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Plagiarism Detection Software: A Comparative Evaluation

Sunayana D. Jadhav
Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur, sunayana.vendait@gmail.com

Shalini R. Lihitkar
Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur, shalinilihitkar2015@gmail.com

Plagiarism Detection Software: A Comparative Evaluation

Ms. Sunayana Jadhav[a]

and

Dr. Shalini Lihitkar[b]

[ab]*Department of Library and Information Science,*

Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur (MH), India.

Abstract: *Plagiarism detection software has become need of the hour. Academicians need to acknowledge this fact and should take some steps towards this new change towards research ethics and reliability. In this research paper, researchers attempt to cover the concept of plagiarism and analyses some of the plagiarism detection software with their features and functions, like-pricing and availability, user-friendliness, publisher checking, internet checking, language support etc. This evaluation of plagiarism detection software will help to enable researchers and academicians to understand the importance of plagiarism and the available functionalities of plagiarism checking tools.*

Keywords: Plagiarism, Duplichecker, viper plagiarism checker, SEO Small Tools, Paperrater, etc.

Introduction: In recent years, the medium of instruction has changed from physical to digital. In this information age, students as well as teachers mostly depend on computers. The assessment of assignments, teaching courses, etc. is changing. Students are highly dependent on the internet for completing their assignments. And because of this, plagiarism is increasing. Plagiarism is now becoming a hazard, as students are unaware of it. The plagiarism concept is known to research students, but undergraduate students are briefly aware of it and they very unknowingly copy from the internet. [11]

Etymology: Plagiarism is derived from the Latin word "plagiarius", which means kidnapping or an abductor.

Definition: Chambers Dictionary defines a plagiarist as a kind of thief – "one who steals the thoughts or writings of others and gives them out as his [sic] own".

Merriam-Webster -dictionary also defines plagiarism as: to steal and pass off (the ideas or words of another) as one's own: use (another's production) without crediting the source. https://www.merriam-webster.com/dictionary/plagiarize [1]

Which means the thought is somewhat the same context. Plagiarism is the theft of literary work. Plagiarism can be distinguished into different forms. Ramesh Naik and others (2015) have considered 9 types-copy and paste, disguised plagiarism, plagiarism by translation, shake and paste, structural plagiarism, mosaic plagiarism, metaphor plagiarism, idea plagiarism, and self-plagiarism. [6]

Plagiarism Detection: plagiarism detection can be done by both methods-manually and using plagiarism detection software.

Importance of Plagiarism tools:

Plagiarism can be detected manually or with the assistance of computer search engines and plagiarism detection software, which are generally online, but some are offline. Manual detection requires a lot of skill or a very good memory, whereas online detection tools can access large amounts of data in less time. The accuracy level also increases when plagiarism detection software is used.

In this new world where information is available in ample form and is within reach of everyone, there is a need for some honesty. If we consider the academic unit or academic circle, from students to teachers, some kind of information is generated in the form of research, assignments, class work, etc. This information should be or must be genuine and original, but this does not happen. Students plagiarize. The reasons might be anything from the pressure of completion to easy access to information from various sources, like the internet. This can be avoided if there is proper guidance about what plagiarism is. Consequences of plagiarism and use of various plagiarism detection tools are easily available to detect plagiarism and to motivate students to write in their own style.

Plagiarism detection software: Nowadays, there are many plagiarism detection software available online as well as offline. Some of the plagiarism detection software are free and for some plagiarism detection software we have to pay to use their services.

Free Plagiarism detection software: Some of the free plagiarism detection tools are as follows Grammarly, ProWritingAid, Duplichecker, Quetext, SmallSEO Tools, Paperrater, Copyleaks, Copyscape, DMCA Scan, Plagiarismcheck.org, Plagiarisma.net, Plagium, Plagtracker, WebConf tool, Dustball, Wordpress-plugin, etc. Some of these plagiarism software are freely available for bulk content needs subscription and most of them are very easy to use. Teachers as well as students can both use these plagiarism tools to detect plagiarism and improve their writing skills.

Ways to prevent or reduce plagiarism: As it is said, prevention is better than cure. Students and teachers can definitely prevent or reduce plagiarism by using some preventive measures. Romans Lukashenko and others have described some ways, like honesty in work and punishment systems. Also, the use of various plagiarism detection tools to prevent or reduce plagiarism is a very efficient way to prevent plagiarism.

Method and Material:

1. **Plagiarism Software / Tools used:** In this research paper, five plagiarism detection software are compared and analysis by either downloading or online registration of each software to compare the facilities provided by each plagiarism detection software. A total of 16 predefined characteristics have been identified by the researcher to compare the plagiarism detection software.
2. **Methodology:** The data about the Plagiarism Detection Software was collected through investigative methods and from the information provided by the plagiarism software on their websites and FAQs.
3. **Comparative Evaluation and Discussion:** The paper focuses on some well-known plagiarism detection software–Viper Plagiarism Checker, Small SEO Tools plagiarism checker, Plagium, Paperrater, and Duplichecker are taken for comparative analysis on the basis of the characteristics of the software.

Predefined Parameters /features: Predefined parameters selected for inductive analysis of plagiarism software are enlisted in following table:

Table No. 1: Predefined Parameters /features

| Sr. No.	Features	Sr. No	Features
1	Use Environment (online/ offline)	9	Grammar check
2	Friendly Interface	10	Translation
3	Latest Version	11	Textual plagiarism
4	Last date of Update	12	Source code plagiarism
5	Cost (free/ Paid)	13	Self-Plagiarism
6	Registration requirement	14	Language support
7	Upload facility	15	File support
8	Spell check	16	Report Generation

Introduction to Plagiarism Detection Software: Following are the selected Plagiarism Detection Software under study:

1. **Viper Plagiarism Checker:** Viper (https://www.scanmyessay.com/) was introduced in 2007 by scanmyessay.com and released as a downloaded program to check the originality of works (for windows only). In 2017, the Viper plagiarism checker has been transformed into a plagiarism checking app and the previous downloadable version is no longer used. The basic version is free with limited word check. [7]
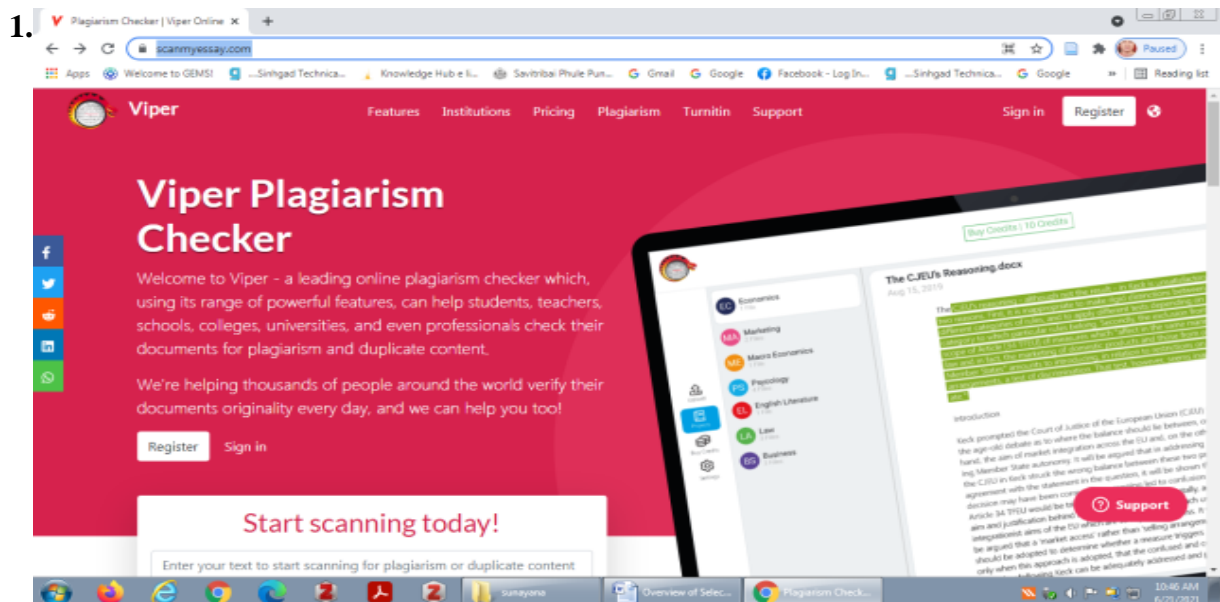

Screenshot 1: Viper plagiarism checker

2. **Small SEO Tools Plagiarism Checker**: Small SEO Tools (https://smallseotools.com/plagiarism-checker/) is the free plagiarism checker provided by Small SEO Tools. It was founded in 2010 by Tausif Akram and operates from London. For advance features minimal charges are taken. [9]
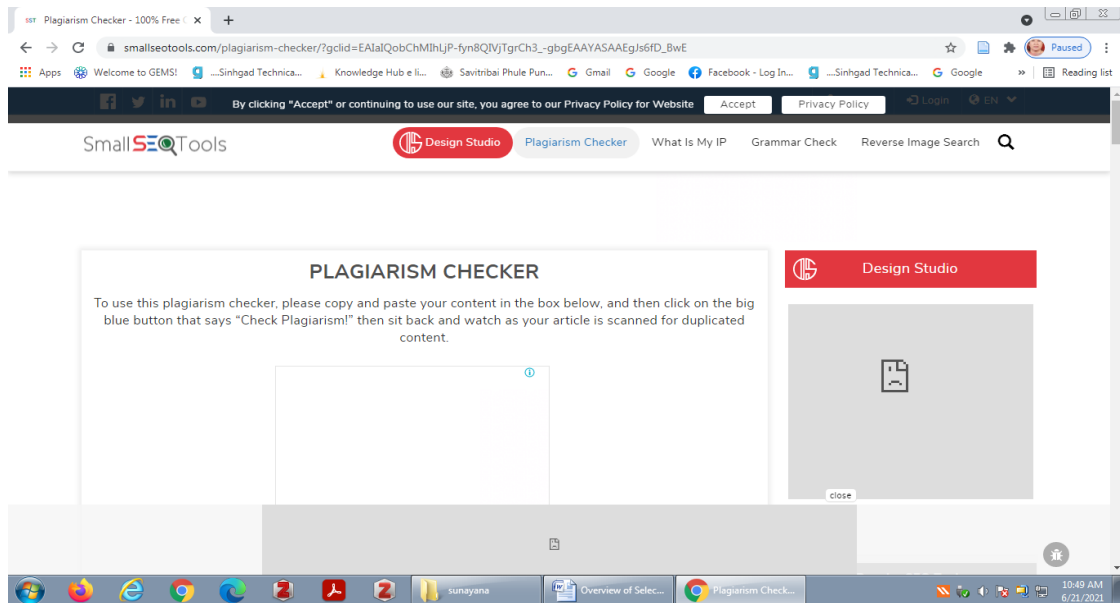
Screenshot 3: Small SEO Tool login

3. **Plagium**: Plagium (https://www.plagium.com/) is one of the free plagiarism software available on the Internet. Plagium plagiarism detection service is provided by Septet System Inc. Company's main focus in on the "development of innovative information search solutions for various group or sectors like academics, enterprises, government and healthcare. [10]
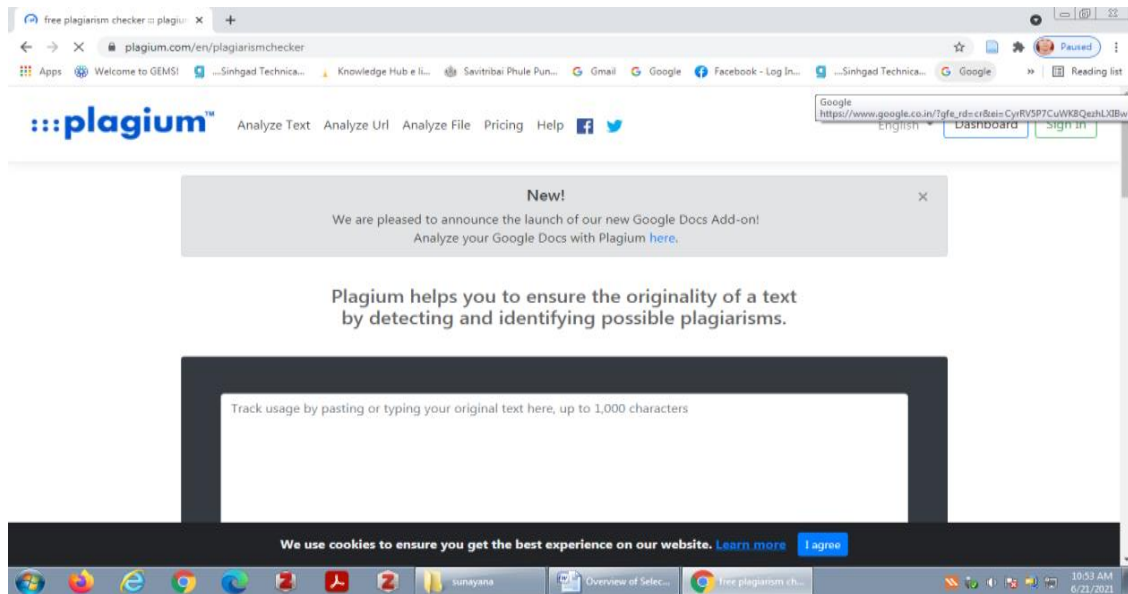

Screenshot 4: Plagium Interface

4. Paperrater: Paperrater (https://www.paperrater.com/) is a patented cloud based system and is used to identify errors contextually using the machine learning and statistical models. Paperrater uses proprietary software running on a Linux-based operating system. Paperrater cannot be operated offline. There is need of internet connectivity for using Paperrater. A user has to register to the service. The registration is free of charge. Once you have registered the user is ready to use the paper-rater service. Paper rater along with plagiarism check, provides various services like grammar and spelling check, free online proof reading.[2]
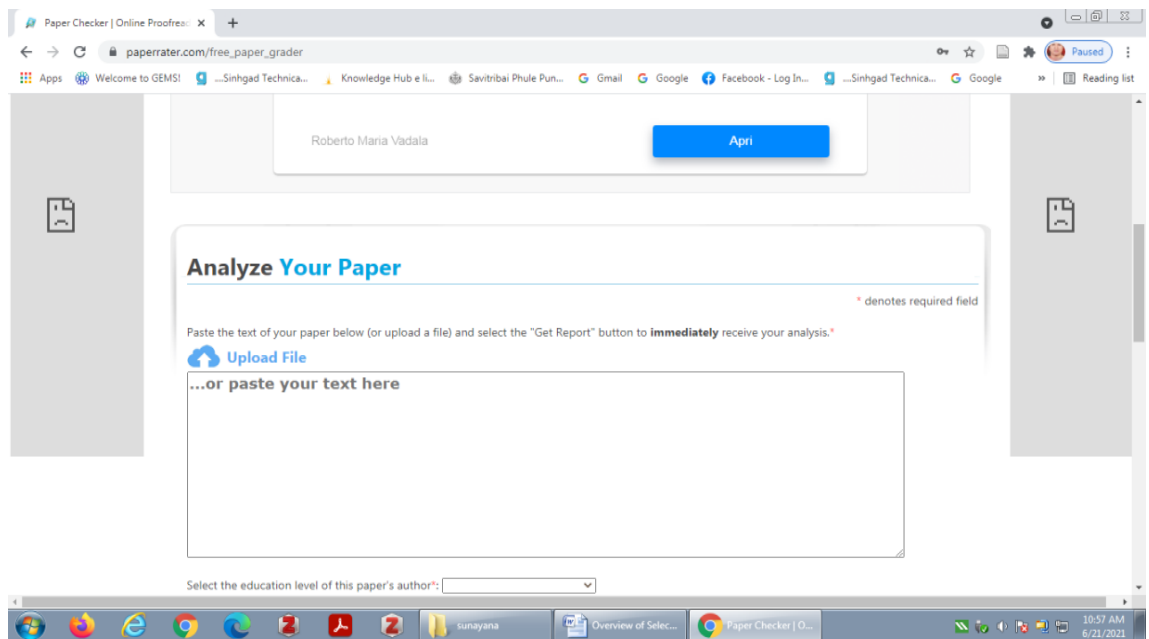
Screenshot 5: Paperrater window for analyzing paper

5. **Duplichecker:** Duplichecker (https://www.duplichecker.com/) is one of the free plagiarism detection software available online. The registration is free of charge. Basic model is free to use, where a person is allowed to checks 1000 words for plagiarism without any charges. It was started in the year 2006. No information is provided about the company owner. Register user can sign up multiple times and also enhance the services without difficulty. For using advance services like uploading research paper or loading through URL webpage, pricing plans are provided according to the need of the user, one can select the pricing plan. [8]
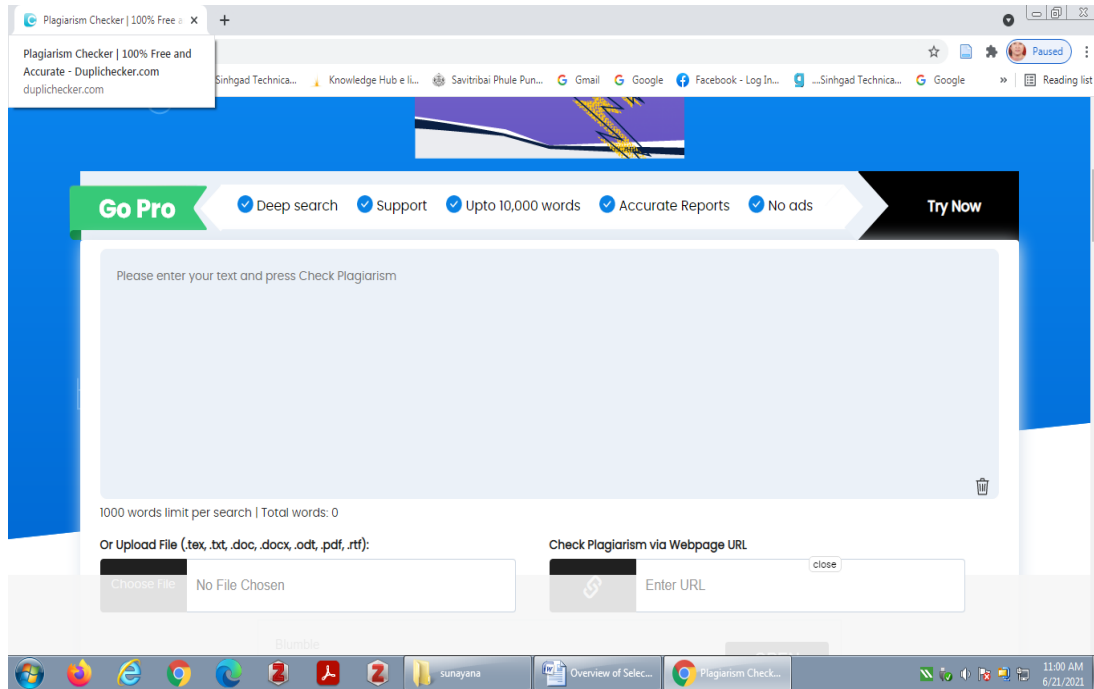
Screenshot 6: Duplichecker Interface

Basic Information: In the basic information table, parameters like – use environment, operating system base, user-friendly interface, latest version and last date of update are mentioned in the following table.

Table No. 2: Basic Information

Sr. No.	Name of Software	Use Environment	OS Base (Windows/Linux/ Hybrid	User-Friendly Interface	Latest Version	Last Date of Updation
1	Viper Plagiarism Checker	online	Hybrid	Yes	v1.7	9th Dec 2018
2	Small SEO Tool Plagiarism checker	online	Hybrid	Yes	No information	No Information
3	Plagium	online	Hybrid	Yes	No information	4th Nov 2016
4	Paperrater	online	Hybrid	Yes	No information	17th Dec 2019
5	Duplichecker	online	Hybrid	Yes	No information	20th Feb 2021

All five plagiarism detection software are available online. The offline version is not available for any of the plagiarism software. All the five plagiarism software are user-friendly. The Duplichecker plagiarism software is the only software with the latest update in the year 2021. Only the Viper plagiarism checker provides the latest version for other software, no such information is available.

Pricing, Registration requirements and type of tool: The following table depicts various aspects like pricing, registration requirements, and types of tools (i.e. standalone or online portal-based).

Table No. 3: Pricing, Registration requirements and type of tool.

Sr. No.	Name of Software	Cost Free/Paid	Registration requirement	Type of Tool (i.e. standalone tool / Online portal base
1	Viper Plagiarism Checker	Paid	Yes	Online portal base
2	Small SEO Tool Plagiarism checker	1000 words free	Yes	Online portal base
3	Plagium	1000 words free search	Yes	Online portal base
4	Paperrater	Free	Yes	Online portal base
5	Duplichecker	1000 word free search	Yes	Online portal base

The Viper plagiarism checker is a commercial software. All the other plagiarism software provides free check for plagiarism up to 1000 words (basic version). Registration is required for easy access to all five plagiarism software. It is free of cost. All the five plagiarism tools are online portal-based software.

Common Features: The following table explains the different common features, like spell check, grammar check, translation check, textual plagiarism, source code plagiarism, and self-plagiarism for tools under study.

Table No. 4: Common Features (viz. Spell check, Grammar check, Translation check, Textual Plagiarism, Source code Plagiarism and Self Plagiarism)

Sr. No.	Name of Software	Spell check	Grammar check	Translation check	Textual Plagiarism	Source code Plagiarism	Self-Plagiarism
1	Viper Plagiarism Checker	No	No	No	Yes	No	Yes
2	Small SEO Tool Plagiarism checker	Yes	Yes	No	Yes	No	No
3	Plagium	No	No	No	Yes	No	No
4	Paperrater	Yes	Yes	No	Yes	No	No
5	Duplichecker	Yes	Yes	No	Yes	No	No

The Spell check and grammar check facilities are provided by Small SEO Tool plagiarism checker, Paperrater, and Duplichecker plagiarism checker, whereas no such facility is provided by Viper plagiarism checker and Plagium. The translation facility is not provided by any of the five plagiarism detection software taken for analysis. All the five plagiarism software checks for textual plagiarism. None of the five plagiarism detection software checks for source code plagiarism. Self-Plagiarism is checked by only Viper plagiarism detection software. No such information is provided by the other plagiarism detection software.

Important Additional Features: In this section, the following table enlists important other features, like: language support by software, file upload format types, and report generation after plagiarism screening.

Table no. 5: Important Additional Features:

Sr. No	Name of Software	Language support	File format support	Report Generation
1	Viper Plagiarism checker	59	4 (doc, docx, txt, rtf) only for paid users	Yes
2	Small SEO Tool Plagiarism checker	9	7 (.tex, .txt, .doc, .docx, .odt, .pdf, .rtf)	Yes
3	Plagium	4	2 (Pdf and .txt) only for paid users	Yes
4	Paperrater	4	4 (doc, docx, txt, rtf)	Yes
5	Duplichecker	8	7 (.tex, .txt, .doc, .docx, .odt, .pdf, .rtf)	Yes

Viper plagiarism detection software supports 59 languages, which is the highest of all the other plagiarism detection software taken for study. Small SEO Tool plagiarism detection software and Duplichecker support the highest file types support for uploading for screening plagiarism, i.e. 7 number of types. A report generation facility is provided by all the 5 plagiarism detection software.

Help and Support Features: The following table depicts the help and support services provided by plagiarism screening tools under study.

Table No.6: Help and Support

Sr. No	Name of Software	Help/ Support		
		Online Chatbot	Email	Teleservices
1	Viper Plagiarism checker	Yes (online for premium users)	Yes	Yes
2	Small SEO Tool Plagiarism checker	No	Yes	Yes
3	Plagium	No	Yes	Yes

4	Paperrater	No	Yes	Yes
5	Duplichecker	No	Yes	Yes

It is found that Viper plagiarism checker has an online chat-bot facility but is available for premium members only. Other plagiarism tools, viz. small SEO plagiarism checker, Plagium, Duplichecker and Paperrater do not provide an "online chat-bot" facility. Help/support by email and tele-services is provided by all plagiarism software for paid or premium users.

Conclusion: Plagiarism is a serious problem nowadays. The traditional manual means of detecting plagiarism are not sufficient for screening and avoiding plagiarism. One needs to consider the new technology and use online plagiarism detection software to prevent plagiarism. Free plagiarism detection software like Duplichecker, Plagium, Paperrater, and Small SEO Tool plagiarism checker can be helpful. This paper covered features which this software provides and will be helpful for all students. After exclusive inductive analysis of five plagiarism screening software, researchers recommend that collaborative use of all software be conventional or otherwise. One has to check multiple and bulk contents, then they can subscribe to any one of them for their premium features. However, paraphrasing words from other researchers/authors' work is not an ethical and genuine way to do research and authors do not promote doing such work.

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