AUTO-GPT

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Developer: Toran Bruce Richards
Written in: Python

"Auto-GPT stand for generative pre-trained transformer."

A Transformer is a type of AI deep learning model that was first introduced by Google in a Research paper in 2017. And five years later, transformer architecture has a evolved to create powerful models such as chat-GPT.

According to Wikipedia…
Auto-GPT is an "AI agent" that given a goal in natural language, can attempt to achieve it by breaking it into sub-tasks and using the internet and other tools in an automatic loop. It uses Open AI's GPT-4 or GPT-3.5 APIs, and is among the first examples of an application using GPT-4 to perform autonomous tasks. Auto-GPT is a free, Open-Source application. It can be accessed by all.

Let me make easy to understand the term GPT-4 and GPT-3.5__
Basically the GPT-4 is capable of Analysing and commenting on graphics and images, in contrast to GPT-3.5, which focuses primarily on text. GPT-4 is a powerful tool for education and content creation because for instance, it can describe the content of a photo, identity trends in a graph, and even generated captions for images. Compared to GPT-3.5, GPT-4 is smarter, can handle longer prompts and conversation and doesn't make as many factual error.

Let me clear you factual errors… an error (such as a spelling mistake), incorrect information (such as block location, Opening number, mapsheet, and latitude/longitude), an omission of mandatory Cengea Resources tabular data or an incorrect calculation or number.

GPT-3.5 has an accuracy of 70.1% whereas GPT-4 has an accuracy of 85.5% in a 3-shot massive multitask language understanding (MMLU). It performed well in languages other than English when these MMLU benchmarks, which are available mostly in English, were translated into other languages.

Working of Auto-GPT

When task is given, it develops a plan to work it out by adapting its approaches to incorporate new data or utilise internet browsing. Auto-GPT works similarly to Chat-GPT, with the added feature of AI agents. AI agents can be programmed to make decisions and take actions based on a set of rules and predefined goals. The technology is similar to having a personal assistant that can perform specific tasks on your behalf, such as scheduling appointments or sending emails. AI agents operate on the principle of limited access. Just as a personal assistant can only perform tasks that are within its scope of access. An AI agent is only as powerful as the access it is given through an API.

For example, an AI agent with internet access can search for information but can not make purchases on your behalf. However, if an AI agent has access to your computer's terminal, it could potentially search for and install apps that it deems necessary for achieving its goal. Similarly, if given and AI agent access to your credit card, it could make purchases on your Behalf.

To guarantee that the project is proceeding as per the user's expectations, Auto-GPT will Prompt for permission after each step.

Auto-GPT essentially pairs GPT with a companion robot that GPT on what actions to takes. The companion robot receives instructions from the user and uses GPT and several APIs to carry out the necessary steps to achieve the desired goal.

QuickStart:

1. Get an Open AI API Key
2. Download the latest release
3. Follow the installation instructions
4. Configure any additional feature you want, or install some plugins
5. Run the App
6. Please see the documentation for the full setup instructions and configuration options.

Auto-GPT Vs Chat-GPT:

Auto-GPT is a powerful and cutting-edge AI tool that has taken the tech world by Strom. Auto-GPT is an experimental AI tool that is changing the way we think about intelligence. It is considered to be the first glimpse of artificial general intelligence (AGI), which is a type of AI that can perform human-level intellectual tasks. Its capabilities are so advanced that it has caught the attention of the tech community and is being hailed as the next big thing in AI. Unlike Chat-GPT, which requires human prompts to accomplish even the simplest tasks, Auto-GPT realise on AI agents to make decisions and take actions based on predefined goals and rules. The technology may seem far-fetched, but it is already being used in various practical applications.

The Key difference between Chat-GPT and Auto-GPT:
Auto-GPT and Chat-GPT are built on the same technology, but they differ significantly in their functionality. The primary difference between the two is that Auto-GPT can function autonomously without the need for human agents, whereas Chat-GPT requires human prompts to operate.
For instance, if you wanted to plan your child's birthday party using Chat-GPT, you would need to prompt the program with specific questions such as "Help me plan a birthday for my 5year old son." Chat-GPT would then generate a list of things you should account for including the birthday theme, venue, guest lists, gifts, food, and decorations. However, you would need to prompt ChatGPT for every subsequent step, such as shopping for gifts or sending invitations. In contrast, Auto-GPT can self-prompt and tackle every subset of a problem without the need for human intervention. For example, if you asked Auto-GPT to plan a birthday party, it could develop a theme, create guest lists, send out invitations, and even shop for gifts, all on its own.

Features:

- Internet Access for searches and information gathering.
- Long-term and short-term memory management.
- GPT-4 instances for text generation.
- Access to popular websites and platforms.
- File storage and summarization with GPT-3.5.
- Extensibility with plugins.

Limitations:

The experiments aims to showcase the potential of GPT-4 but comes with some Limitations:

1. Not a polished application or product, just an experiment.
2. May not perform well in complex, real-world business scenarios. In fact, if it actually does, please share your results!
3. Quite expensive to run, so set and monitor your API key limits with Open AI!