

Compendium of ChatGPT

Vedika Prashant Chandratre

Computer Department, Guru Gobind Singh polytechnic, Nashik India

Abstract: This document gives us the overview of ChatGPT. ChatGPT is nothing but Chat Generative Pretrained Transformer. It is newly introduced tool of Open AI. It is a natural language processing tool, using AI technology to talk with us like a Human being. It assists us in task such as, composing emails, essays, and code. This analysis is basically all about history and background of ChatGPT. Then how to use ChatGPT. Its advantages disadvantage. Effects on various field. AI Tools that will probably be a competition or replace ChatGPT in future. Future aspects of ChatGPT and conclusion that I have derived from my analysis. It is Compendium of ChatGPT.

Keywords: Compendium; ChatGPT; Chatbot; Open AI; Natural Language; AI; AI Tools; USB; Custom ChatGPT Development.

I. INTRODUCTION

We all face many problems in our day-to-day life, and today solution for our problem is Google. But don't you think browsing Google is very time consuming? As technology is upgrading our lives are becoming more easy. As world is putting one step forward in the direction of AI, Open AI has presented a chatbot for human welfare. UBS research verified that ChatGPT is the "fastest-growing consumer application ever." This is a record-breaking achievement. And it was confirmed by analysis from one of the world's most reputed finance and investment firms: UBS. This seems to be an indicative of the wide acceptance of AI features. ChatGPT has brought a new tide of progress, in the field of Technology.

The best thing about AI is its ability to

learn
predict
make
understand
do

II. BACKGROUND OF CHATGPT

It was launched on 30th November 2022. Development of Chat GPT started in 2018. GPT model was able to generate human-like responses to question.

ChatGPT is the first chatbot platform which combines AI natural language theme and GPT model features.

Open AI CEO and ChatGPT creator Sam Altman, is the reason behind this spark.

A. About Open AI

Open AI is an American Non-profit Open AI Incorporated. Open AI systems works on an Azure-based super computing platform. It is provided by Microsoft. The organization was founded in San Francisco in 2015. Founder of Open AI are Sam Altman, Reid Hoffman, Jessica Livingston, Elon Musk, Ilya Sutskever, Wojciech Zaremba, Peter Thiel and others.

III. HOW TO USE CHATGPT

Conversation with ChatGPT is possible on the website of Open AI. By performing formalities you can initiate your talk with the ChatGPT.

Here are steps to work with ChatGPT:

Step 1: Create a ChatGPT account, from Open AI website. Click the "Sign Up" button. Enter your email address [email ID] and create a password.

Step 2: Log in to your account. You may access the ChatGPT dashboard.

Step 3: Then create a conversation. Click on the "Create Conversation" button. Enter the conversation details, such as the conversation's title, the participants, and the topic.

Step 4: Start the conversation. Initiate by start chatting with your participants.

Step 5: Use NLP of ChatGPT. ChatGPT have a built-in natural language processing feature. It has an advanced NLP engine that can help you understand the messages you receive.

Step 6: Monitor the conversation to ensure that the conversation is going in the right direction.

Step 7: End the chatting. When you are done chatting, you can click on the "End Conversation" button.

In this way ChatGPT works. You can monitor the conversation. It is a talk with AI Tool. Interesting fact is that it gives us experience as if we are talking to our friend, it has Natural language.

IV. ADVANTAGES OF CHATGPT

ChatGPT has it's own Advantage and Disadvantage. let's take an overview of it. Advantages of ChatGPT proves that it is an powerful AI tool, which is providing a path of improvement for humanity.

A. Custom ChatGPT Development: ChatGPT technology has ability to improve customer service. By utilizing custom ChatGPT development.

B. Customer Service: ChatGPT technology, businesses can provide their customers with 24/7 support and facilities. Thus, it frees up valuable time for their employees to focus on other tasks.

C. Cost Features: The original version of ChatGPT was based on GPT-3.5. It was free of cost. So, user was able to access its features for no cost.

D. Admits its Mistake: It admits its mistake. Even when something goes wrong, ChatGPT can recognize it, and it also help us get to the right answer easily. It has mentioned, that it can occasionally generate incorrect information.

E. Decline Inappropriate Questions: It declines the inappropriate question or responses. ChatGPT is designed to filter out inappropriate language and requests. Thus, conversation becomes friendly but not offensive.

F. NLP: It has Natural Language Processing system. ChatGPT converse with us like a human being. Its natural dialogues are effective means of communication for user. "Google has replaced books with websites, ChatGPT replaced websites with Direct solution"

ChatGPT

Examples	Capabilities	Limitations
"Explain quantum computing in simple terms"	Remembers what user said earlier in the conversation	May occasionally generate incorrect information
"Got any creative ideas for a 10 year old's birthday?"	Allows user to provide follow-up corrections	May occasionally produce harmful instructions or biased content
"How do I make an HTTP request in Javascript?"	Trained to decline inappropriate requests	Limited knowledge of world and events after 2021

V. DISADVANTAGES OF CHATGPT

As every coin has two sides, in the same way ChatGPT has its own disadvantages. But experts are doing their best to minimize these disadvantages.

Few disadvantages are listed below:

A Biased Output: ChatGPT accesses information from various sources. A common reason for ChatGPT to fail is that it generates biased and offensive information. Creators have to deal with this task on a primary basis.

B. Violent Content: ChatGPT is designed to converse with us freely. But it does not understand violent content. Without warning, it generates violent content. To ensure the safety of user content, filters are used, so inappropriate content is blocked.

C. Domain Knowledge: ChatGPT uses natural language processing technology to interpret users' instructions. But using this model is difficult to interpret complicated language. This makes users use easy instructions to converse with ChatGPT. ChatGPT has specific data fed into it. So, it gives answers according to stored data. When data proves to be insufficient, it gives inaccurate predictions and at times gives complete falsehood. It has limited knowledge of the world and events after 2021.

D. Hacking: ChatGPT is becoming more secure, however, it is possible for hackers and malicious users to find vulnerabilities to exploit. This creates a risk for customer data and confidential information, making it a security risk.

E. Emotional Barriers: ChatGPT is not able to sense our humor and emotional saying. So, it gives insensitive and offensive replies. This causes ChatGPT to take one step back. Because of wrong replies, users get disappointed, and this becomes a limit for ChatGPT.

F. Job Cuts: As ChatGPT can compose poems, write blogs, do coding, create ideas, provide answers to our questions, etc. It is prone to do human jobs to some extent. Though it is restricted to certain languages, but because of this, people may suffer from unemployment.

VI. EFFECTS OF CHATGPT

A. Effect of ChatGPT on employment: As ChatGPT can formulate many sources for users, it has put a question mark on employment of people. Within a course of typing, it gives us what we need. Such as, Essay, Poem, Code [For programming language], articles, etc.

As a result, jobs of artists, bloggers, writers are in danger. Humans have made AI, but it is not for consuming our own jobs. AI cannot add our sensation and emotion in a poem; it can only compose common emotions fed into it.

B. Effect on Students: School is the early and crucial stage of a student's life. In this course of time through different mediums, students are evolved. In school, Home Work plays an important role. Students become independent. Their thinking power increases because of Home Work. But ChatGPT has brought hindrance in their growth. Students can get direct solutions of their questions; they do not need to think on it. Youths play an important role in Nations Growth. Thus, development of youths is important. They show a casual approach towards their studies.

In recent interview with New York Times, the creator explained the following things:

"These systems are not designed for truth. They are designed for plausible conversation [...] character. AI is useful today for fun, for emotional support, for generating ideas, for kind of kinds of creativity", as per a report by Tech Radar.

C. Effect on Teacher: Artificial Intelligence cannot be an option and replacement for a teacher. ChatGPT generates answers for students but it does not promote their development. Teachers are responsible for their mental growth, however, students are more relying on technology. In the COVID pandemic we have seen the effects of online learning. It has changed students

attitude towards learning. ChatGPT only gives preferred answers but puts a full stop of students development and most important it is decreasing the bond between a Teacher and a Student.

D.Effect on Software Development: ChatGPT conversate with us a superhuman. Strength of users using this application is over 100 million users. The website currently generates 1 billion visitors per month. This shows the increasing popularity of ChatGPT.

ChatGPT have significant impacted on software development field. Developers have to integrate natural language processing (NLP) features into their software applications. Thus, making them interactive and user-friendly. Chatbots, virtual assistants, are the examples of NLP-based software that have become increasingly popular in recent time. With the help of ChatGPT, developers can create more advanced chatbots. This Chatbot can understand and respond to user doubt more humanistically. Because of this technology it is easier for developers to incorporate ML [Machine Learning] and AI capabilities into their applications. Result of this is that ChatGPT has opened up new possibilities and opportunities for software development.

E. Effect on Educational field:

This invention have opened new doors of opportunities. With the help of ChatGPT we can make huge progress in the field of Education, but keeping a safe distance.

The potential of ChatGPT present opportunities for education. As academia must continue to shift from unidirectional knowledge transfer to an active development of experience, social abilities, and technological agility.

With the help of ChatGPT teachers can formulate new questions assignment, etc. And boost their as well as students technical knowledge. Instead of banning it in educational we can use it as a boon for our welfare. Considering this opportunity we have to also take note that completely relying on ChatGPT is dangerous.

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, and it revealed following grades:-

The bot ChatGPT earned a solid grade (between B and B-).

Obviously, it proves as a threat for universities and schools but 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 and goals.

VII. ALTERNATIVES FOR CHATGPT

Due to Microsoft's investments in ChatGPT, several companies came forward with their AI-based chatbot and one of them is Google. Google's Bard is an AI-based chatbot using the LaMDA language model. It is close to Chat GPT 3.5. It works similarly to Chat GPT, where it can generate answers on a different range of topics. And it will generate a user-friendly response for user. Bard (Google's chatbot) converts the Google search engine to an engaging virtual assistant.

Following are the competitors of ChatGPT:-

DeepMind Sparrow

Character AI

Amazon Codewhisperer

VIII. FUTURE OF CHATGPT

Future of ChatGPT is full of potential. Development in ChatGPT have statistically change our present and it will change our future also. ChatGPT is expected to become even more capable of understanding and responding to human language more naturally. This could lead to the development of even more advanced chatbots, virtual assistants to handle complex, complicated tasks and provide personalized recommendations and advice. Additionally, it could become an even more powerful tool for data analysis, predictive modeling, and decision-making. There are also opportunities for ChatGPT to be used in many fields such as:

Education, healthcare, and mental health therapy. Here conversational agents can be used to provide guidance to people in need. As ChatGPT continues to develop, it has the potential to transform the way we interact with technology and make our lives easier and more efficient.

IX. CONCLUSIONS

ChatGPT is a milestone in AI progress. This NLP module grab users attention. It help in many fields and sectors. Along with its disadvantages users are accepting it. Actually, its not only tool but also a medium that taught us a new way to interact with machines. Machines are part of our live. We must walk with technology otherwise we will be outdated. ChatGPT must be used as a tool to upgrade ourselves and sectors. There is solution for every problem, so though because of ChatGPT job cut occurs, but we must train people to deal with ChatGPT. ChatGPT can do our task but at the end a person is needed to keep control on AI tools.

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REFERENCES

- [1] Stephen Wolfram: What Is ChatGPT Doing ... and Why Does It Work
- [2] www.linkedin.com
- [3] <https://www.sandipuniversity.edu.in/blog>
- [4] https://tech.hindustantimes.com/tech/newshttps://www.researchgate.net/publication/369539233_Study_and_Analysis_of_Chat_GPT_and_its_Impact_on_Different_Fields_of_Study
- [5] Else, H. (2023). Abstracts written by ChatGPT fool scientists. Nature. <https://doi.org/10.1038/d41586-023-00056->
- [6] <https://explodingtopics.com/blog>
- [7] digitalscholar.in/history-of-chatgpt/
- [8] <https://africa.businessinsider.com/news/chatgpt-may-be-coming-for-our-jobs-here-are-the-10-roles-that-ai-is-most-likely-to-grmgtk3>
- [9] <https://www.businessinsider.in/tech/news/college-professors-are-considering-creative-ways-to-stop-students-from-using-ai-to-cheat/articleshow/97197138.cms>
- [10] researchgate.net/publication
- [11] <https://www.techopedia.com/who-are-the-competitors-of-chatgpt>
- [12] <https://hbsp.harvard.edu/inspiring-minds/chatgpt-and-ai-text-generators-should-academia-adapt-or-resist>
- [13] <https://cdn.openai.com/papers/gpt-4.pdf>
- [14] <https://ieeexplore.ieee.org/>