

A Preliminary Analysis of the Quality of the Content Produced by AI Bots Using AI in Content Generation

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Abstract: Machine learning (ML) has significantly changed how material is traditionally produced, and now, AI writers are producing content in a manner identical to that of humans without sacrificing quality. The inventiveness and quality of content produced by AI bots can usually far outpace that of human writers. The study's primary goals are to identify the various AI tools that Indian bloggers and journalists have used to date to create content and to assess the quality of that content. The study took into account a few apps and their characteristics, and it used qualitative methods to examine the benefits and drawbacks of machine-generated content in terms of word choice, sentence structure, inventiveness, grammar, spelling mistakes, and other factors. Since everything in the digital age is based on technology, this study will assist a newsroom or media company in producing content with minimal human involvement. AI bots have evaluated the study, which will result in less plagiarism and quicker, more inventive content generation than a human writer. These robots may eventually outcompete humans in terms of careers and job positions.

Keywords: Content, Machine Learning, AIBots, Plagiarism, AI Software and Digital Era

1. Introduction

In general, machine learning (ML) is the study of computer techniques to improve the data-use experience. It is a collection of algorithms that enable programmability in computers and automate analytical modelling [1]. On a set of data known as training data, these algorithms build models and produce predictions and judgements that can be programmed. In essence, these algorithms assist machines in making predictions or judgements. With significant advancements in storage technologies, computing power, and analysis methods, artificial intelligence algorithms are able to enhance analysis and decision-making. These algorithms combine data from various sources, analyse it, and make predictions using sensors, digital data, and remote input. A subset of artificial intelligence called machine learning (ML) uses a set of algorithms in an information source to enhance the user's experience. Machine learning and the pursuit of artificial intelligence have advanced scientifically at an exponential rate [2].

According to the most recent technology advancements, content generation can be defined as the process of producing online or digital material. The process of developing digital media that will be used on the internet is referred to as content generation. The term "content" refers to anything that is included on a website, including written text, illustrations, photos, videos, and audio files. This indicates that the process of creating content is interdisciplinary and is carried out by a variety of experts, such as authors, artists, photographers, filmmakers, and musicians. Actually, everyone who adds

to the body of knowledge on the internet might be considered to be creating content, which includes updates to social media websites like blogs, Facebook, and Twitter [3].

Artificial intelligence is the development of machines that assist in performing jobs now performed by humans. In general, it refers to a machine's or computer's capacity to imitate human intelligence. The use of AI in content development could make self-publishing a reality in the future. Professional and amateur authors alike are living in intriguing circumstances right now [4]. As self-publishing platforms grow, authors will have more control over their works as they move them at their own pace from page to screen to reader's screens. Copywriters, bloggers, digital marketers, and hobbyists have all benefited greatly from the tools used to generate text, or content in this case. Since the content is produced in a split second, the usage of artificial intelligence has reduced the workload of human authors. Depending on the software being utilised, the content quality varies [5].

The enormous digital transformation of the publishing sector has caused a number of problems for traditional media firms all around the world. This entails a rise in data accessibility and availability to the extent that journalists are incapable of handle and make use of it for news reporting. A crucial development in this area is the automation of editorial processes and the capacity to handle scalable, data-driven content [6]. Despite recent major advancements in the science of generating natural language (NLG), few NLG systems have been developed to meet the newsrooms' needs for journalistic automation. Artificial intelligence, as was already mentioned, has a lot of benefits as well as drawbacks. Instant content production, audience targeting, performance validation, expanding one's horizons, increasing versatility, and the future of AI content generation are some of the advantages of AI software

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Since AI is still in its infancy, it won't soon rule the globe. Humans remain indispensable. We can interact with our clients more easily on a human level because, despite the fact that we use existing content to produce new content, AI doesn't have the same amount of experience, knowledge, and emotion as we humans [8]. Instead of seeing AI as a threat, content generating tools should be seen as a support because they can speed up activities and provide more inventive ideas that are suited to our target audience. There are quite a few benefits that could be cited in favour of this robotic journalism, but every human invention has drawbacks and restrictions as well. One such example is a lack of imagination. These AI bots can produce flawless, original content very quickly, but there is one thing missing from the articles they produce: the author's originality. The best articles are unquestionably those that were written by a human because they have a lot of aesthetic components. Since these bots create articles or other content using a pre-established template, there is also a lack of adaptability. When these bots are used to write articles, the beauty of the narrative and the adaption of the most recent trend are lost. This Automated Journalism has still another drawback. Unlike journalists who could see this spread of bogus news, the bots are unable to distinguish between true and false news. Not every newsroom can implement AI. The size of the newsroom as a whole and the resources that the organisation has are important [9].

It is clear from Clerwall's (2014) analysis that digital journalism is developing. Software-generated content is the most current advancement in the sector. He carefully examined how the readers responded to his writing. The study's criteria included things like quality, credibility, objectivity, etc. He has generally described automated journalism and contrasted pieces published by an AI bot with human writers [10].

According to Grint and Woolgar[11], algorithms are nothing more than knowledge machines that select the appropriate information for their consumers. Additionally, these algorithms could be viewed as a social process in which the developed formulas are given legitimacy in the systems. According to his research, AI software not only creates news, but also assists news consumers in choosing a news story to read. Artificial intelligence is the guiding premise behind these automated process or automated journalists [12]. In his research, he discovered that as compared to human journalists, algorithms were able to generate stories more quickly, in greater quantities, and without errors. The article's intended audience could potentially be expanded by artificial intelligence translating it into a multilingual format [13]. In his work, Guzman [14] came to the conclusion that algorithms have the capacity to generate articles on demand with only minimal user input. The Indian Express [15] ran a piece titled "Robots could replace journalists in the newsroom" that included a robot journalist by the name of Drea.

2. Statement of the Problem

This study's objective is to evaluate the calibre of the content produced by AI bots. The study's goals are to identify the various AI software programmes used by Indian journalists and bloggers to produce material, assess the quality of that content in light of a few criteria, and examine the benefits and drawbacks of machine-generated content. Human life has begun to be influenced by technology, and it has progressed to the point that it is now impossible for people to survive without it. In their writing, many journalists now make use of artificial intelligence. It is difficult for a human to produce an essay in just a few seconds, but AI bots can. It can even produce a 1500-word article in under two minutes, yet it usually takes a person two to three hours to write a piece of that length. Additionally, because the article's source is online, the quality of the content generated by artificial intelligence software is much higher than that of a human intellect. Before composing an article, a variety of sources are consulted. Before producing an article, both the human and the AI bot writers conduct some preliminary research. Making use of an AI bot makes multitasking simple. It not only aids in article authoring, but also employs specific keywords that aid in article branding. It is now vital to thoroughly research the features of the many AI tools that assist in content development since in the future, when technology will replace humans, this is a must. Five pieces of software are chosen for this study, and their characteristics are examined and compared while taking a few factors into consideration. This aids in choosing the finest tools for article generating and supporting human writers. Technology has evolved into a human need, which makes this study necessary. The benefits and drawbacks of software will be carefully examined, and it will be contrasted to human-written content.

3. Materials and Methods

In the current study, machine learning (ML) is deployed in content generation for AI bots using a qualitative way of analysis.

4. Results

Five kinds of software were chosen at random from those with higher SEO rankings for the study. The software used to create the content, including Simplified App, AI Writer, Copymatic, Sassbook Writer, and Write Sonic, was evaluated for quality. The creation of content is aided by five different types of software. The software's input was "Growth of Artificial Intelligence." Depending on the input, each piece of software produced a different set of outputs. The effectiveness of the essay written by the AI Bots was evaluated thoroughly in light of a few factors. The greatest programme out of these had to be determined using a set of questions.

The Simplified App's algorithms (Fig. 1) had a 10% level of plagiarism; the data's accuracy and dependability added up to 25.0%. Grammar and sentence structure errors were 11.1%; features contributed 21.7% of the total; content relevance was 23.1%; key parameters for

improvement were 26.7%; overall software performance was 7.7%; software cost was 37.5%; references and sources contributed 20.0% of the total; and writer similarity to a human was 16.7% of the total. The software's price is fair and accounts for a high percentage of the entire cost—37.5%—while the overall performance of the software accounts for a lower percentage, 7.692%.

AI Writer App's Algorithms (Fig. 2) had a 20% level of plagiarism, 12.5% data accuracy and reliability, 11.1% grammar and sentence structure errors, 17.4% in terms of features, 7.7% in terms of relevance, 13.3% in terms of key parameters to improve, 30.8% in terms of overall software performance, 12.5% in terms of price, 6.7% in terms of references and sources, and 8.3% in terms of similarity to human writer. The programme performs well overall and accounts for a significant percentage of the total, 30.77%, while the relevance of the content it generates accounts for a low amount, 7.692%.

Copymatic App's algorithms (Fig. 3) had a 30% level of plagiarism; data accuracy and reliability added up to 12.5%; grammar and sentence structure errors were 33.3%; features present added up to 21.7% of the total; relevance of the content was 15.4%; key parameters to improve was 20.0%; overall software performance was 23.1%; price of the software was 25.0%; references and sources added up to 26.7% of the total; and similarity of

human writing was 26.7%. The number of errors in language and sentence structure was the greatest overall (33.33%), while the percentage of errors in data correctness and dependability was the lowest (12.5%).

The Sassbook Writer algorithms (Fig. 4) had a 30% level of plagiarism, a data accuracy and reliability sum of 37.5%, a grammar and sentence structure error of 22.2%, features present at 17.4% of the total, relevance of the content at 23.1%, key parameters to improve at 13.3%, overall software performance at 23.1%, price at 12.5%, references and sources at 20.0% of the total, and similarity of human writing at 20.0%. The percentage of data accuracy and reliability in the total was 37.5%, whereas the percentage of data accuracy and reliability in the total was 13.33%.

Writer's Algorithms (Fig.5) Sonic scored 10% for plagiarism; 12.5% for data accuracy and reliability; 22.2% for grammar and sentence structure errors; 21.7% for features; 30.8% for relevance of content; 26.7% for key parameters to improve; 15.4% for overall software performance; 12.5% for price; 26.7% for references and sources; and 33.3% for similarity of human writer to standard writing. The degree of similarity to human writers was the highest overall (33.33%), while the percentage of plagiarism was the lowest (10.0%).

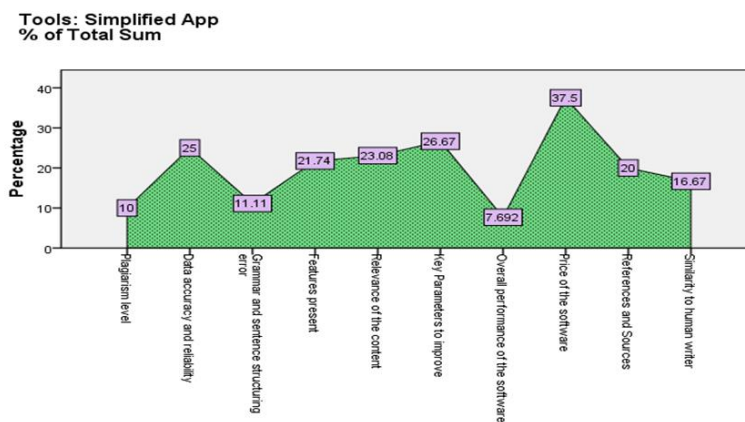


Fig. 1 Algorithms of Simplified App graphs

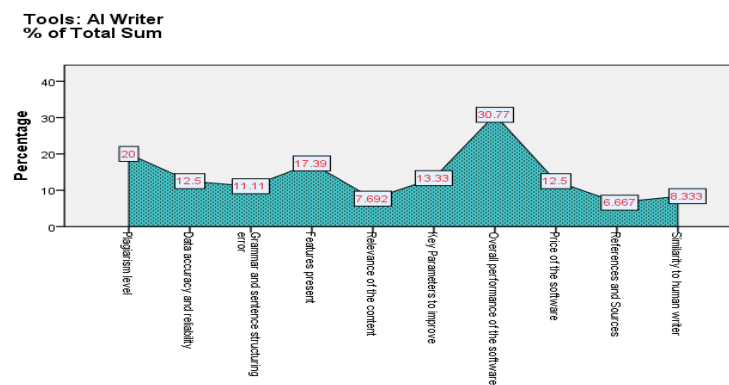


Fig. 2 Algorithms of AI Writer App graphs

OLAP Cubes
Tools: Copymatic
% of Total Sum

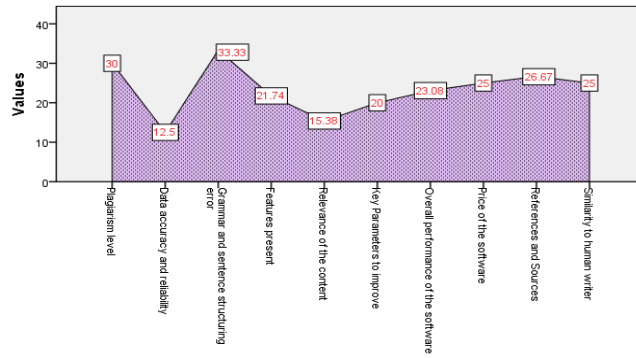


Fig. 3 Algorithms of Copymatic graphs

Tools: Sassbook Writer
% of Total Sum

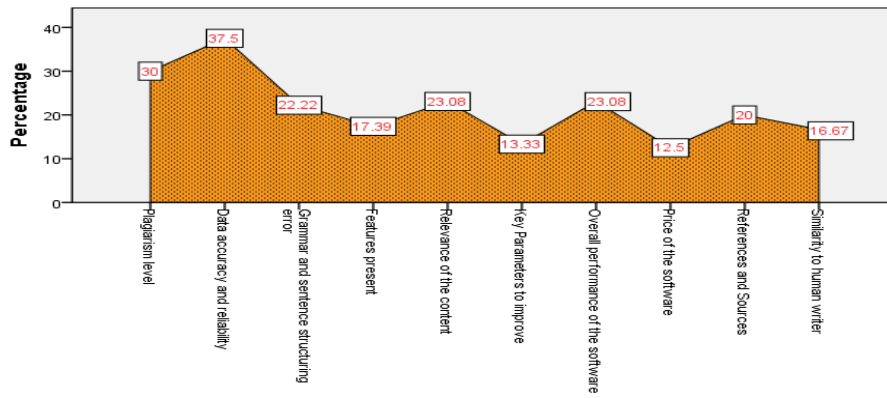


Fig. 4 Algorithms of the Sassbook Writer graphs

OLAP Cubes
Tools: Write Sonic
% of Total Sum

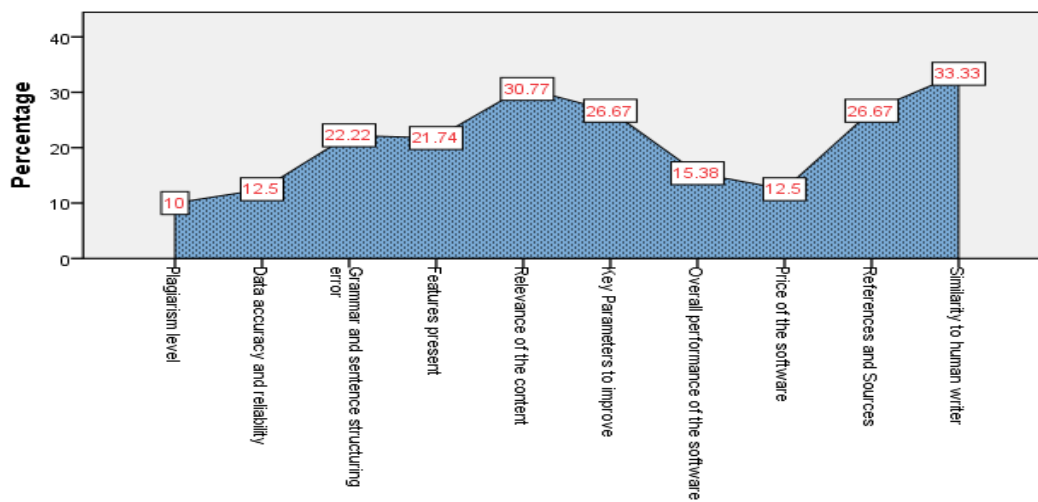


Fig. 5 Algorithms of write Sonic graphs

5. Discussions

Using the OLAP cubes method, all five of the study's software programmes were thoroughly examined. When compared to competing apps, the Simplified App exhibited lower levels of plagiarism and greater data correctness and reliability. There were hardly any grammatical and sentence construction mistakes. The software included more functions. It was also notable how pertinent the content was to the subject. The software's overall performance needs to be enhanced. The programme was reasonably priced, on the whole. Additionally, it referenced sources and references. The fact that it writes like a human writer is the most crucial aspect. The output of the AI Writer App contained a little higher amount of plagiarism. The data was reliable and accurate, and there were few grammatical and sentence structure mistakes. The software only has a small number of features. The text had very little relevance. Compared to the previous programme, there weren't as many essential parameters that needed to be improved. The software had greater overall performance, and it was reasonably priced. The likeness to a human writer was reduced by the citation of references and sources. There was average levels of plagiarism in the Copymatic App. Although the data's quality and dependability were average, there were significant grammatical and sentence structure errors. The features offered made the software stronger. The content's relevance was decent. The software's overall performance was respectable, and the main parameters that needed improvement were on par. The software was fairly reasonably priced. It was superior to the other software because it had references and sources. In comparison to other software utilised in the study, the human writer's similarity was noticeably superior. Although The Sassbook Writer had an average degree of plagiarism, its data accuracy and dependability were higher than those of other programmes. The features included contributed to a portion of the total while the grammar and sentence structure faults were acceptable. The content's relevance was average. There weren't many important variables that needed to be improved. The software ran smoothly throughout the entire system. The software had a reasonable cost. It has reputable sources and references cited. The human writers were fairly similar to one another. The Write Sonic had a very low level of plagiarism, and the data's precision and dependability were also quite low. The number of grammar and sentence construction mistakes was really high. Average features were offered by the software. The content was quite relevant. The most important factors for improvement were greater than in other software. The software had good overall performance, and it was reasonably priced. The references and sources were accurate, and the human writers' likeness to each other was much higher than that of any other software utilised in the study, etc.

6. Conclusions

Machine learning (ML) has fundamentally altered the traditional method of content creation, enabling AI

writers to produce content as well as human authors without compromising quality. The study's qualitative methodology demonstrates that AI bots' writing quality and creativity can occasionally outpace that of a human writer. Now, Indian bloggers and journalists employ a variety of AI technologies to write their posts, as well as assessing the calibre of the information an AI bot provides. The quality of the content produced by the special software and its properties are evaluated in detail by some of the research applications and their parameters, as well as the benefits and drawbacks of machine-generated content based on word usage, sentence structure, creativity, grammar, and spelling. The report produced by the artificial intelligence programme is clear, accurate, brief, and easy to read. This thorough investigation allows for the quick writing of an essay. Data dependability and correctness in streamlined applications, thorough linguistic and grammatical assessments, and evaluation of faults. Artificial intelligence software does not use any plagiarised material, and the sentences it produces are clear, correct, and succinct. Following research, the piece was written in a relatively short amount of time. Simplified App has shown to be the greatest software after a thorough analysis of all 5 pieces of software, and the writers highly suggest it due to its many features.

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