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Using Artificial Intelligence (ChatGPT) to Enhance Language Skills of B.Tech Students (RGUKT)

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ABSTRACT: As education continues to evolve, technology is playing an increasingly important role in helping students to learn and grow. One technology that is rapidly gaining popularity in the education sector is chatbots. Chatbots are AI-powered programs that can converse with humans, providing them with information and assistance on a wide range of topics. One of the most innovative chatbots currently available is ChatGPT.ChatGPT is an advanced chatbot that uses natural language processing and machine learning to communicate with students. Whether you're struggling with a particular subject, or just need some advice on how to manage your time more effectively, ChatGPT can help. ChatGPT works by using natural language processing and machine learning algorithms to understand the needs of students. The chatbot can interpret student questions and provide accurate and helpful answers. ChatGPT can also provide personalized recommendations based on a student's learning history, helping them to improve academic performance over time, especially,for-B.Tech-students.

KEYWORDS: ChatGPT, language, skills,artificial,intelligence,students,education,B.Tech,machine,learning

I. INTRODUCTION

Here are some of the ways in which ChatGPT can help students.
1. 24/7 Access to Support And Guidance
One of the key benefits of ChatGPT is that it is available 24/7 to provide support and guidance to students. Whether you need help with a difficult assignment or just want to ask a quick question, ChatGPT is always there to help-B.Tech-students
2. Personalized Recommendations Based On Your Learning History
ChatGPT uses machine learning algorithms to analyze your learning history and provide personalized recommendations based on your individual needs. This means that you can get targeted advice on how to improve your performance in specific subjects or areas,for-B.Tech-students[1,2,3]
3. Quick and Accurate Answers to Your Questions
ChatGPT is designed to provide quick and accurate answers to your questions. Whether you're looking for information on a specific topic or need help understanding a difficult concept, ChatGPT can provide you with the answers you need.
4. Improved Study Skills and Time Management
ChatGPT can help you to develop better study skills and time management strategies. The chatbot can provide you with tips and strategies for managing your workload and help you to develop good study habits.
5. Increased Motivation and Engagement with Learning
ChatGPT can help to increase your motivation and engagement with learning. By providing personalized support and guidance, ChatGPT can help you to stay on track and achieve goals-of--B.Tech-students
6. Access to A Wide Range Of Resources
ChatGPT can provide you with access to a wide range of resources, including study materials, practice exams, and educational videos. This can help -B.Tech-students to learn more effectively and efficiently.

How ChatGPT Is Improving Learning Outcomes

Studies have shown that chatbots like ChatGPT can have a significant impact on learning outcomes. By providing personalized support and guidance to students, chatbots can help to improve academic performance and reduce the number of students who drop out of school. ChatGPT is also helping to bridge the gap between students and educators, making it easier for students to get the help they need to succeed.

ChatGPT for Study Support

One of the most valuable features of ChatGPT is its ability to provide study support to students. Whether you're struggling with a particular subject, or just need some help getting started with a new assignment, ChatGPT can provide you with personalized recommendations and guidance. ChatGPT can also help you to identify areas where you need to improve your skills, and provide you with resources to help you do so.[5,7,8]

ChatGPT for Time Management

Time management is a crucial skill for students and one that can be challenging to master. ChatGPT can help you to manage your time more effectively by providing you with tips and strategies for managing your workload. The chatbot can also help you to set and achieve goals, and track your progress over time.

Final Thoughts ChatGPT is an innovative technology that is revolutionizing the way students learn and study. By providing personalized support and guidance to students, ChatGPT is helping to improve academic performance and make education more accessible than ever before.

Artificial Intelligence (AI) has been making waves in various industries, and the education sector is no exception. In recent years, AI has found its way into learning, providing students with personalized learning experiences and teachers with powerful tools to track student progress and adapt their teaching methods. AI-based learning platforms, like ChatGPT, have gained popularity due to their ability to engage students in a conversational manner, similar to that of a human tutor. The use of AI has also been praised for its potential to improve learning outcomes by providing students with more efficient and effective ways to learn. However, with the rise of AI in learning, there are also concerns about the potential negative impact it could have on students. Some experts argue that AI-based learning platforms could hinder critical thinking skills and reduce human interaction, which is an essential aspect of learning,for-B.Tech-students

We will explore the pros and cons of using AI in learning, specifically focusing on the ChatGPT platform. We will examine the potential benefits of AI in learning, including personalization and efficiency, as well as the potential drawbacks, such as the lack of human interaction and the potential negative impact on critical thinking skills. By the end of this article, you will have a better understanding of the impact of AI on learning outcomes, and whether ChatGPT is helping or hindering student learning.[9,10,11]

The Benefits of Using AI In Learning

The use of Artificial Intelligence in learning has numerous benefits. AI can personalize learning by tailoring lessons to individual student's needs, providing immediate feedback, and offering guidance. Chatbots like ChatGPT can engage students, answer their questions, and keep them motivated. Additionally, AI can collect and analyze data on student performance, enabling educators to make informed decisions about teaching methods and curriculum improvements,of-B.Tech-students

The potential benefits of AI in learning are significant, with the ability to revolutionize teaching and learning processes. Despite challenges, such as bias and limitations in individualized learning, the potential benefits make AI a promising tool for educators to consider. AI in learning has the potential to enhance the educational experience, improve learning outcomes, and support student success.

The Challenges of Using AI in Learning

AI has the potential to revolutionize learning, but challenges need to be addressed. Bias in AI models, lack of personalization, the potential for errors, and fear of job loss for teachers are among the challenges. AI models can perpetuate biases if trained on biased data, and they may struggle with individualized learning needs.Errors in AI recommendations or feedback can impact learning outcomes. Additionally, there are concerns about the replacement of human teachers by AI. It is crucial to address these challenges to ensure that AI in learning enhances outcomes and benefits learners. Careful consideration and ethical use of AI are necessary to mitigate biases, improve personalization, minimize errors, and ensure that AI complements human teachers rather than replacing them.

ChatGPT and its working

ChatGPT is an AI chatbot that uses the GPT model to provide responses to user input in natural language. It can be used in various learning contexts, such as language learning and test preparation, to provide personalized feedback and practice opportunities. The chatbot analyzes user input and generates responses based on its understanding of the user's needs and goals. It can provide explanations, examples, and exercises tailored to the user's level and needs.However, ChatGPT has limitations, including difficulties in understanding complex or ambiguous input, and its responses may be limited by its programming and data input. Some learners may prefer human interaction over interacting with a chatbot. Overall, ChatGPT can be a useful tool for learning, but its effectiveness depends on the context and individual learner preferences. Careful consideration of the pros and cons of using AI in learning is recommended before incorporating ChatGPT or other chatbots into educational practices,of-B.Tech-students[12,13,15]

II. DISCUSSION

The Advantages of Using ChatGPT in Learning

The use of ChatGPT in learning has several advantages that have been observed in recent times. ChatGPT can:

1.   Support personalized learning in a way that was previously impossible. Unlike human teachers who may have limited time and resources, ChatGPT can engage with learners individually, giving them a unique learning experience that is tailored to their needs and interests.

2.   Provide learners with immediate feedback, which is essential for effective learning. ChatGPT can quickly identify areas where learners are struggling and provide them with additional support to help them overcome these challenges. This immediate feedback can help learners stay motivated and engaged in their learning journey.

3.   Also provide learners with access to vast amounts of information that they may not have had access to otherwise.

This can help learners expand their knowledge base and discover new information that they may find useful in their academic or professional pursuits.

4.   Help reduce the workload of teachers and educators. This would free up their time to focus on other important tasks such as lesson planning, grading, and providing additional support to learners who may need more personalized attention.

Overall, the use of ChatGPT in learning has several advantages that can help enhance the learning experience for students. However, it is important to note that there may also be some disadvantages to using this technology, which should be carefully considered before implementation.[15,17]

The Limitations of Using ChatGPT in Learning

ChatGPT, as a machine-based tool, has limitations in the context of learning. It may struggle with unique or complex situations, lack the ability to adapt to individual learning styles, and may not provide critical thinking or problem-solving skills. Additionally, ChatGPT's responses may be biased if the dataset it relies on is biased, leading to the potential reinforcement of biases or stereotypes.

Another limitation is the potential for decreased engagement and motivation among learners when interacting with a machine instead of a human. The lack of real-time feedback and interaction may lead to a sense of isolation or disconnection from the learning process.

It is crucial to recognize that ChatGPT is not a substitute for human teachers or peers. While it can provide support and assistance, it cannot replicate the human element of teaching, which includes empathy, creativity, and adaptability to unique learning needs.

To mitigate these limitations, ChatGPT should be used in conjunction with other teaching methods and tools, and educators should actively monitor and address potential biases in its responses. It is essential to consider the limitations of ChatGPT and use it appropriately to supplement, rather than replace, human interaction and engagement in the learning process.

The Ethical Considerations of Using AI in Learning

The use of AI in learning raises ethical concerns that must be addressed. Bias in algorithms used by AI is a significant concern, as incorrect programming can result in biased outcomes or the promotion of certain ideologies without transparency. Another concern is the potential for AI to replace human teachers, as human interaction, guidance, and support

are crucial for students' development. Data privacy and security are also concerns, as the collection and use of student data must be ethical and transparent.

Educators and policymakers must carefully consider these ethical considerations when implementing AI in learning. Transparency and accountability are essential in ensuring that AI is used in a manner that benefits students and does not harm them. The ultimate goal should be to enhance the learning experience and improve learning outcomes, rather than replacing human teachers or compromising student privacy and security. Students must be informed about the data being collected, how it is used, and who has access to it. It is imperative to prioritize the ethical use of AI in learning to ensure that it serves the best interests of students and upholds their rights and privacy.

The Future of AI In Learning: Opportunities and Challenges
AI has the potential to revolutionize learning, with opportunities in personalized learning and grading. However, challenges include the fear of job loss for teachers and the potential for bias in AI algorithms. It's important to strike a balance between the benefits and challenges of AI in learning, recognizing that AI is a tool to enhance learning, not a replacement for human teachers. ChatGPT, for example, can be a helpful tool in supplementing learning, but it's crucial to remember its limitations and the need for human interaction in education.Educators need to be mindful of the limitations of AI and use it appropriately, while learners need to develop skills to navigate AI-based learning tools effectively. AI has the potential to transform education, but it must be used ethically, transparently, and with consideration for learners and educators alike. ChatGPT is just one example of the many AI tools available, and its role should be carefully considered in the context of each learning environment.[18,19,20]

III. RESULTS

Those in the education sector have long expressed divergent opinions about technology innovations and their use in classrooms. The debate may be around something as simple as allowing students to use their laptops or smartphones during class, or it may center around an emerging artificial intelligence (AI) technology like ARISTO, a system that can pass (with a score of 90 percent) B.Tech exam.

The COVID-19 pandemic forced even the most reluctant academic institutions to embrace the use of technology; most gradually understood that their mission was to educate new generations on the responsible use of technology rather than excluding it completely from the B.-Tech   classroom.

Now, academia faces another technological evolution in the form of artificial intelligence text generators (AITGs). At the beginning of this year, we heard about an AITG called ChatGPT that can generate text by asking it questions (like a chatbot). But users quickly discovered that this AI is not just a chatbot; it can generate articles, summaries, essays, or code in seconds. The education-related use cases abound, especially for students, who can use ChatGPT to do their assignments and examinations.If used unethically, this technology could diminish their learning process and objectives, some have argued. Since the pandemic, we have contributed to the technology debate by suggesting the adoption of a constructive and positive approach to pedagogy, in which it is better to concentrate on what innovations could bring to education rather than resisting change.Here, we'll offer our own recommendations for approaching AITGs. But first, let's look more generally at some of the advantages and concerns surrounding this AI technology.

The potential of ChatGPT presents intriguing opportunities for education. As most of us would agree, academia must continue to shift from unidirectional knowledge transfer to an active development of competencies, experience, social abilities, and technological agility. Access to information has democratized knowledge acquisition, and ChatGPT may synthesize the use of various sources, albeit not without a potential bias.

On January 21, the Financial Times published an article commenting on a paper published by a Wharton Business School professor that describes how the author, Christian Terwiesch, tested ChatGPT3 on an exam in a core course of his MBA program. The bot ChatGPT earned a solid grade (between B and B-) and outperformed most of the actual students in the course.

Obviously, these kinds of situations represent a challenge for universities and business schools; but instead of taking ChatGPT as a threat, educators and their institutions should nevertheless analyze its advantages and use them in favor of the student to achieve their educational objectives.

Here are five ways AITGs can be used in a participant-centered learning process.

1. Text generators like ChatGPT can boost our collective familiarity with AI and how to use it, a critical competency for our students and their futures. Industries move quickly, and new technologies push them to continue innovating. We must be the first facilitators of new technologies as they emerge and teach our students how to use them appropriately (technically and ethically). If not us, who?

2. AITGs can assist educators in preparing and reviewing sessions by providing them with additional resources or helping them create engaging educational content that can lead to a better learning experience for students. Educators and students already use search engines, citation and research management apps, spellcheckers, and data collection tools; the addition of tech like ChatGPT has the potential to develop written materials previously validated including scripts, examples, tests questions, or even cases analysis to be discussed in class.[15,17,19]

3. AITGs can save educators time by automatically grading students' assignments or doing educators' repetitive work—for example, preparing announcements and instructions for assignments or exams; or providing feedback to students when making "recurrent" or common mistakes in solving their exercises; or preparing basic but customized guidelines for activities, such as how to structure a research thesis or how to solve an exercise. AITGs can also be effectively used to give students automatic feedback on their essays and texts.

4. AITGs can be used for training purposes. For example, students can use ChatGPT to emulate conversations and develop their language skills and abilities through conversational interactions with the chatbot.

5. ChatGPT could be used to improve engagement in online learning by increasing students' motivation in asynchronous sessions or activities. Students will find using an innovative tool to be exciting while discovering its potential use in day-to-day tasks, for example to write emails, send text messages, or even prepare a draft of a contract. It can also send automatic but customized feedback and instructions in online courses to help students stay on track (further increasing their engagement in the course).

Early Concerns about Using ChatGPT in Education

Educators understandably have concerns about the risks of this new technology on teaching and evaluating students. Some example concerns include the following:

- Plagiarism or fraudulent use of AITGs in written content reflected in papers, essays, tests, and quizzes; identifying and handling unethical behavior in student content; and promoting ethical research with the use of reliable and valid sources of information.
- Bias, limitations, and inaccuracy of AITGs in developing responses on certain topics, which could negatively affect the learning process and objectives for students and perpetuate stereotypes and other misinformation.
- Students' overreliance on AITGs, causing them to miss out on important learning opportunities such as critical thinking, problem-solving, proper research techniques, and interaction with educators and peers.
- Unfair or inaccurate evaluation of students' work using AITGs due to its inability to estimate creativity and originality, among other soft skills.

Should We Adapt or Resist. Recommendations for Academia

In the face of these abundant opportunities and risks, education institutions can respond to this new technology by either resisting or adapting. The resistors will treat AI as an enemy and ban it—as has happened with some educators prohibiting the use of laptops, mobile phones, and other technologies in the classroom.[4,5,6]

But taking an adaptive response provides an opportunity to raise awareness among faculty about the importance of knowing and using technology in education. Further, we can step in to more adequately train our future generations of students to use AI and be better prepared for the challenges they will face in their careers.[24,25]

"Instead of taking ChatGPT as a threat, educators and their institutions should analyze its advantages and use them in favor of the student to achieve their educational objectives."

Here are several recommendations for educators and academic institutions to adapt to this technology rather than resist it.

- Help students develop their critical thinking skills by asking them to compare AI-produced content with reliable, valid sources of information.
- Invest energy, resources, and creativity into providing an attractive and engaging learning environment for students—either in physical spaces or virtual settings.
- Introduce more oral assignments and in-person exams into your curricula. Many Australian universities, for example, have already announced a return to in-person exams to protect the integrity of student assessments.

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- Increase the importance of in-class activities and participation as a significant element of the evaluation process and a relevant component of the final grade. In other words, shift the object of evaluation from the "product" to the "process" of student learning.[23,24]
- Adopt new or more ways to get students to develop and showcase their knowledge or learning: For example, through debates—in which students take a formalized position on a specific topic and have to defend their idea, perspective, or point of view. Or by introducing Art-Thinking methodology, which highlights the ways artists create to help students develop specific skills they need to enter the workforce and face ever-growing uncertainty.
- Emphasize ethical use of AI and the importance of proper research and citation practices. For example, some universities include (or are reintroducing) mandatory courses in academic ethics, research integrity, and critical thinking for all students. Developing in future generations a sensibility on these topics is crucial for all levels of education.
- At the institution level, train educators in the use and identification of AI-produced content despite the challenge it represents as an emergent technology.[7,8,9]
- While we are advocating for a more adaptive approach with these recommendations, some educators are choosing to take a more resistant approach. Examples of these more resistive reactions to ChatGPT include the following:
- Trying to render AITG useless by asking more complex questions in examinations and assignments.
- Asking for anecdotal or personal information that AI technology cannot provide—at the expense of learning from public knowledge and existing data on a topic.
- Using software that blocks students' access to the rest of their system when working on examinations or assignments.
- Fighting fire with fire: There is another AI in development called GPTZero that will specialize in finding AI-generated texts.

ChatGPT Can Complement Learning, Not Replace It

ChatGPT has academia buzzing, and many institutions are feeling compelled to "do something" about it quickly, perhaps even implementing policy changes or abrupt bans that may prove disruptive when a term is already in progress. But we're advocating a more adaptive and inclusive approach.

It is important for educators to consider how to address the use of AITGs in the classroom, ensuring that these tools are being used as a complement to, rather than a supplement for, traditional teaching methods. As facilitators of tools that can help students optimize their learning processes, we need to use and understand these new technologies to ensure students have a better learning experience.[21,22]

It is still too early to know if this AITG is the next tipping point that will disrupt the human-digital interaction, like Google did some years ago or the introduction of the Gutenberg printing press did centuries ago. However, we do know the adaptation process is already unfolding in a few weeks rather than taking decades, while questions around this type of AI remain—like how it may make human life better, as time invested in producing writing content can potentially be significantly reduced.[11,12,13]

Educators will need to think creatively about how to apply changes to their content, as well as the skills we give (and we want to give) our students. We can and should embrace AITGs like ChatGPT as a partner that helps us learn more, work smarter, and faster.

IV. CONCLUSIONS

Language models such as ChatGPT have been changing the domain of conversational artificial intelligence (AI) for the past couple of years. But now, it is becoming increasingly popular in education. ChatGPT is in news as it offers students an exciting way to learn and engage with material and helps them with a range of tasks, such as writing essays, coding projects and even studying for exams.[4,5,6]

Created by OpenAI, an AI research and development company, and launched as a chatbot in November last year, ChatGPT has many unique capabilities. "It can save time by summarising a body of text and can be used to create an outline for an essay with title, body and conclusions. It can also help students in improving their writing skills and developing problem-solving skills," says Soharab Hossain Shaikh, associate professor in the School of Engineering & Technology, BML Munjal University.[18,19,20]

REFERENCES

1. "ChatGPT – Release Notes". Archived from the original on May 24, 2023. Retrieved May 24, 2023.
2. ^ Lock, Samantha (December 5, 2022). "What is AI chatbot phenomenon ChatGPT and could it replace humans?". The Guardian. Archived from the original on January 16, 2023. Retrieved December 5, 2022.
3. ^ Gertner, Jon (July 18, 2023). "Wikipedia's Moment of Truth - Can the online encyclopedia help teach A.I. chatbots to get their facts right — without destroying itself in the process? + comment". The New York Times. Archived from the original on July 19, 2023. Retrieved July 19, 2023.
4. ^ Hu, Krystal (February 2, 2023). "ChatGPT sets record for fastest-growing user base – analyst note". Reuters. Archived from the original on February 3, 2023. Retrieved June 3, 2023.
5. ^ Varanasi, Lakshmi (January 5, 2023). "ChatGPT creator OpenAI is in talks to sell shares in a tender offer that would double the startup's valuation to $29 billion". Insider. Archived from the original on January 18, 2023. Retrieved January 18, 2023.
6. ^ "What's the next word in large language models?". Nature Machine Intelligence. 5 (4): 331–332. April 2023. doi:10.1038/s42256-023-00655-z. ISSN 2522-5839. S2CID 258302563. Archived from the original on June 11, 2023. Retrieved June 10, 2023.
7. ^ "What is ChatGPT and why does it matter? Here's what you need to know". ZDNET. May 30, 2023. Retrieved June 22, 2023.
8. ^ Douglas, Will (March 3, 2023). "The inside story of how ChatGPT was built from the people who made it". MIT Technology Review. Archived from the original on March 3, 2023. Retrieved March 6, 2023.
9. ^ OpenAI (November 30, 2022). "ChatGPT: Optimizing Language Models for Dialogue". Archived from the original on November 30, 2022. Retrieved December 5, 2022.
10. ^ Vincent, James (December 8, 2022). "ChatGPT proves AI is finally mainstream – and things are only going to get weirder". The Verge. Archived from the original on January 11, 2023. Retrieved December 8, 2022.
11. ^ Perrigo, Billy (January 18, 2023). "Exclusive: OpenAI Used Kenyan Workers on Less Than $2 Per Hour to Make ChatGPT Less Toxic". The Times. Archived from the original on January 19, 2023. Retrieved January 19, 2023. One Sama worker tasked with reading and labeling text for OpenAI told TIME he suffered from recurring visions after reading a graphic description of a man having sex with a dog in the presence of a young child. "That was torture," he said.
12. ^ Roth, Emma (March 13, 2023). "Microsoft spent hundreds of millions of dollars on a ChatGPT supercomputer". The Verge. Archived from the original on March 30, 2023. Retrieved March 30, 2023.
13. ^ Ortiz, Sabrina (February 2, 2023). "What is ChatGPT and why does it matter? Here's what you need to know". ZDNET. Archived from the original on January 18, 2023. Retrieved December 18, 2022.
14. ^ "ChatGPT Feedback Contest: Official Rules" (PDF). OpenAI. Archived (PDF) from the original on January 18, 2023. Retrieved December 30, 2022.
15. ^ Edwards, Benj (December 5, 2022). "No Linux? No problem. Just get AI to hallucinate it for you". Ars Technica. Archived from the original on December 26, 2022. Retrieved December 5, 2022.
16. ^ Dwivedi, Yogesh K.; Kshetri, Nir; Hughes, Laurie; Slade, Emma Louise; Jeyaraj, Anand; Kar, Arpan Kumar; Baabdullah, Abdullah M.; Koohang, Alex; Raghavan, Vishnupriya; Ahuja, Manju; Albanna, Hanaa; Albashrawi, Mousa Ahmad; Al-Busaidi, Adil S.; Balakrishnan, Janarthanan; Barlette, Yves (August 1, 2023). "Opinion Paper: "So what if ChatGPT wrote it?" Multidisciplinary perspectives on opportunities, challenges and implications of generative conversational AI for research, practice, and policy". International Journal of Information Management. 71: 102642. doi:10.1016/j.ijinfomgt.2023.102642. ISSN 0268-4012. S2CID 257486916.
17. ^ Tung, Liam (January 26, 2023). "ChatGPT can write code. Now researchers say it's good at fixing bugs, too". ZDNET. Archived from the original on February 3, 2023. Retrieved June 22, 2023.
18. ^ Heilweil, Rebecca (December 7, 2022). "AI is finally good at stuff. Now what?". Vox. Archived from the original on January 16, 2023. Retrieved December 30, 2022.
19. ^ "How Generative AI Can Augment Human Creativity". Harvard Business Review. June 16, 2023. ISSN 0017-8012. Retrieved June 20, 2023.
20. ^ Reich, Aaron (December 27, 2022). "ChatGPT: What is the new free AI chatbot? – explainer". The Jerusalem Post. Archived from the original on January 18, 2023. Retrieved December 30, 2022.
21. ^ Rider, Elizabeth (April 6, 2023). "How ChatGPT Will Dramatically Change the Influencer Space". Entrepreneur. Archived from the original on April 13, 2023. Retrieved April 25, 2023.

22. ^ Chawla, Raveen (December 26, 2022). "What is ChatGPT? History, Features, Uses, Benefits, Drawbacks 2023". Archived from the original on January 7, 2023. Retrieved December 27, 2022.

23. ^ Roose, Kevin (December 5, 2022). "The Brilliance and Weirdness of ChatGPT". The New York Times. Archived from the original on January 18, 2023. Retrieved December 26, 2022. Like those tools, ChatGPT – which stands for "generative pre-trained transformer" – landed with a splash.

24. ^ "New and Improved Content Moderation Tooling". OpenAI. August 10, 2022. Archived from the original on January 11, 2023. Retrieved December 30, 2022.

25. ^ Markov, Todor; Zhang, Chong; Agarwal, Sandhini; Eloundou, Tyna; Lee, Teddy; Adler, Steven; Jiang, Angela; Weng, Lilian (August 5, 2022). "A Holistic Approach to Undesired Content Detection in the Real World". arXiv:2208.03274 [cs.CL].

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