
[64] Donut
[65] layoutxlm
[66] Docformer
[67] LayoutParser
[68] DocTR
[69] TableBank

Model	Description	Editorial Usefulness
DocLayNet [70][28]	A large benchmark dataset for layout detection across document types.	General-purpose layout detection across diverse journal formats.

Figure/Table Improving Tools

A recurring issue in editorial workflows is the submission of poor-quality figures and tables that are inconsistently formatted. Authors may embed low-resolution images, leading to pixelated visuals, unreadable labels, or distorted diagrams, especially after file conversions. In some cases, the same figure may be reused across different sections or submissions, raising concerns of duplication or ethical reuse. Tables can also present challenges such as misaligned columns, missing headers, or ambiguous structures, making it difficult to parse or interpret during review and digital conversion. [3,6]

To resolve these challenges, AI-based solutions now offer robust methods to enhance visual clarity and maintain structural integrity. For images, Stable Diffusion XL[71] and DALL·E 3[72] can be used to regenerate high-fidelity versions of scientific diagrams and illustrations while preserving their semantic intent.[29] Models like Real-ESRGAN[73] specialize in super-resolution enhancement, improving image quality without altering content. For identifying duplicate or reused images, Google Lens[74] and TinEye[75] provide reverse image search capabilities that can detect online occurrences of visual content.[30] Captioning and flow description can also be improved using models like BLIP-2[76], which generate contextual image descriptions to support figure placement and readability. [31] On the table side, large language models such as GPT-4 and Claude help refine captions, standardize structures, and convert loosely formatted tables into clean, machine-readable outputs.[32] These tools not only enhance the readability and usability of visual content but also promote consistency across submissions—reducing editorial overhead and improving the overall quality of published manuscripts.

Data and Statistical Analysis Tools

In scholarly publishing, data-driven analysis has become an essential tool for editors and reviewers. Statistical and linguistic metrics offer valuable insights into manuscript quality, structure, and reporting integrity. These analyses not only support editorial judgment but also enable scalable, consistent evaluations, especially as submission volumes grow.

Linguistic and Readability Metrics

Advancements in natural language processing have enabled detailed evaluations of textual readability, providing editors with objective insights into manuscript structure and accessibility. Tools like the Python readability[77] package analyze multiple linguistic dimensions—such as readability grades, sentence structure, lexical usage, and variation in sentence beginnings—to assess how well a manuscript communicates with its intended audience. These computational

[70] DocLayNet
[71] Stable Diffusion XL
[72] DALL·E 3
[73] Real-ESRGAN
[74] Google Lens
[75] tineye
[76] blip-2
[77] readability

readability measures support consistent editorial decisions by quantifying writing complexity and syntactic features, aligning with frameworks proposed in recent research on NLP-based readability modeling [33].

Automated Statistical and Compliance Tools

In addition to linguistic analysis, modern editorial systems increasingly rely on AI-based tools for automating statistical checks and research integrity evaluations. Notable tools include:

- **Statcheck**[78] : A "spellchecker" for statistics, Statcheck scans manuscripts for statistical results (e.g., t, F, χ^2 tests) and verifies whether reported p-values are consistent with the accompanying test statistics and degrees of freedom. It flags inconsistencies, helping prevent statistical misreporting in published articles.[34]
- **StatReviewer** : Developed by Aries Systems, StatReviewer is an automated manuscript evaluation tool that supplements human reviewers. It performs thousands of checks related to statistical reporting, methods descriptions, and adherence to editorial policies. Fully integrated with Editorial Manager, it runs automatically for designated article types, offering scalable, real-time support in the editorial workflow.
- **RobotReviewer** is a machine learning tool that extracts structured data from RCTs, including PICO elements and study design. It provides preliminary risk of bias assessments to assist in evidence synthesis. Designed as a semi-automated assistant, it accelerates the review process without replacing human judgment [35].
- **SciScore** enhances research transparency in life sciences through automated Rigor and RRID reports. It evaluates study design completeness and verifies the inclusion of Research Resource Identifiers. This helps journals uphold reproducibility standards set by NIH, ARRIVE, and CONSORT [36].

Multipurpose Tools for Manuscript Preparation

Several AI-powered platforms have emerged as comprehensive solutions for supporting authors and editors in manuscript preparation and evaluation. Penelope offers an in-depth compliance check covering ethical statements, manuscript structure, title relevance, declarations, figures and tables, references, and metadata validation—ensuring alignment with journal standards. Scholarcy stands out for its automatic summarization capabilities, generating structured outputs such as snapshots, key findings, objectives, methods, results, and conclusions. It also assesses research quality, highlights limitations, suggests future directions, and analyzes study compliance and structure. Paperpal[79] functions as a smart academic assistant, offering grammar correction, paraphrasing suggestions, plagiarism checks, and structural improvements tailored to academic writing. Similarly, SciFlow[80] provides a collaborative writing environment with journal-specific templates, language support, and editorial checks, making it an all-in-one platform for researchers aiming for publication-ready manuscripts. Together, these tools streamline the authoring and review process, enhancing both efficiency and quality.[11]

Reviewer Recommendation Tools

For journal editors, selecting suitable peer reviewers is an essential yet time-consuming task. Manual identification of qualified and objective reviewers has become increasingly challenging

[78] statcheck-web
[79] https://paperpal.com/
[80] https://www.sciflow.net/

due to the volume of entries and the need for thorough peer review. Powered by artificial intelligence and data-driven algorithms, reviewer recommendation tools have become increasingly crucial for automating and simplifying the reviewer selection process in order to solve this.

For example, by analyzing keywords, abstracts, and author metadata, Elsevier's Reviewer Recommendation[81], housed within the EVISE platform, utilizes machine learning approaches to match manuscripts with relevant experts. Likewise, publishers like Wiley utilize Publons Reviewer Connect—now part of Web of Science Reviewer[82]—which leverages an extensive database of reviewer profiles and review histories to suggest reviewers whose experience aligns with the manuscript's topic.

Developed internally by Frontiers, the Artificial Intelligence Review Assistant (AIRA) is a groundbreaking innovation designed to address significant publishing challenges at scale. AIRA improves the quality of peer review by automatically matching manuscripts to expert reviewers and editors based on topic relevance using data from sources such as Microsoft Academic[83]. It also facilitates editor selection, helps reduce reviewer fatigue, and supports outside stakeholders—such as funders during the COVID-19 pandemic—in finding qualified reviewers [37].

Custom-built reviewer recommendation systems, tailored to specific domains and datasets, are also being utilized by many publishers and institutions. These systems identify suitable reviewers from internal or open-access academic networks by using the manuscript's topic, which is derived from keyword extraction or NLP-based content analysis. For instance, a scholarly activity-based algorithm was proposed to suggest peer reviewers, highlighting how customised approaches can improve reviewer discovery, openness, and fairness. [38]

Generative AI tools:

Generative AI tools, such as ChatGPT, Gemini, Copilot, and LLaMA, are transforming the way researchers and reviewers engage with academic work. These tools facilitate understanding complex data, new methodologies, and intricate formulas by breaking them down into more straightforward explanations, providing summaries, and even visualizing data relationships. This allows reviewers to focus more on conceptual clarity, originality, and implications of the research, rather than getting bogged down by technical language or formatting issues [39,40]

Moreover, AI can assist in analyzing the strengths, weaknesses, biases, and assumptions of a study, providing a more comprehensive and balanced review. It promotes deeper engagement by suggesting questions, highlighting limitations, and even facilitating dialogue through multimodal interfaces [40]. These capabilities support higher education research by making it more accessible, efficient, and informed [39].

However, with these benefits comes the responsibility to use AI ethically. Researchers and reviewers must ensure that the role of AI is transparent, that synthetic data is disclosed, and that AI is not mistaken for human authorship. It's crucial to control biases, maintain research integrity,

[81] Elsevier's Reviewer
[82] Web of Science Reviewer
[83] Microsoft Academic

and engage with communities affected by the research [41]. By combining the power of these tools with a strong ethical foundation, AI becomes a trusted assistant—not a shortcut—for high-quality, responsible scholarship.

AI-Powered Acceptance Prediction and Evaluation Tools

The previously mentioned AI tools assist with paper quality checks, aiding editors by analyzing structure, clarity, grammar, and relevance to ensure that ethical standards are followed. These tools offer guidance, not decisions, supporting the human review process with valuable insights.

In contrast, an AI-assisted peer review system goes a step further by predicting the acceptance or rejection of a paper. One such system, trained on 3,300 papers, achieved 74.01% accuracy using only readability and basic text features, demonstrating both its potential and limitations.[42] Accuracy can be improved by incorporating features such as title strength, abstract clarity, methodology depth, reference quality and quantity, and institutional reputation. Using advanced NLP techniques such as topic modeling, word associations, and grammar analysis, along with Large Language Models (LLMs), enhances contextual understanding. A classification model can then provide a more accurate and fair acceptance probability.

A recent approach using GPT-40 in the AI Scientist framework conducted automated review scoring with 70% accuracy, evaluated on a dataset of just 500 papers from ICLR 2022. While it demonstrates the potential of LLMs in review prediction, the limited dataset size restricts generalization.[43] Additionally, the model relies solely on language model outputs without incorporating structured features such as reference quality, institutional reputation, or methodology completeness. Expanding the dataset and integrating these complementary features could enhance accuracy and fairness in peer review automation.

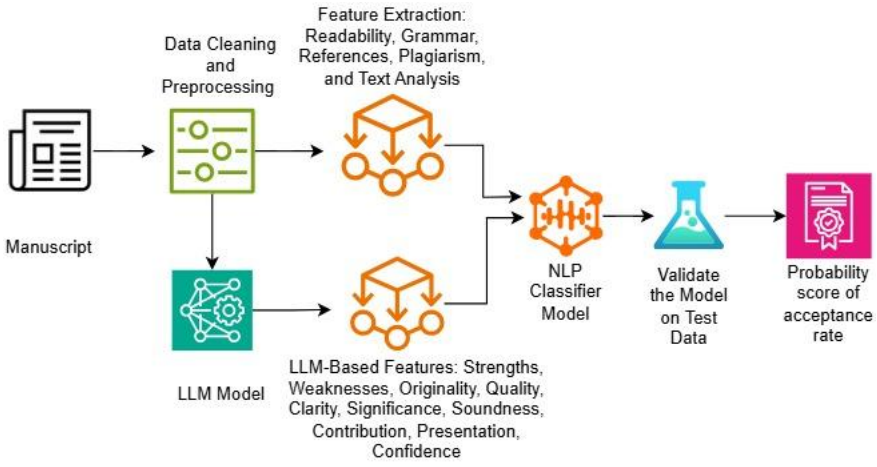

Figure 4: Hybrid AI Framework for Manuscript Acceptance Prediction Using LLM and NLP-Based Features

Figure 4 illustrates a hybrid framework that combines structured features (e.g., readability, grammar, references, plagiarism) and LLM-based reasoning (e.g., strengths, originality, clarity, significance) to power an NLP classifier for manuscript acceptance prediction. This framework is validated on test data to generate a probability score of acceptance. Combining LLM-based

reasoning with structured machine learning models in a hybrid approach, trained on a larger and more diverse dataset, holds promise for achieving significantly better accuracy and more reliable peer review support.

Formatting & Typesetting Tools

Once the reviewer and editor accept a research paper, the next critical phase is handled by the publisher: formatting and typesetting. This stage often faces several common problems. Authors submit documents in different formats, styles, and structures, which leads to inconsistencies in font usage, spacing, headings, figure placement, and reference styles. Complex mathematical equations or tables may not display correctly.[6] Manual formatting of citations and references can be time-consuming and error prone. Moreover, converting documents into web-friendly formats, such as HTML, PDF, or XML, can lead to layout issues or broken content if not done correctly. These issues can impact readability, visual consistency, and even the indexing of the paper in databases such as Crossref, DOAJ, or PubMed.

Standardising the appearance and structure of accepted papers depends critically on formatting and typesetting, which also ensure that the documents comply with the journal's publication guidelines. This method addresses several challenges and ensures that the paper is not only readable but also professionally presented, suitable for both print and digital media. While supporting accurate indexing and citation tracking, proper formatting ensures adherence to technical standards, such as JATS XML for metadata tagging, which enhances the overall reading experience. Without this essential process, even the best-quality research runs the risk of seeming disorganized or failing to meet basic technical publication criteria.

Publishers rely on a range of specialized tools to accomplish this work. LaTeX is one of the most widely used typesetting systems, particularly in fields such as engineering and mathematics, as it handles complex equations and ensures consistent formatting with ease. Overleaf is an online LaTeX editor that supports collaboration and auto-formatting for various journal styles. For desktop publishing, tools like Adobe[84] InDesign offer robust layout control for professional-quality print and digital outputs. Some journals also provide Microsoft Word templates with built-in styles and macros to guide authors. Tools like Pandoc[85] are used to convert documents between formats (e.g., from Word to LaTeX or HTML). For digital publishing and indexing, JATS XML[86] tools facilitate accurate tagging of the paper, enabling it to be submitted to online repositories and databases. Platforms like Typeset.io[87] and Authorea[88] utilize AI and templates to assist authors and publishers in quickly formatting papers according to specific journal guidelines. [44]

Metadata Validation Tools

Authors often submit papers with missing or inconsistent metadata like author names, affiliations, or declaration statements, which can delay publication. These errors make it harder for publishers to ensure compliance with ethical and indexing standards. To solve this, tools like Penelope.ai are used for automatic metadata validation. They check for completeness, accuracy,

[84] Adobe
[85] Pandoc converter
[86] JATS
[87] Typeset
[88] authorea

and formatting of declarations and author details. This speeds up editorial checks and ensures the manuscript meets publishing requirements.[45]

Unique Identifier Tools

In academic publishing, authors often share common names, making it difficult to correctly identify and attribute work. Without unique identifiers, papers may be misattributed, citations may not be counted correctly, and authors may miss recognition or funding opportunities. To solve this, publishers use tools and platforms that assign unique identifiers:

- **ORCID ID**[89] for uniquely identifying researchers across all platforms and publishers. It is globally recognized and managed by the author, ensuring consistency throughout their career.
- **DOI**[90] **(Digital Object Identifier)** for uniquely identifying and linking published articles.
- **ROR ID**[91] **(Research Organization Registry)** for standardizing institution names in funding and affiliation data.
- **ISSN**[92] **(International Standard Serial Number)** for uniquely identifying journals, preventing confusion caused by similar or cloned journal names.
- **ISBN**[93] **(International Standard Book Number)** for uniquely identifying books and conference proceedings, ensuring proper cataloging and citation.

These tools help ensure accurate author attribution, proper citation tracking, and standardized institutional and publication recognition in the academic ecosystem.[46]

Indexing and archiving tools

Academic publishing relies heavily on indexing and archiving technologies to ensure the long-term availability, discoverability, and preservation of research papers. Research outputs may become challenging to find, cite, or reference without these tools, thus lowering their visibility and influence. Adequate indexing guarantees that papers are included in notable databases, so facilitating researcher discovery and referencing of them. Archiving, on the other hand, ensures that papers remain easily accessible for future use by protecting research from loss resulting from platform closures or digital deterioration.

Indexing is necessary for reasons other than making research discoverable. It is crucial in gauging the influence of research, as it enables citation tracking, allowing authors in their field to gain recognition. Often cited more frequently, indexed papers help to establish the academic credibility of the writers. Moreover, many funding organisations and institutions require papers to be indexed in specific databases to meet publishing requirements; thus, indexing is a compliance requirement.

[89] ORCID ID
[90] DOI
[91] ROR
[92] ISSN
[93] isbn

Several tools help achieve these goals, including Google Scholar[94], PubMed[95], Scopus[96], and Web of Science[97]. These platforms offer indexing services that ensure visibility across different disciplines.[47] For archiving, tools like Portico[98] and CLOCKSS[99] preserve content long-term, safeguarding against content loss.[48] DOAJ[100] and CrossRef [101]are vital for promoting open-access content and proper citation linking, enhancing the credibility and discoverability of research. These tools collectively help in maintaining the integrity, accessibility, and scholarly impact of academic work.

Journal Management Tools for Publisher Workflow

Managing academic publishing without an organized system can lead to delays, miscommunication, and poor version control. Editors and reviewers often struggle to keep track of submissions and revisions, especially when done manually via email or spreadsheets. These challenges make it essential for publishers to adopt centralized systems.

To address these issues, Journal Management Tools offers a comprehensive platform for managing manuscript submission, peer review, editorial workflows, and final publication. These tools enhance transparency, minimize manual overhead, and facilitate streamlined communication among all parties involved in the publishing process.[49]

- **PKP Open Journal Systems[102] (OJS)** – An open-source and widely adopted platform, offering a submission-to-publication workflow.
- **Editorial Manager**[103] – Used by large publishers for complex peer review and editorial tracking.
- **ScholarOne Manuscripts**[104] – Commercial tool for handling submission, peer review, and production.
- **eJournalPress**[105] – Flexible platform that supports end-to-end journal workflows.
- **Manuscript Manager**[106] – Cloud-based CMS ideal for smaller journals.
- **JAMS[107] (Journal & Article Management System)** – An open-source tool designed for modular workflow support.
- **ARPHA Platform**[108] – provides complete publishing facilities covering layout, XML conversion, and hosting.
- **HighWire Press**[109] – Particularly sought after among STM publishers, this comprehensive platform provides manuscript submission, peer review, production, and hosting.

These tools streamline journal operations, ensure quality control, and enable publishers to scale efficiently.

[94] Google Scholar
[95] pubmed
[96] scopus
[97] Web of Science
[98] portico
[99] clockss
[100] doaj
[101] crossref
[102] pkp
[103] Editorial Manager
[104] scholarone-manuscripts
[105] ejournalpress
[106] manuscriptmanager
[107] jams
[108] ARPHA Platform
[109] highwirepress

Ethical Publishing Platforms & Compliance Resources

Ethical problems, including plagiarism, duplicate submissions, fake peer reviews, authorship conflicts, undisclosed conflicts of interest, and data fabrication, are increasingly threatening the integrity of academic publishing. Apart from compromising the integrity of research, these acts damage the reputation of journals, institutions, and the more general scholarly community. Authors may unwittingly violate ethical guidelines, reviewers might ignore conflicts of interest, and publishers sometimes find misbehaviour on a broad scale difficult to uncover.

All participants—authors, editors, reviewers, and publishers—must adhere to established ethical standards if we are to maintain the integrity and reliability of published research. From all phases of the publishing process, these tools offer organised procedures to encourage justice, openness, and honesty. Following the ethical standards established by prestigious organisations like the World Association of Medical Editors (WAME) and the Committee on Publication Ethics (COPE) helps to make scholarly communication more reliable, repeatable, and globally respected [50,51].

Tools for ethics and compliance form a structure for preventing unethical behavior and promoting ethical research methods. They help stakeholders identify issues early on, learn about moral standards, and respond appropriately to potential misbehaviour. These tools help everyone engaged in academic publishing to contribute with confidence, clarity, and honesty.

Core Tools & What They Offer

- **COPE**[110] (Committee on Publication Ethics): Provides flow charts, policies, and case studies to help publishers and editors manage ethical conundrums and misbehaviour in scholarly publishing. It promotes a consistent attitude to integrity across publications.
- **DOAJ** (Directory of Open Access Journals): Lists open-access publications following moral and transparent publishing standards. It helps both publishers and writers find reliable sources that meet high standards.
- **OASPA**[111] (Open Access Scholarly Publishing Association): sets ethical standards for its members, promoting best practices in open-access publishing. It ensures responsibility and transparency among publishers committed to open knowledge.
- **WAME**[112] (World Association of Medical Editors): offers medical journal editors and reviewers tools, knowledge, and networking opportunities. Its primary goals are to raise editorial quality and ethical consciousness in medical publishing.
- **CSE**[113] (Council of Science Editors): provides thorough policies and best practices for publishers and scientific editors. Its tools help support professionalism and moral judgment throughout the editorial process.
- **EQUATOR Network**[114]: encourages accurate and open reporting, thereby improving the dependability of health research. For writers and editors, it provides set rules, including PRISMA and CONSORT.
- **STM**[115] (International Association of Scientific, Technical, and Medical Publishers): Encourages technological innovations in publishing and upholds ethical standards. Working with publishers, it addresses industry issues and promotes research integrity.

[110] COPE
[111] OASPA
[112] wame
[113] CSE
[114] EQUATOR Network
[115] stm

- **NISO**[116] (National Information Standards Organization): creates worldwide guidelines for academic publishing concerning best standards for ethical practices, metadata, and citations. It helps editors and publishers to maintain consistency and excellence.
- **EASE**[117] (European Association of Science Editors): By encouraging editorial quality, ethical standards, and responsible research communication, it supports science editors and writers. It provides tools and policies meant to improve openness and integrity.

Dissemination & Promotion Tools

Once a paper is published, one of the main difficulties researchers face is ensuring their work receives sufficient exposure and reaches the relevant readership. Even with the calibre of the research, it may go underappreciated without efficient publication (Parwani, 2024). Increasing the impact of research depends on its effective promotion, which also helps ensure its contribution to the growth of knowledge by fostering interaction with the scholarly community.

Indexing articles in databases and distributing them across multiple platforms is essential to address this challenge. This ensures that the study is discoverable and readily accessible to a broader audience, including legislators, experts, academics, and other sectors. By using these instruments, one enhances visibility, increases the likelihood of citations, and ultimately strengthens the scholarly relevance of the work.

Several tools can assist in disseminating and promoting research, including Google Scholar, PubMed, Scopus, Web of Science, ORCID, ResearchGate[118], Academia[119], Twitter[120], LinkedIn[121], Mendeley, Zotero, OpenAIRE[122], Altmetric[123], SSRN[124], arXiv[125], Zenodo[126], Scribe[127], and Semantic Scholar[128]. These platforms play a critical role in making research more accessible, tracking its reach, and ensuring that it is effectively shared across different networks.[52]

Conclusion:

Combining artificial intelligence, including machine learning, deep learning, and generative AI models, offers a significant opportunity to transform academic publishing. For every participant engaged in the academic communication process, the several ranges of instruments covered in this paper provide real advantages. By greatly enhancing the quality and presentation of their work, authors raise their chances of successful publishing. By means of their workflows, editors and reviewers can improve the rigour of peer review and concentrate on the substantive features of research. Publishers can guarantee more knowledge distribution, keep better ethical standards, and increase their own efficiency. Furthermore, the capacity to create custom AI models enables the development of customised solutions addressing particular problems and optimising particular processes inside the publishing ecosystem. Although the acceptance of artificial intelligence tools is fast changing, it is still imperative to keep ethical issues and responsible application of these technologies as a first priority. Adopting a complete, AI-driven toolchain will

[116] niso
[117] ease
[118] ResearchGate
[119] Academia
[120] Twitter
[121] LinkedIn
[122] OpenAIRE
[123] Altmetric
[124] SSRN
[125] arxiv
[126] Zenodo
[127] Scribe
[128] Semantic Scholar

help the academic publishing community towards a future marked by increased efficiency, better quality, and finally a stronger and more effective dissemination of scholarly research.

Future work:

1. **Establish Comprehensive Ethical Frameworks:** Future studies must prioritize strong ethical guidelines and pragmatic frameworks for the application of artificial intelligence in academic publishing. To preserve research integrity, this involves defining clear limits for human supervision to ensure transparency in AI-assisted decision-making procedures, as well as addressing bias detection and mitigation in AI models.
2. **Advanced User-Centric Custom AI Model Development:** Future initiatives should focus on developing user-friendly platforms and tools that enable academic institutions and publishers to create and implement custom AI models without relying heavily on sophisticated External AI Tools. Investigating readily available model training methods, modular artificial intelligence components, and user-friendly interfaces helps one to customise AI solutions to particular requirements and processes.
3. **Investigate Human-AI Collaborative Paradigms:** Defining ideal models for human-AI cooperation across the scholarly publishing process requires research. This involves identifying specific tasks where artificial intelligence can most effectively enhance human knowledge, researching how AI tools impact user experience and job roles, and developing best practices for seamless and efficient integration of AI support into existing processes while maintaining human control and critical judgment.

Data Availability:

All data and information used in this research are derived from publicly available literature and the author's professional experience in academic publishing and data science. **No proprietary or confidential datasets** were used.

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Conflict of Interest:

Nikit Patel is currently pursuing a PhD at **GLS University, Ahmedabad**. He serves as a **Senior Artificial Intelligence Engineer at ISRDO Publishing**, **where he leads AI-driven initiatives in academic publishing.** The author declares that these affiliations have not influenced the objectivity or integrity of the research presented in this paper. No financial or personal relationships exist that could be perceived to inappropriately influence (bias) the work reported in this paper.

Author Contribution:
Nikit Patel conceived the research idea, conducted the literature review, analyzed the information, developed the framework, and wrote the manuscript. Dr. Darshita Kalyani provided guidance, supervision, and critical feedback throughout the research process, making significant contributions to the conceptualization and refinement of the paper.

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References:
Mike Thelwall, Pardeep Sud; Scopus 1900–2020: Growth in articles, abstracts, countries, fields, and journals. *Quantitative Science Studies* 2022; 3 (1): 37–50. doi: https://doi.org/10.1162/qss_a_00177

el-Guebaly N, Foster J, Bahji A, Hellman M. The critical role of peer reviewers: Challenges and future steps. Nordic Studies on Alcohol and Drugs. 2022;40(1):14-21. doi:10.1177/14550725221092862

Teixeira da Silva, J. A., & Nazarovets, M. (2024). Rejected papers in academic publishing: Turning negatives into positives to maximize paper acceptance. Learned Publishing, 38(1). https://doi.org/10.1002/leap.1649

L. Fiorillo and V. Mehta, "Accelerating editorial processes in scientific journals: Leveraging AI for rapid manuscript review," Oral Oncology Reports, vol. 10. Elsevier BV, p. 100511, Jun. 2024. doi: 10.1016/j.oor.2024.100511.

M. Murtaza, Y. Ahmed, J. A. Shamsi, F. Sherwani, and M. Usman, "AI-Based Personalized E-Learning Systems: Issues, Challenges, and Solutions," IEEE Access, vol. 10. Institute of Electrical and Electronics Engineers (IEEE), pp. 81323–81342, 2022. doi: 10.1109/access.2022.3193938.

Menon V, Varadharajan N, Praharaj SK, Ameen S. Why Do Manuscripts Get Rejected? A Content Analysis of Rejection Reports from the Indian Journal of Psychological Medicine. Indian Journal of Psychological Medicine. 2020;44(1):59-65. doi:10.1177/0253717620965845

Kadam, Sujata D.. Challenges in scientific writing: Editor's perspective. Journal of Ayurveda Case Reports 8(1):p 1-4, Jan–Mar 2025. | DOI: 10.4103/jacr.jacr_47_25

Severin, A. and Chataway, J. (2021), Overburdening of peer reviewers: A multi-stakeholder perspective on causes and effects. Learned Publishing, 34: 537-546. https://doi.org/10.1002/leap.1392

Richtig G, Berger M, Lange-Asschenfeldt B, Aberer W, Richtig E. Problems and challenges of predatory journals. J Eur Acad Dermatol Venereol. 2018 Sep;32(9):1441-1449. doi: 10.1111/jdv.15039. Epub 2018 May 29. PMID: 29729106; PMCID: PMC6174996.

Razack, H. I. A., Mathew, S. T., Saad, F. F. A., & Alqahtani, S. A. (2021). Artificial intelligence-assisted tools for redefining the communication landscape of the scholarly world. Science Editing, 8(2), 134–144. https://doi.org/10.6087/kcse.244

Kousha, K. and Thelwall, M. (2024), Artificial intelligence to support publishing and peer review: A summary and review. Learned Publishing, 37: 4-12. https://doi.org/10.1002/leap.1570

Khalifa, M., & Albadawy, M. (2024). Using artificial intelligence in academic writing and research: An essential productivity tool. In Computer Methods and Programs in Biomedicine Update (Vol. 5, p. 100145). Elsevier BV. https://doi.org/10.1016/j.cmpbup.2024.100145

Buriak, J. M., Akinwande, D., Artzi, N., Brinker, C. J., Burrows, C., Chan, W. C. W., Chen, C., Chen, X., Chhowalla, M., Chi, L., Chueh, W., Crudden, C. M., Di Carlo, D., Glotzer, S. C., Hersam, M. C., Ho, D., Hu, T. Y., Huang, J., Javey, A., … Ye, J. (2023). Best Practices for Using AI When Writing Scientific Manuscripts. In ACS Nano (Vol. 17, Issue 5, pp. 4091–4093). American Chemical Society (ACS). https://doi.org/10.1021/acsnano.3c01544

WEI, Y., & LIU, X. (2022). ERROR ANALYSIS ON THE INTRODUCTION OF ENGLISH ACADEMIC WRITING BY CHINESE NON-ENGLISH MAJOR POSTGRADUATES AND WAYS TO IMPROVE THEIR WRITING ABILITIES. In Journal of Global Research in Education and Social Science (pp. 38–46). IK Press. https://doi.org/10.56557/jogress/2022/v16i27764

Lamptey, R., & Atta-Obeng, H. (2013). Challenges with Reference Citations among Postgraduate Students at the Kwame Nkrumah University of Science and Technology, Kumasi, Ghana. In Journal of Science and Technology (Ghana) (Vol. 32, Issue 3). African Journals Online (AJOL). https://doi.org/10.4314/just.v32i3.8

Ivey, C., & Crum, J. (2018). Choosing the right citation management tool: EndNote, Mendeley, RefWorks, or Zotero. In Journal of the Medical Library Association (Vol. 106, Issue 3). University Library System, University of Pittsburgh. https://doi.org/10.5195/jmla.2018.468

Nicholson, J. M., Mordaunt, M., Lopez, P., Uppala, A., Rosati, D., Rodrigues, N. P., Grabitz, P., & Rife, S. C. (2021). scite: A smart citation index that displays the context of citations and classifies their intent using deep learning. In Quantitative Science Studies (Vol. 2, Issue 3, pp. 882–898). MIT Press. https://doi.org/10.1162/qss_a_00146

Elali, F. R., & Rachid, L. N. (2023). AI-generated research paper fabrication and plagiarism in the scientific community. In Patterns (Vol. 4, Issue 3, p. 100706). Elsevier BV. https://doi.org/10.1016/j.patter.2023.100706

Rupp, D. E. (2011). Ethical Issues Faced by Editors and Reviewers. In Management and Organization Review (Vol. 7, Issue 3, pp. 481–493). Cambridge University Press (CUP). https://doi.org/10.1111/j.1740-8784.2011.00227.x

Zhong, X., Tang, J., & Yepes, A. J. (2019). PubLayNet: largest dataset ever for document layout analysis (Version 1). arXiv. https://doi.org/10.48550/ARXIV.1908.07836

Xu, Y., Xu, Y., Lv, T., Cui, L., Wei, F., Wang, G., Lu, Y., Florencio, D., Zhang, C., Che, W., Zhang, M., & Zhou, L. (2020). LayoutLMv2: Multi-modal Pre-training for Visually-Rich Document Understanding (Version 4). arXiv. https://doi.org/10.48550/ARXIV.2012.14740

Kim, G., Hong, T., Yim, M., Nam, J., Park, J., Yim, J., Hwang, W., Yun, S., Han, D., & Park, S. (2021). OCR-free Document Understanding Transformer (Version 5). arXiv. https://doi.org/10.48550/ARXIV.2111.15664

Xu, Y., Lv, T., Cui, L., Wang, G., Lu, Y., Florencio, D., Zhang, C., & Wei, F. (2021). LayoutXLM: Multimodal Pre-training for Multilingual Visually-rich Document Understanding (Version 3). arXiv. https://doi.org/10.48550/ARXIV.2104.08836

Appalaraju, S., Jasani, B., Kota, B. U., Xie, Y., & Manmatha, R. (2021). DocFormer: End-to-End Transformer for Document Understanding (Version 2). arXiv. https://doi.org/10.48550/ARXIV.2106.11539

Shen, Z., Zhang, R., Dell, M., Lee, B. C. G., Carlson, J., & Li, W. (2021). LayoutParser: A Unified Toolkit for Deep Learning Based Document Image Analysis (Version 2). arXiv. https://doi.org/10.48550/ARXIV.2103.15348

Liao, H., RoyChowdhury, A., Li, W., Bansal, A., Zhang, Y., Tu, Z., Satzoda, R. K., Manmatha, R., & Mahadevan, V. (2023). DocTr: Document Transformer for Structured Information Extraction in Documents (Version 1). arXiv. https://doi.org/10.48550/ARXIV.2307.07929

Li, M., Cui, L., Huang, S., Wei, F., Zhou, M., & Li, Z. (2019). TableBank: A Benchmark Dataset for Table Detection and Recognition (Version 2). arXiv. https://doi.org/10.48550/ARXIV.1903.01949

Pfitzmann, B., Auer, C., Dolfi, M., Nassar, A. S., & Staar, P. (2022). DocLayNet: A Large Human-Annotated Dataset for Document-Layout Segmentation. In Proceedings of the 28th ACM SIGKDD Conference on Knowledge Discovery and Data Mining (pp. 3743–3751). KDD '22: The 28th ACM SIGKDD Conference on Knowledge Discovery and Data Mining. ACM. https://doi.org/10.1145/3534678.3539043

Bougueffa, H., Keita, M., Hamidouche, W., Taleb-Ahmed, A., Liz-López, H., Martín, A., Camacho, D., & Hadid, A. (2024). Advances in AI-Generated Images and Videos. In International Journal of Interactive Multimedia and Artificial Intelligence: Vol. In Press (Issue In Press, pp. 1–36). Universidad Internacional de La Rioja. https://doi.org/10.9781/ijimai.2024.11.003

Kondal, M. & Dr. Virender Singh. (2022). Comparative Analysis of Tineye and Google Reverse Image Search Engines. Zenodo. https://doi.org/10.5281/ZENODO.6378256

Sarto, S., Cornia, M., & Cucchiara, R. (2025). Image Captioning Evaluation in the Age of Multimodal LLMs: Challenges and Future Perspectives (Version 1). arXiv. https://doi.org/10.48550/ARXIV.2503.14604

Lu, W., Zhang, J., Fan, J., Fu, Z., Chen, Y., & Du, X. (2024). Large Language Model for Table Processing: A Survey. arXiv. https://doi.org/10.48550/ARXIV.2402.05121

Crossley, S. A. (2024). Developing Linguistic Constructs of Text Readability Using Natural Language Processing. In Scientific Studies of Reading (Vol. 29, Issue 2, pp. 138–160). Informa UK Limited. https://doi.org/10.1080/10888438.2024.2422365

Nuijten, M. B., & Polanin, J. R. (2020). "statcheck": Automatically detect statistical reporting inconsistencies to increase reproducibility of meta-analyses. In Research Synthesis Methods (Vol. 11, Issue 5, pp. 574–579). Wiley. https://doi.org/10.1002/jrsm.1408

Marshall, I., Kuiper, J., Banner, E., & Wallace, B. C. (2017). Automating Biomedical Evidence Synthesis: RobotReviewer. In Proceedings of ACL 2017, System Demonstrations. Proceedings of ACL 2017, System Demonstrations. Association for Computational Linguistics. https://doi.org/10.18653/v1/p17-4002

Roelandse, M., Ozyurt, I. B., Evanko, D., & Bandrowski, A. (2023). Assessing the Effectiveness of SciScore in Supporting the Reproducibility of Scientific Research. In Science Editor. Council of Science Editors. https://doi.org/10.36591/se-d-4602-15

Lazarus, E. (2021). Artificial Intelligence-Assisted Editorial Tools: Case Studies. In Science Editor (pp. e7–e9). Council of Science Editors. https://doi.org/10.36591/se-d-4404-e7

Choi, D.-H., Hyun, J. W., & Kim, Y. R. (2023). An Algorithm for Peer Reviewer Recommendation Based on Scholarly Activity Assessment. In IEEE Access (Vol. 11, pp. 39609–39620). Institute of Electrical and Electronics Engineers (IEEE). https://doi.org/10.1109/access.2023.3263857

Zawacki-Richter, O., Marín, V. I., Bond, M., & Gouverneur, F. (2019). Systematic review of research on artificial intelligence applications in higher education – where are the educators? In International Journal of Educational Technology in Higher Education (Vol. 16, Issue 1). Springer Science and Business Media LLC. https://doi.org/10.1186/s41239-019-0171-0

Ashwin Parwani. (2024). The Relationships between Foreign Direct Investment, State-Owned Investment, Private Investment, Import, Export, and Economic Growth in India. AEIDA: Journal of Multidisciplinary Studies , 1(1), 11–24. https://aeidajournal.org/index.php/AEIDA/article/view/3

The advent of human-assisted peer review by AI. (2024). In Nature Biomedical Engineering (Vol. 8, Issue 6, pp. 665–666). Springer Science and Business Media LLC. https://doi.org/10.1038/s41551-024-01228-0

Resnik, D. B., & Hosseini, M. (2024). The ethics of using artificial intelligence in scientific research: new guidance needed for a new tool. In AI and Ethics. Springer Science and Business Media LLC. https://doi.org/10.1007/s43681-024-00493-8

Checco, A., Bracciale, L., Loreti, P., Pinfield, S., & Bianchi, G. (2021). AI-assisted peer review. In Humanities and Social Sciences Communications (Vol. 8, Issue 1). Springer Science and Business Media LLC. https://doi.org/10.1057/s41599-020-00703-8

Lu, C., Lu, C., Lange, R. T., Foerster, J., Clune, J., & Ha, D. (2024). The AI Scientist: Towards Fully Automated Open-Ended Scientific Discovery (Version 3). arXiv. https://doi.org/10.48550/ARXIV.2408.06292

Jertec Musap, L. (2023). Enhancing scientific publishing: automatic conversion to JATS XML. In European Science Editing (Vol. 49). Pensoft Publishers. https://doi.org/10.3897/ese.2023.e114977

Struthers, C., Harwood, J., de Beyer, J. A., Dhiman, P., Logullo, P., & Schlüssel, M. (2021). GoodReports: developing a website to help health researchers find and use reporting guidelines. In BMC Medical Research Methodology (Vol. 21, Issue 1). Springer Science and Business Media LLC. https://doi.org/10.1186/s12874-021-01402-x

ODIN Consortium, Aryani, A., Barton, A. J., Brase, J., Brown, J., Demeranville, T., Herterich, P., McAvoy, L., Paglione, L., Ruiz, S., Thorisson, G., Vision, T., & Ziedorn, F. (2015). D4.2: Workflow for interoperability. Figshare. https://doi.org/10.6084/M9.FIGSHARE.1373669.V1

Jiao, C., Li, K., & Fang, Z. (2023). How are exclusively data journals indexed in major scholarly databases? An examination of four databases. In Scientific Data (Vol. 10, Issue 1). Springer Science and Business Media LLC. https://doi.org/10.1038/s41597-023-02625-x

Fenton, E. G. (2006). An Overview of Portico: An Electronic Archiving Service. In Serials Review (Vol. 32, Issue 2, pp. 81–86). Informa UK Limited. https://doi.org/10.1080/00987913.2006.10765036

Salem, R. M., Culbertson, N. M., & O'Connell, A. (2016). Process for selecting and implementing a manuscript management system: Experiences of a new peer-reviewed journal. In Learned Publishing (Vol. 29, Issue 1, pp. 55–59). Wiley. https://doi.org/10.1002/leap.1011

Ndungu, M. W. (2021). Scholarly journal publishing standards, policies and guidelines. In Learned Publishing (Vol. 34, Issue 4, pp. 612–621). Wiley. https://doi.org/10.1002/leap.1410

Teixeira da Silva, J. A., & Moussa, S. (2024). The COPE / DOAJ / OASPA / WAME Principles of Transparency and Best Practice in Scholarly Publishing: A Critical Analysis. In ETHICS IN PROGRESS (Vol. 15, Issue 1, pp. 130–154). Adam Mickiewicz University Poznan. https://doi.org/10.14746/eip.2024.1.7

Majhi, S., Sahu, L., & Behera, K. (2023). Practices for enhancing research visibility, citations and impact: review of literature. In Aslib Journal of Information Management (Vol. 75, Issue 6, pp. 1280–1305). Emerald. https://doi.org/10.1108/ajim-11-2023-532