

Open AI GPT 3 and Chat GPT

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Agenda

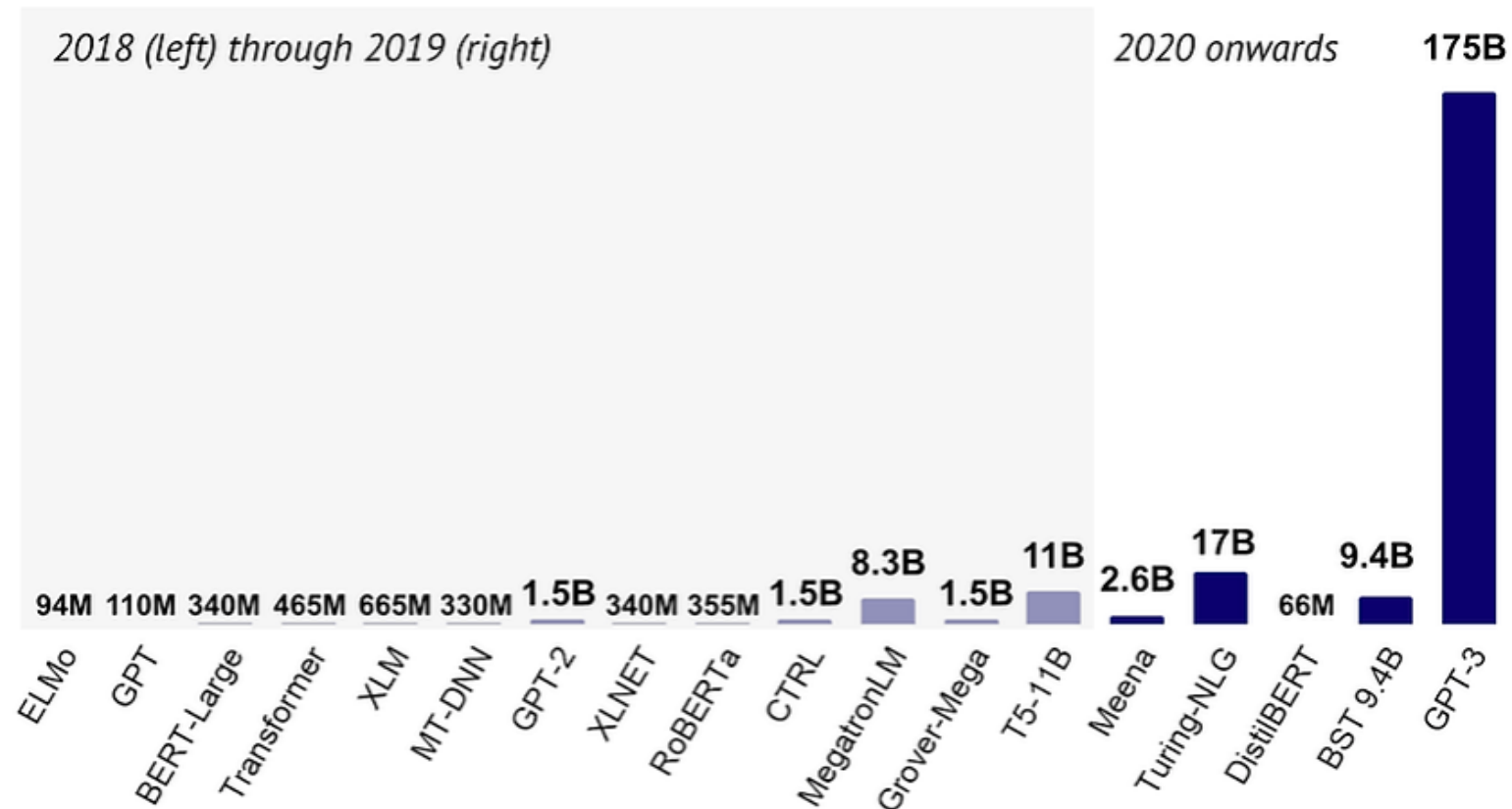
- Introduction to OpenAI and GPT-3
- GPT 3 Architecture and key features
- What are API's and How to access them
- Get , Test and Utilize API
- Introduction to ChatGPT and its features
- Conversational AI Applications with ChatGPT

- Founded in 2015 OpenAI is a research organization that aims to develop and promote friendly AI.
- OpenAI conducts research in a variety of areas related to AI, including machine learning, computer vision, natural language processing, and robotics.
- The organization also develops and releases open-source tools and models to make AI more accessible to developers and researchers.
- Some of OpenAI's notable projects include the **GPT-3 language model**, the OpenAI Gym platform for developing and comparing reinforcement learning algorithms, and the RoboSumo platform for research in robotic manipulation.

- OpenAI's GPT-3 (**Generative Pre-trained Transformer 3**) is a state-of-the-art language model that uses deep learning techniques to generate natural language text. It is the third iteration of the GPT series of language models and was released by OpenAI in 2020.
- GPT-3 has been trained on a massive amount of text data using **unsupervised learning**, which means that it was not explicitly taught what to do, but rather learned from patterns in the data. It has 175 billion parameters, making it one of the largest language models ever created.
- Because of its large size and extensive training, GPT-3 can perform a wide range of natural language processing tasks, such as **language translation**, **question-answering**, and **text summarization**. It can also generate human-like text, including articles, stories, and even computer code.

Why Its Different ?

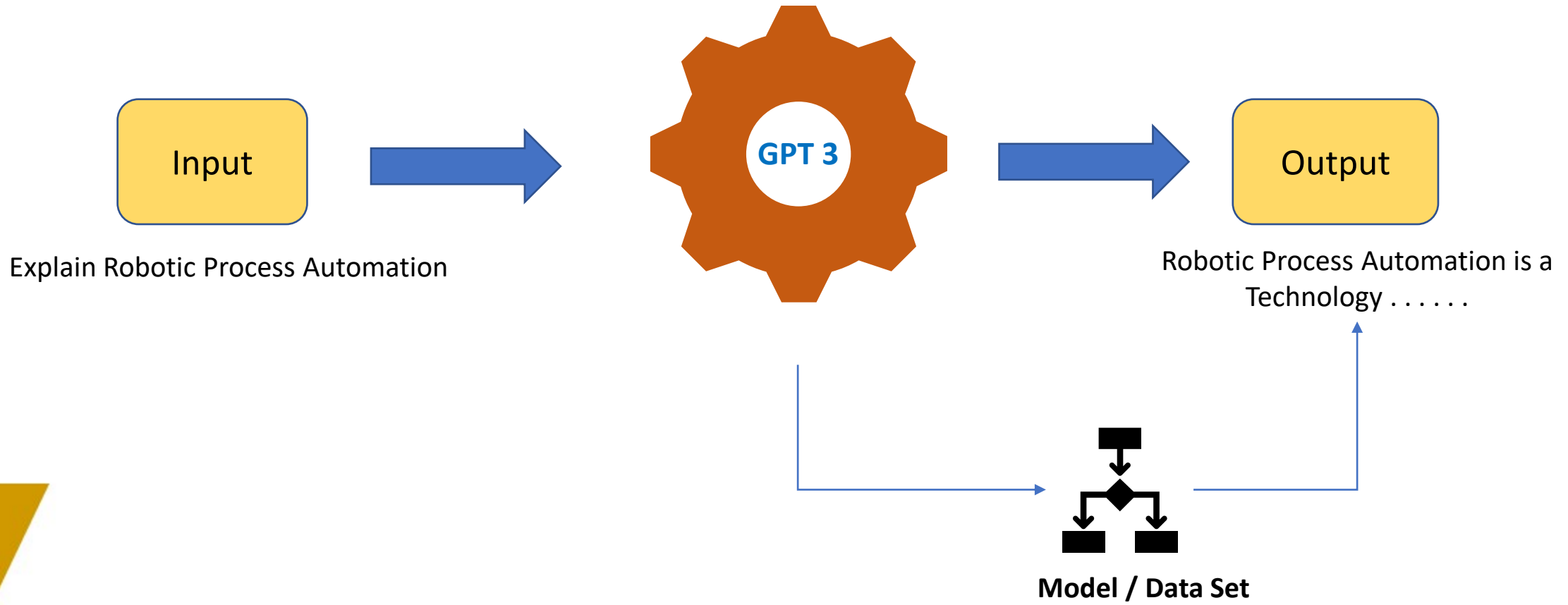
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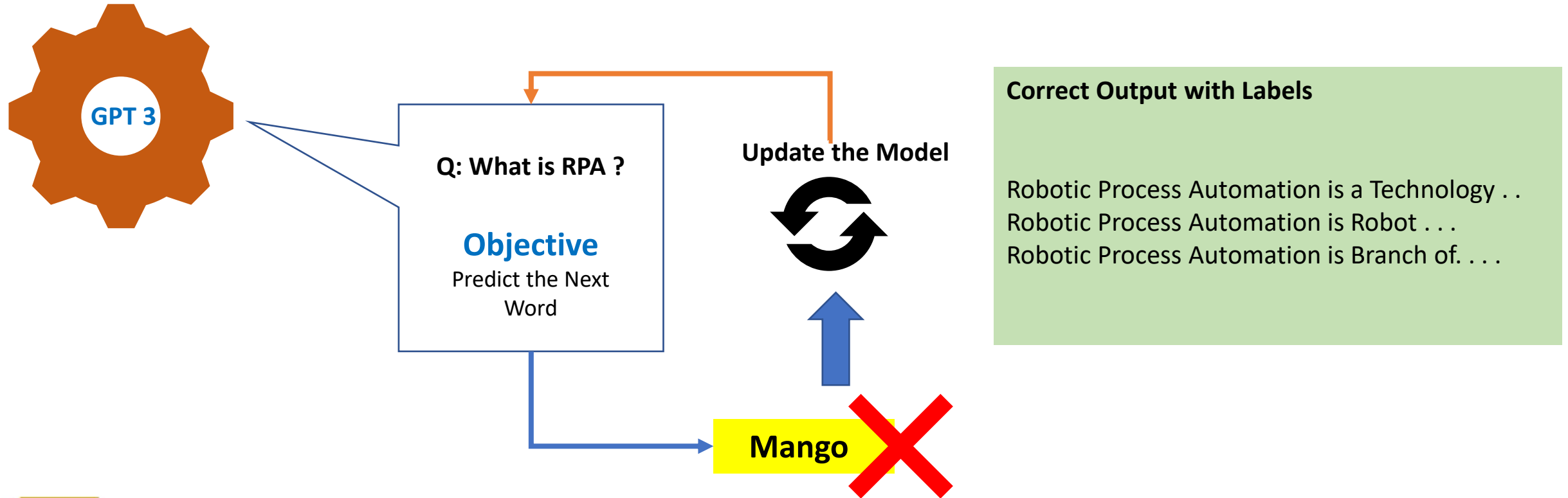
Evolution of Language Model

Source : <https://www.ruder.io/research-highlights>

GPT-3 Architecture



GPT-3 Architecture



Un Supervised Training

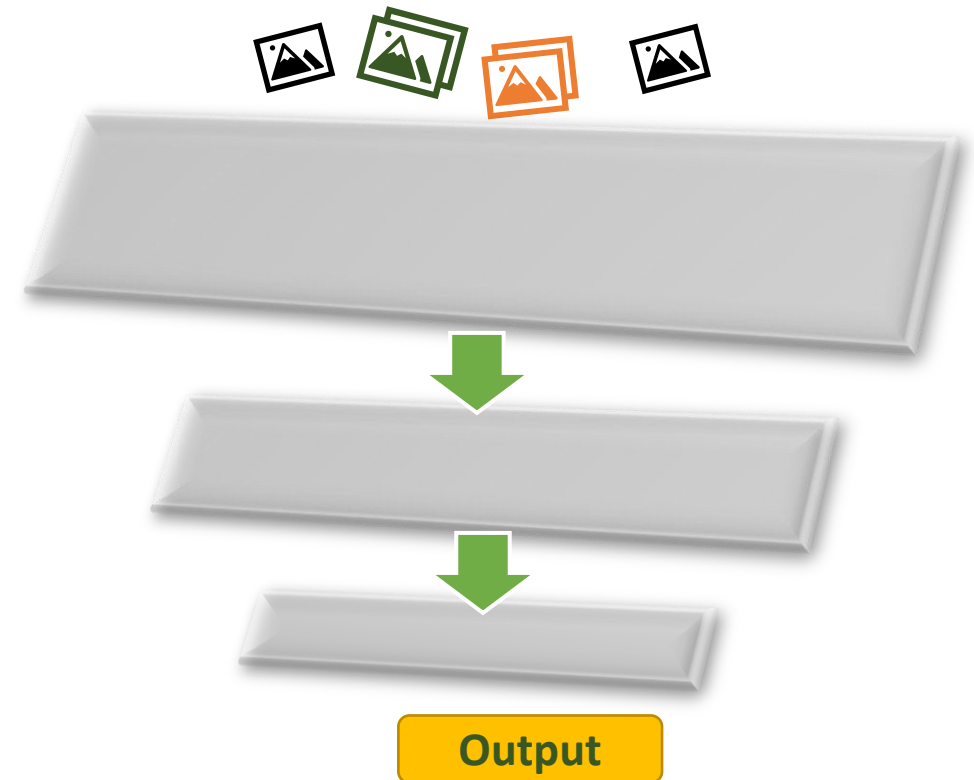
Recurrent neural networks (RNNs)

Input : Hello World

Output : Bonjour le monde

- Take one word at a Time and Process .
- **Sequentially** Split the French Counterparts.
- Sometime the words Shuffle and order was not maintained
- Cannot Handle Large Sequence of Texts /Paragraphs.
- By the time we reach End of Paragraph , Model lost context
- Hard to train as it process sequentially

Convolutional neural networks (CNNs)



e.g. Identifying Objects in Photos

Transformers

Positional Encoding

- Do not process Sequentially
- Put a position (No.) to each word before sending to Model.
- Neural network understand the word order from Data

Attention

- Neural Language Structure that allows text model to look every single word in original Sentence while making a decision about how to translate a word.
- Takes attention data over a huge data set

Self Attention

- Neural Language with huge data can understand the synonyms data like programmer / developer / SE .
- Learn Rules of Grammar /Tense / Sentences.
- Helps to get the context of the word around it

Bring the **Bats** for tomorrow Match
Bats are the only flying mammal

What are Transformers

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- Traditionally, NLP models such as **recurrent neural networks (RNNs)** and **convolutional neural networks (CNNs)** have been used for sequence modeling tasks such as **language translation, language modeling, and text classification**. However, these models have **limitations** in capturing long-range dependencies and suffer from vanishing gradient problems.
- **Transformers**, on the other hand, rely solely on the self-attention mechanism, which allows the model to selectively attend to different parts of the input sequence to produce context-aware representations. The self-attention mechanism can capture dependencies between tokens in the input sequence regardless of their position in the sequence, making it well-suited for handling long-range dependencies.
- Transformers have achieved state-of-the-art results in a variety of NLP tasks such as machine translation, question answering, and language modeling. image recognition and speech recognition.

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- GPT-3 uses a deep neural network architecture called a transformer, which is a type of attention-based model which has been very successful in natural language processing tasks because of its ability to capture long-term dependencies and to process sequences of variable length.

- The GPT-3 model has a total of 96 layers, with each layer having 1,024 hidden units. The model has a vocabulary size of 50,000, which includes a mix of words, subwords, and characters. It is trained on a large corpus of text using an unsupervised learning approach called language modeling, where the model is trained to predict the next word in a sequence given the preceding words.

- The GPT-3 model is based on a deep stack of transformer blocks, with each block consisting of a self-attention mechanism followed by a feedforward neural network. The self-attention mechanism allows the model to focus on different parts of the input sequence, while the feedforward network applies a non-linear transformation to the input.

- GPT-3 uses a technique called few-shot learning, which allows it to generalize to new tasks without requiring extensive training on each task. This is achieved through the use of prompt programming, where the model is provided with a short example of what is required, and then generates output based on that example.

Overall, the GPT-3 architecture is designed to efficiently process natural language input, capture complex patterns and dependencies in the data, and generate high-quality, human-like text.

GPT-3 has a wide range of capabilities in natural language processing.

Text
Generation

Language
Translation

Question
Answering

Summarization

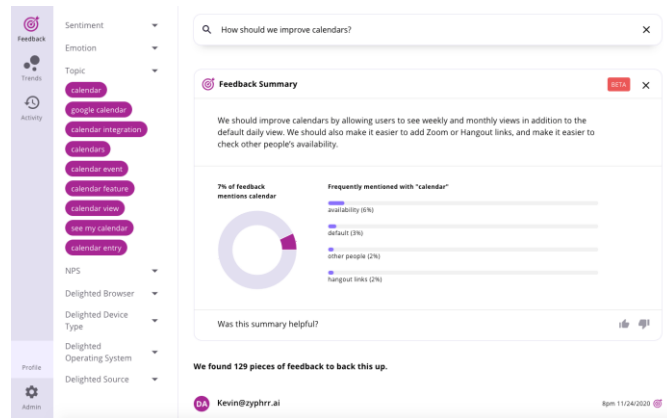
Chatbots

Sentiment
Analysis

Text
Completion

Code
Generation

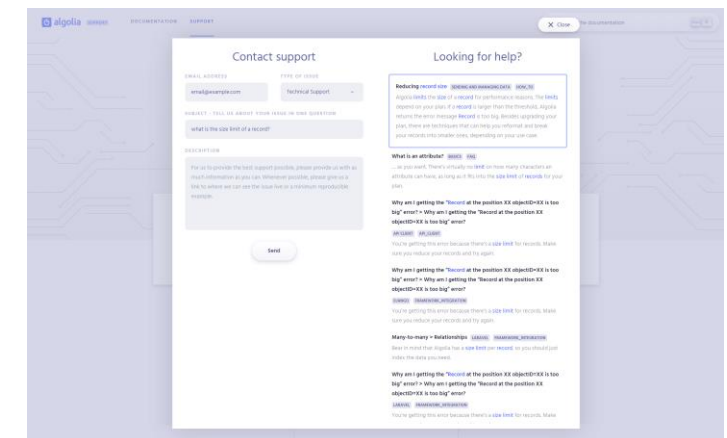
To date, over **300 apps** are using GPT-3 across varying categories and industries, from productivity and education to creativity and games. These applications utilize a suite of GPT-3's diverse capabilities



Viable helps companies better understand their customers by using GPT-3 to provide useful insights from customer feedback in easy-to-understand summaries.



Fable Studio is creating a new genre of interactive stories and using GPT-3 to help power their story-driven "Virtual Beings."



Algolia uses GPT-3 in their Algolia Answers product to offer relevant, lightning-fast semantic search for their customers.

<https://openai.com/blog/gpt-3-apps/>

ChatGPT

- Open AI have trained a model called ChatGPT which interacts in a conversational way.
- The dialogue format makes it possible for ChatGPT to answer follow up questions, admit its mistakes, challenge incorrect premises, and reject inappropriate requests.
- The dialogue format makes it possible for ChatGPT to answer follow up questions, admit its mistakes, challenge incorrect premises, and reject inappropriate requests.

ChatGPT



Examples

"Explain quantum computing in simple terms" →

"Got any creative ideas for a 10 year old's birthday?" →

"How do I make an HTTP request in Javascript?" →



Capabilities

Remembers what user said earlier in the conversation

Allows user to provide follow-up corrections

Trained to decline inappropriate requests



Limitations

May occasionally generate incorrect information

May occasionally produce harmful instructions or biased content

Limited knowledge of world and events after 2021



Examples



Can you suggest me a good laptop for Video Editing



Sure, here are some laptops that are good for video editing:



1. MacBook Pro 16-inch: This laptop is a great choice for video editing as it comes with a powerful 9th generation Intel Core i7 or i9 processor, up to 64GB of RAM, and an AMD Radeon Pro graphics card. It also has a beautiful Retina display, which is great for video editing.
2. Dell XPS 15: This laptop is also a popular choice for video editing as it comes with a 9th generation Intel Core i7 or i9 processor, up to 64GB of RAM, and an NVIDIA GeForce GTX 1650 graphics card. It also has a 4K OLED display, which is great for color accuracy.
3. HP Spectre x360 15T: This laptop comes with a 10th generation Intel Core i7 processor, up to 16GB of RAM, and an NVIDIA GeForce GTX 1650 graphics card. It also has a 4K display and a 2-in-1 design, which can be useful for video editing.
4. ASUS ROG Zephyrus G14: This laptop is a good choice if you're looking for a more affordable option. It comes with an AMD Ryzen 9 processor, up to 32GB of RAM, and an NVIDIA GeForce RTX 2060 Max-Q graphics card. It also has a 14-inch display with a 120Hz refresh rate, which is great for video editing.
5. Lenovo ThinkPad X1 Extreme Gen 4: This laptop is a good choice if you're looking for a business-oriented laptop that's powerful and portable. It comes with a 10th

Regenerate response



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Examples



I have some leftover rice and pizza from night party , can you help me with a recipe ?



Sure, here's a recipe that you can make with leftover rice and pizza:



Pizza Fried Rice

Ingredients:

- 2 cups leftover cooked rice
- 2 slices leftover pizza, chopped into small pieces
- 1/2 onion, chopped
- 2 cloves garlic, minced
- 1 tablespoon olive oil
- 1 tablespoon soy sauce
- 1 teaspoon chili powder
- 1 teaspoon dried oregano
- Salt and pepper to taste

Instructions:

1. In a large pan, heat the olive oil

 Regenerate response

the onion and garlic and sauté

Examples



give me c# code to get the value from Sql Database and display on a webpage



Sure, here's an example C# code to retrieve data from a SQL database and display it on a webpage using ASP.NET:



First, make sure you have the following namespaces added at the top of your code:

csharp

Copy code

```
using System.Data.SqlClient;  
using System.Data;
```

Then, you can use the following code to retrieve data from a SQL database and display it on a webpage:

csharp

Copy code

```
// Connection string to your SQL database  
string connectionString = "Data Source=yourServerName;Initial Catalog=yourDatabaseName;  
// SQL query to retrieve data  
string query = "SELECT * FROM yourTableName";
```

Regenerate response



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Examples



I want you to take my interview as HR Manager and ask me questions which i will answer



Sure, I'd be happy to take on the role of the interviewer and ask you some questions as an HR Manager. Let's begin:



1. Can you tell me about your previous experience in human resources management and how it has prepared you for this role?
2. How do you stay current with HR regulations and employment laws to ensure compliance within the organization?
3. Can you describe your experience in developing and implementing HR policies and procedures to support the organization's goals and objectives?
4. How do you handle sensitive employee issues, such as conflicts or complaints, and what strategies do you use to resolve them?
5. How do you work with management to identify workforce needs, recruit top talent, and retain key employees?
6. Can you describe a time when you successfully managed a difficult employee situation and what steps you took to resolve it?
7. How do you manage performance evaluations and feedback to ensure employee growth and development within the org

Regenerate response

Examples



Help me to get answers of all these questions



Sure, I'd be happy to help you answer these questions:



1. Can you tell me about your previous experience in human resources management and how it has prepared you for this role?

Answer: I have worked in various human resources roles for the past 10 years, with experience in recruitment, employee relations, benefits administration, and HR policy development. My experience has prepared me for this role by providing me with the necessary skills and knowledge to effectively manage the HR functions of an organization, and ensure that the company is in compliance with all employment laws and regulations.

2. How do you stay current with HR regulations and employment laws to ensure compliance within the organization?

Answer: I stay current with HR regulations and employment laws through a variety of methods, including attending industry conferences and seminars, subscribing to HR publications and newsletters, and participating in professional organizations. I also regularly review and update our HR policies and procedures to ensure compliance with any new or



Examples



translate to hindi : I Hope you are Enjoying the Session



मुझे आशा है कि आप सत्र का आनंद ले रहे हैं।



tell me a joke



Sure, here's a joke for you:

Why did the tomato turn red?

Because it saw the salad dressing!



Outline for a book on utilities



Here is an outline for a book on utilities:

I. Introduction

A. Definition of Utilities

B. Brief history of utilities

C. Importance of utilities in modern society

II. Overview of Utilities

A. Types of Utilities

1. Electricity

2. Water

3. Gas

4. Telecommunications

5. Waste Management

B. Infrastructure and Operations of Utilities

1. Production and Distribution

2. Regulations and Standards

Regenerate response




Get Started with API

API keys

Your secret API keys are listed below. Please note that we do not display your secret API keys again after you generate them.

Do not share your API key with others, or expose it in the browser or other client-side code. In order to protect the security of your account, OpenAI may also automatically rotate any API key that we've found has leaked publicly.

SECRET KEY	CREATED	LAST USED	
sk-...8Imp	Jan 24, 2023	Never	

+ Create new secret key

Mukesh Kala
mailmukeshkala@gmail.com

Personal

Manage account

View API keys

Invite team

Help

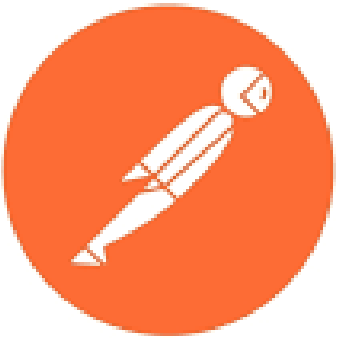
Pricing

Terms & policies

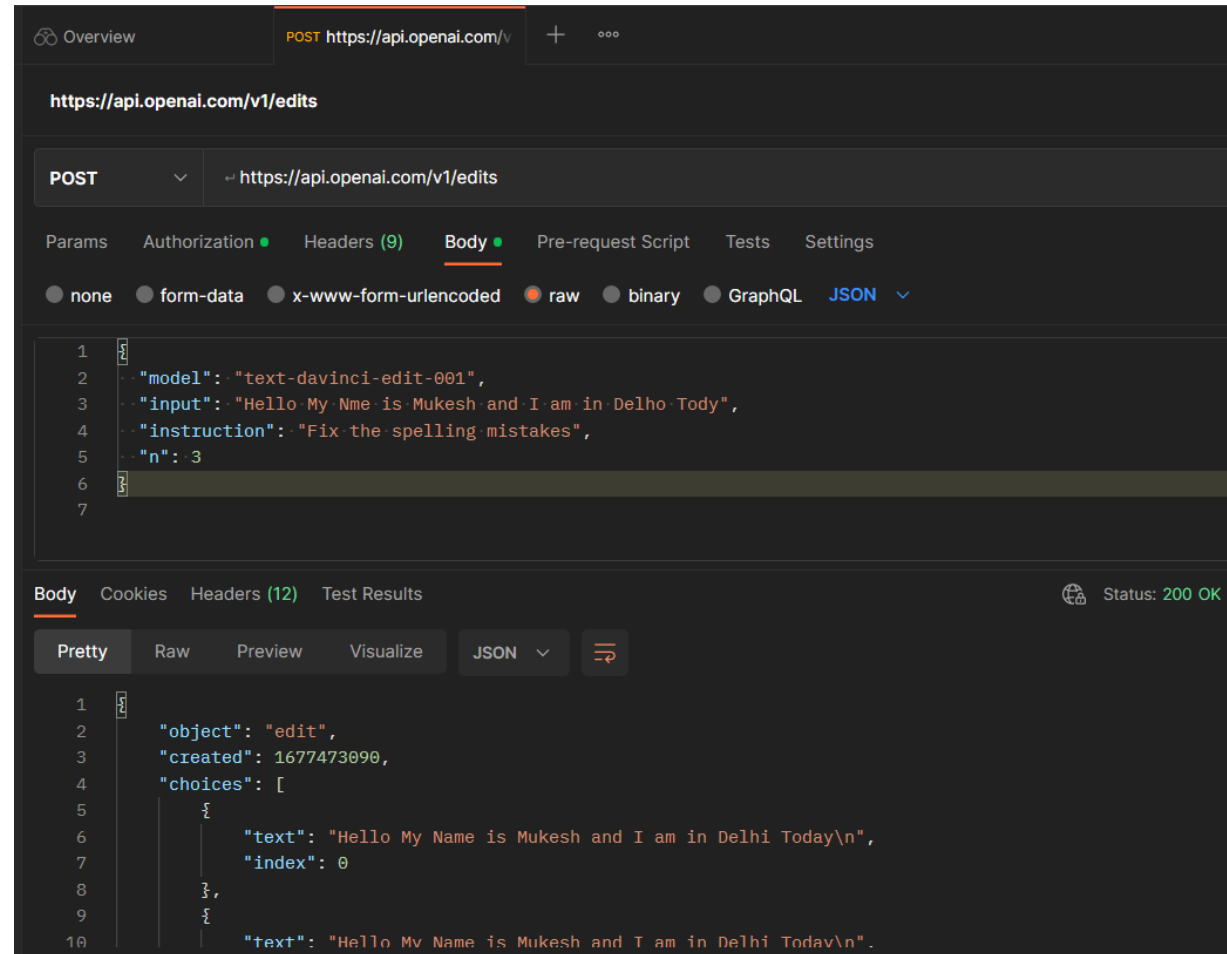
Log out

<https://platform.openai.com/docs/api-reference/introduction>

How to Test API's



POSTMAN



GPT 3 vs ChatGPT

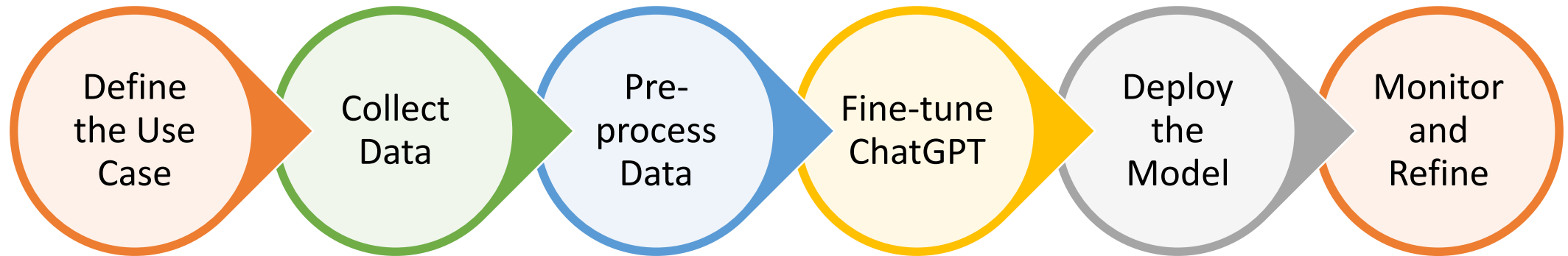
GPT-3 and ChatGPT are both large language models created by OpenAI, but they serve different purposes.

GPT-3 (Generative Pre-trained Transformer 3) is a state-of-the-art language model designed for various natural language processing tasks, such as text completion, language translation, and question answering. It has 175 billion parameters, making it one of the largest and most powerful language models to date.

ChatGPT, on the other hand, is specifically designed for conversational AI. It has been fine-tuned on a large corpus of dialogues to enable it to understand and generate human-like responses to user queries in a conversational context. ChatGPT is optimized for tasks such as customer service, chatbots, and personal assistants.

In summary, GPT-3 is a general-purpose language model, while ChatGPT is a specialized model designed for conversational AI applications.

Conversational Apps with ChatGPT



Thank You

For discussions/suggestions/queries email: isuw@isuw.in

www.isuw.in

Links/References (If any)