

INTRO TO AI AND ITS USAGE IN MARKETING

Yogesh Haribhau Kulkarni

Outline

① BACKGROUND

② INTRODUCTION

③ APPLICATIONS

④ CONCLUSION

About Me

Yogesh Haribhau Kulkarni

Bio:

- ▶ 20+ years in CAD/Engineering software development
- ▶ Got Bachelors, Masters and Doctoral degrees in Mechanical Engineering (specialization: Geometric Modeling Algorithms).
- ▶ Currently doing Coaching in fields such as Data Science, Artificial Intelligence Machine-Deep Learning (ML/DL) and Natural Language Processing (NLP).
- ▶ Feel free to follow me at:
 - ▶ Github (github.com/yogeshhk)
 - ▶ LinkedIn (www.linkedin.com/in/yogeshkulkarni/)
 - ▶ Medium (yogeshharibhaukulkarni.medium.com)
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Office Hours:
Saturdays, 2 to 5pm
(IST); Free-Open to all;
email for appointment.

From Zero to GPT!!

Chess: next move?

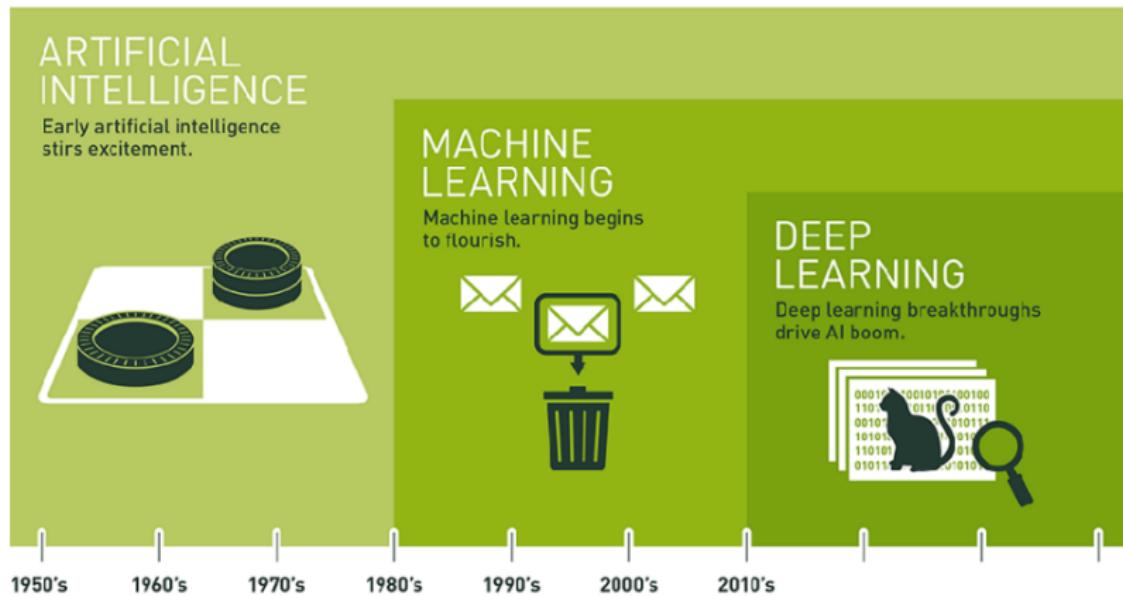
- ▶ Needs extreme expertise
- ▶ Needs “intelligence”
- ▶ How do you get that?
 - ▶ Built by lots of training.
 - ▶ By studying lots of past games.
- ▶ This is how Humans build intelligence

Intelligence

- ▶ Can machine (software/program) also do the same?
- ▶ Can it play chess?
- ▶ Can it build intelligence?
- ▶ By looking at past experiences (data),
- ▶ Training Data: games played, moves used, etc.

Yes, it can!! Thats Artificial Intelligence.

Relationship between AI, ML, DL



(Ref: <https://blogs.nvidia.com/blog/2016/07/29/whats-difference-artificial-intelligence-machine-learning-deep-learning-ai/>)

What is AI-ML-DL?

- ▶ Artificial Intelligence: mimicking human intelligence
- ▶ Machine Learning: Automating Learning with features.
- ▶ ML: human-designed representations and input features. So, its just optimizing weights to best make a final prediction
- ▶ There could be programmed (hand coded) AI, that's not Machine Learning
- ▶ Machine Learning could be for non AI activities, like automation
- ▶ Deep Learning: Neural network with no input features

Introduction to Machine Learning

How do we learn?

- ▶ What do we do when we have to prepare for an examination?
- ▶ Study. Learn. Imbibe. Take notes. Practice mock papers.
- ▶ Thus, prepare for the unseen test.
- ▶ Machine Learning does the same.

What is Machine Learning?

Machine learning is a type of artificial intelligence (AI) which:

- ▶ Learns function without being explicitly programmed.
- ▶ Can grow and change when exposed to new data.

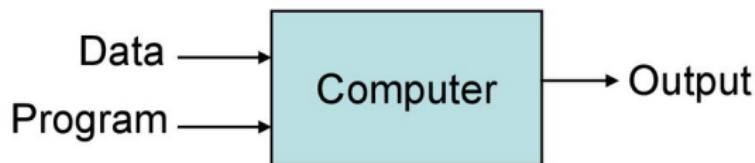
Model entities

For $income = c + \beta_0 \times education + \beta_1 \times experience$

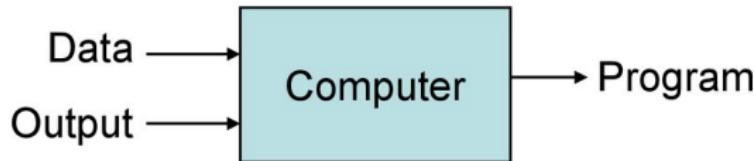
- ▶ Inputs: Education and experience, also called as features or attributes or dimensions or variables.
- ▶ Mathematical entities added to input data, are Parameters.. β_0 and β_1 are parameters
- ▶ Income is target, also called as outcome or class.

Traditional vs. Machine Learning?

Traditional Programming



Machine Learning



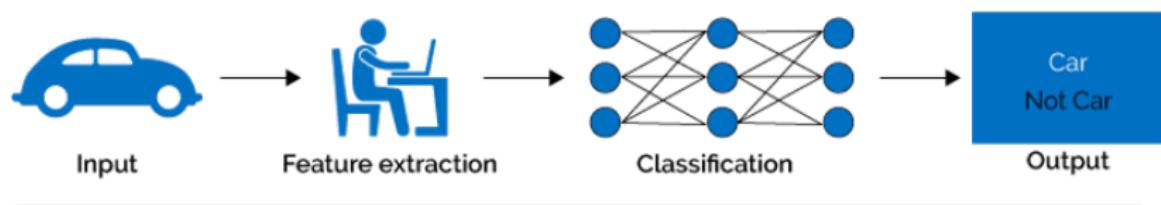
Why Machine Learning?

- ▶ Problems with High Dimensionality
- ▶ Hard/Expensive to program manually
- ▶ Techniques to model 'ANY' function given 'ENOUGH' data.
- ▶ Job \$\$\$

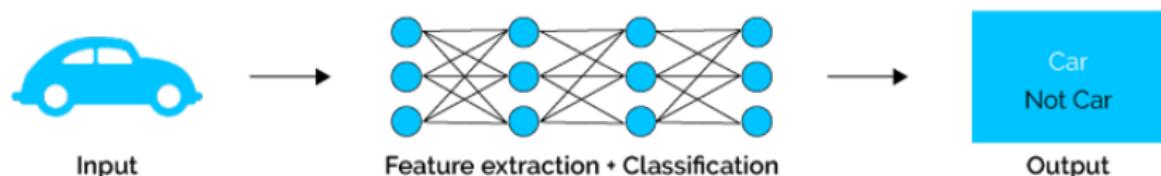
ML vs DL: What's the difference?

Deep learning algorithms attempt to learn (multiple levels of) representation by using a hierarchy of multiple layers

Machine Learning



Deep Learning



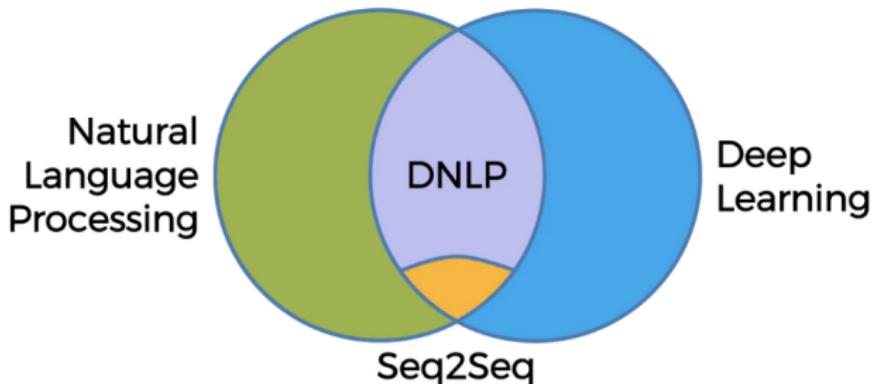
(Reference: <https://www.xenonstack.com/blog/static/public/uploads/media/machine-learning-vs-deep-learning.png>)

Use Deep Learning When ...

- ▶ You have lots of data (about 10k+ examples)
- ▶ The problem is “complex” - speech, vision, natural language
- ▶ The data is unstructured
- ▶ You need the absolute “best” model

(Ref: Introduction to TensorFlow 2.0 - Brad Miro)

What is Deep NLP



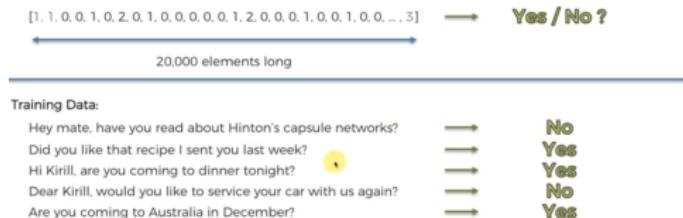
(Ref: Deep Learning and NLP A-Z - Kirill Eremenko)
(Note: Size is not indicative of importance)

- ▶ Green part is NLP (rule based, linguistic)
- ▶ Blue part is Deep Learning not applied to NLP
- ▶ Purple is Deep NLP (DNLP), NN applied for NLP use cases
- ▶ Seq2Seq is heavily used technique of DNLP for sequence to sequence modeling, eg Translation, Q & A, etc.

Typical Machine Learning Classification

- ▶ Questions are converted to bag of words (a vocab long vector, having frequency of specific words at their places)
- ▶ Each question thus gets converted to fixed size vector, which acts as list of features.
- ▶ In training, weights are computed based on the given target.
- ▶ Once model is ready, it is able to answer Yes or No to the question.

Hello Kirill, Checking if you are back to Oz. Let me know if you are around ... Cheers, V



(Ref: Deep Learning and NLP A-Z - Kirill Eremenko)

Context

Representing words by their context



- Distributional semantics: A word's meaning is given by the words that frequently appear close-by
 - “*You shall know a word by the company it keeps*” (J. R. Firth 1957)
 - One of the most successful ideas of modern statistical NLP!
- When a word w appears in a text, its **context** is the set of words that appear nearby (within a fixed-size window).
- Use the many contexts of w to build up a representation of w

...government debt problems turning into **banking** crises as happened in 2009...

...saying that Europe needs unified **banking** regulation to replace the hodgepodge...

...India has just given its **banking** system a shot in the arm...

These **context words** will represent **banking**

YHK

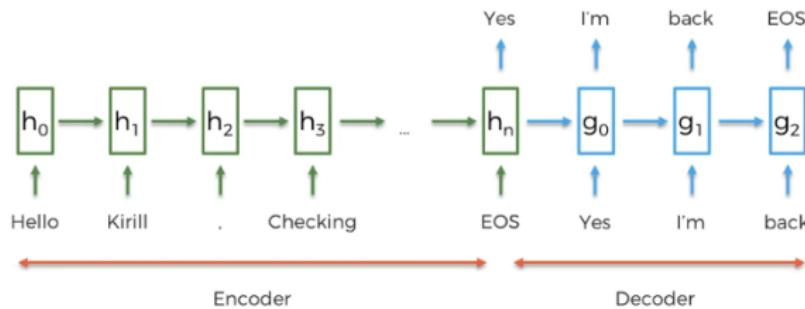
Word vectors

- ▶ Dense vector for each word
- ▶ Called distributed representation, word embeddings or word representations
- ▶ Test: similar to vectors of words that appear in similar contexts

$$\text{banking} = \begin{pmatrix} 0.286 \\ 0.792 \\ -0.177 \\ -0.107 \\ 0.109 \\ -0.542 \\ 0.349 \\ 0.271 \end{pmatrix}$$

Seq2Seq architecture

Hello Kirill, Checking if you are back to Oz.

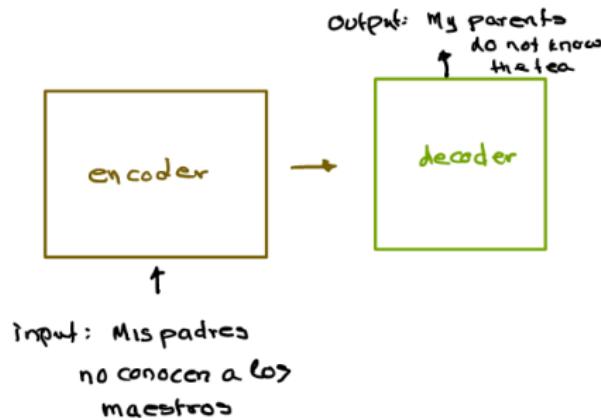


(Ref: Deep Learning and NLP A-Z - Kirill Eremenko)

During training, Encoder is fed with Questions and decoder with Answers. Weights in gates, hidden states get settled. During testing for each sequence of input, encoder results in to a combo vector. Decoder takes this and starts spitting out words one by one, probabilistically.

Transformers

- ▶ The Transformer is a model that uses attention to boost the speed with which seq2seq with attention models can be trained. The biggest benefit, however, comes from how The Transformer lends itself to parallelization.
- ▶ In its heart it contains an encoding component, a decoding component, and connections between them.



Transformers

- ▶ Offer a better structure to train a language model, which gave raise to the large language models (LLMs) like GPT and Bart. Its characteristics are:
 - ▶ Positional encoding: each word is labeled with the number of its position in a sentence.
 - ▶ Self-attention: each word is examined in the context of the whole sentence to generate a representation of the word. This helps the model to understand the linguistic meaning and nuances of a word. As the scale of a language model grows, the model builds mastery of our human language, and it does not only know how to perform basic text-based tasks but also gives a structured and logical answer to any user prompt.

(Ref: Techy Stuff 1: Notes on Transformers, LLMs, and OpenAI - Bill)

GPT

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Generative Pretrained Transformer (GPT)

2018's GPT was a big success in pretraining a decoder!

- ▶ Transformer decoder with 12 layers.
- ▶ 768-dimensional hidden states, 3072-dimensional feed-forward hidden layers.
- ▶ Trained on BooksCorpus: over 7000 unique books.
- ▶ Contains long spans of contiguous text, for learning long-distance dependencies.
- ▶ The acronym "GPT" never showed up in the original paper; it could stand for
- ▶ "Generative PreTraining" or "Generative Pretrained Transformer"

(Ref: John Hewitt, Radford et al., 2018)

GPT-3, in-context learning, very large models

- ▶ Very large language models seem to perform some kind of learning without gradient steps simply from examples you provide within their contexts.
- ▶ GPT-3 is the canonical example of this. The largest T5 model had 11 billion parameters.
- ▶ GPT-3 has 175 billion parameters.

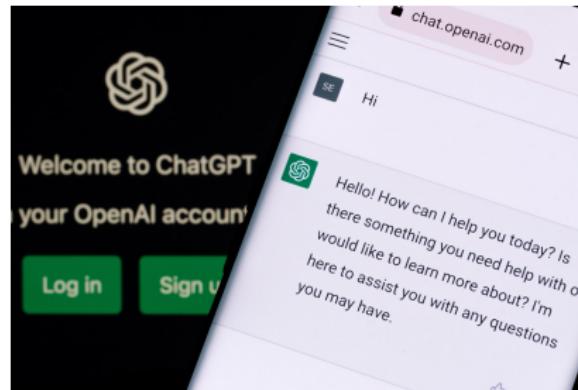
(Ref: John Hewitt)



Overview of ChatGPT

What is ChatGPT?

- ▶ A Chatbot
- ▶ A language model, that takes 'prompt' from user and generates a response.
- ▶ Built by OpenAI and released in Nov 2022
- ▶ Got 1m users in 5 days (Insta 2.5 months, Spotify 5m, Facebook 10m, Netflix 3.5yrs)
- ▶ Link: <https://chat.openai.com/chat>
- ▶ Details: <https://openai.com/blog/chatgpt/>

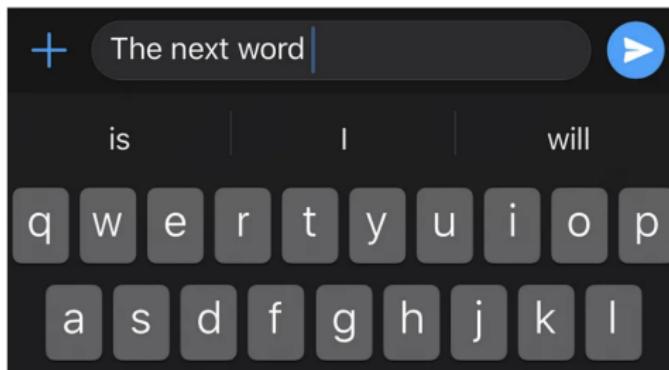


(Ref: OpenAI, creator of ChatGPT, casts spell on Microsoft - The Jakarta Post

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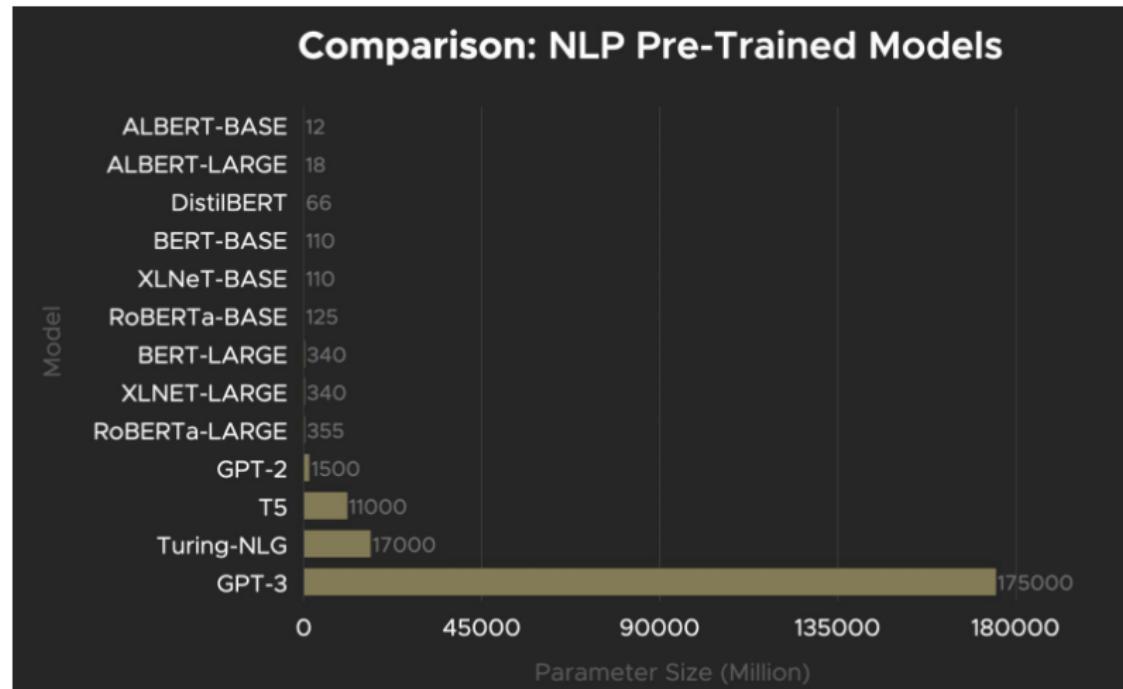
What is a Language Models?

- ▶ While typing SMS, have you seen it suggests next word?
- ▶ While typing email, have you seen next few words are suggested?
- ▶ How does it suggest? (suggestions are not random, right?)
- ▶ In the past, for "Lets go for a ... ", if you have typed 'coffee' 15 times, 'movie' say 4 times, then it learns that. Machine/Statistical Learning.
- ▶ Next time, when you type "Lets go for a ", what will be suggested? why?
- ▶ This is called Language Model. Predicting the next word. When done continuously, one after other, it spits sentence, called Generative Model.



Next word prediction using language modeling in keyboards(Mandar Deshpande)

Large Language Models - Comparison



(Ref: Deus.ai <https://www.deus.ai/post/gpt-3-what-is-all-the-excitement-about>)

Open AI: Who are these guys?

- ▶ San Francisco-based artificial intelligence company
- ▶ Famous for its well-known DALL-E, generates images from prompts.
- ▶ Initially supported by Elon Musk
- ▶ The CEO is Sam Altman, who previously was president of Y Combinator.
- ▶ Microsoft is a partner and investor.
- ▶ Mission: To ensure that artificial general intelligence benefits all of humanity. Prevent misuse of AI

OpenAI Founded

The company was founded with the goal of developing and promoting friendly AI in a responsible way, with a focus on transparency and open research.



Elon
Musk

Sam
Altman

Greg
Brockman

Ilya
Sutskever

Wojciech
Zaremba

John
Schulman

(Ref: <https://www.slideegg.com/open-ai-chat-gpt>)

GPTs Training

GPT: Generative Pre-trained Transformers

- ▶ GPT-1 is pre-trained on the BooksCorpus dataset, containing 7000 books amounting to 5GB of data
- ▶ GPT-2 is pre-trained using the WebText dataset which is a more diverse set of internet data containing 8M documents for about 40 GB of data
- ▶ GPT-3 uses an expanded version of the WebText dataset, two internet-based books corpora that are not disclosed and the English-language Wikipedia which constituted 600 GB of data

GPTs Training compared to human reading

- ▶ GPT-3 was trained on 499B tokens; GPT-4, on 1.4T tokens.
- ▶ In comparison, if you spent 12 hours a day reading for an entire lifetime (80 years) at average speed (250 words / minute), we would absorb 5.26B words (tokens).
- ▶ That's a ratio of 100:1 between the training data used for GPT-3 and the amount of data that can ever be read by a human, and 260:1 for GPT-4.

(Ref: LinkedIn post by Dr Jennifer Prendki)

GPT3 vs ChatGPT

	GPT-3	ChatGPT
Training Parameters	175 billion	175 Billion RLHF Technique Human conversational text
Designed For	NLP Tasks	Chatbot apps
Content Retention Ability	No	Yes
Use Cases	Creative Writing, Business Writing, Ads, Translation, Summarization, Data Analysis	Customer Service, Data Analysis, Blogging, Copywriting, Coding, Debugging, etc.

(Ref: ChatGPT Explained: Complete A-Z Guide - Kripesh Adwani)

Applications

Explain Complex Subjects



What is neuroscience?



Neuroscience is the scientific study of the nervous system, which includes the brain, spinal cord, and peripheral nerves. It is a multidisciplinary field that combines knowledge from biology, chemistry, physics, psychology, and other fields to understand how the nervous system works and how it relates to behavior and cognition. Researchers in neuroscience use a variety of methods, including neuroanatomy, neurophysiology, and neuroimaging, to study the structure and function of the nervous system.



(Ref: Top 10 Chat GPT Use Cases - Simplilearn)

Write Code

The screenshot shows a GPT-3 AI interface. At the top, there's a message from the user: "Give me a machine learning sample program for stocks prediction". Below it, the AI responds with a Python code snippet for linear regression on stock prices. The code is as follows:

```
import numpy as np
from sklearn.linear_model import LinearRegression
from sklearn.model_selection import train_test_split

# Load stock data
stock_prices = np.genfromtxt('
    ■
```

A "Copy code" button is visible above the code block.

it was still writing but I stopped it, just to show this pic

(Ref: Top 10 Chat GPT Use Cases - Simplilearn)

Debug Code

```
arr[j + 1] = tempp;
```

It should be:

 Copy code

```
arr[j + 1] = temp;
```

You have an extra "p" in the variable name, `temp`, which is causing a compile error. This is because "temp" is the variable that you declared earlier to store the value of the current element, whereas "tempp" is not a variable that has been declared.

This error is causing the code not to run. Once you fix this issue, the code should work correctly and sort the array in ascending

(Ref: Top 10 Chat GPT Use Cases - Simplilearn)

Get Custom Marketing Strategy



How should i promote my youtube videos on social media?



Promoting your YouTube videos on social media can be a great way to increase views and engagement. Here are a few strategies you can use:

1. Share your videos on your personal social media accounts. This includes your Facebook, Twitter, Instagram, and other accounts where you have a following. Encourage your friends, family and followers to share the video with their own networks.
2. Join relevant communities and groups on social media. For example, if you're making cooking videos, join Facebook groups and Reddit communities dedicated to cooking. Share your videos with the group and engage with the community.
3. Use social media ads. Platforms like Facebook, Instagram, and Twitter allow you to create targeted ads that promote your videos



Write Articles



Write an article on machine learning in 500 words



Machine learning is a rapidly growing field that is transforming the way we live and work. It is a branch of artificial intelligence that allows computers to learn from data, without being explicitly programmed. Machine learning is changing the way we interact with technology and has the potential to revolutionize many industries, including healthcare, finance, transportation, and more.

The basic idea behind machine learning is that computers can learn from data, without being explicitly programmed. This is done by feeding a computer large amounts of data and allowing it to find patterns and make predictions. There are three main types of machine learning: supervised learning, unsupervised learning, and reinforcement learning.

Supervised learning is the most common type of machine learning. It involves training a computer on a labeled dataset, where the desired output is ■

Summarize Book



summarize the book Gullivers travels



Gulliver's Travels is a satirical novel written by Jonathan Swift in 1726. The book tells the story of Lemuel Gulliver, a ship's surgeon who becomes shipwrecked and ends up on a series of strange and fantastical islands. The novel is divided into four parts, each of which tells the story of Gulliver's travels to a different island.

In Part 1, Gulliver washes up on the island of Lilliput, where he encounters a race of tiny people who are locked in a bitter war with their neighboring island of Blefuscus. Gulliver becomes embroiled in the politics of the island and ultimately helps the Lilliputians defeat the Blefuscudians.

In Part 2, Gulliver travels to the island of Brobdingnag, where he encounters a race of giants. He is initially treated kindly by ■

Answer Interview Questions



How to answer the interviewer what is your weakness



When answering this question, it is best to be honest, but also to frame your answer in a positive way. For example, you could say something like: "I have a tendency to be a perfectionist and sometimes struggle with delegating tasks. However, I have been working on this by learning to trust my team members and giving them more responsibility." This shows that you are aware of your weakness and actively working to improve it.

(Ref: Top 10 Chat GPT Use Cases - Simplilearn)

Develop Apps



I want to write an android app that shows me 50 stock prices as a list from yahoo API. How can i do it?



To write an Android app that shows a list of 50 stock prices from the Yahoo API, you will need to do the following:

1. Create a new Android project using Android Studio or another development environment.
2. Register for a Yahoo API key, which will allow you to access financial data such as stock prices.
3. Use the Retrofit library to make API calls to the Yahoo API. You can use the Retrofit library to create an interface that defines the API endpoints, and then use this interface to make API calls.

4 ■

(Ref: Top 10 Chat GPT Use Cases - Simplilearn)

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Create Health Plan



My weight is 95 kg and I want to loose it. create 7 days plan excercise and diet planfor it.



Here is a 7-day exercise and diet plan that can help you lose weight:

Day 1:

- Exercise: 30-minute brisk walk or jog
- Diet: Start your day with a healthy breakfast of oatmeal, berries, and a boiled egg. For lunch, have a salad with grilled chicken or fish. For dinner, have grilled vegetables and a small serving of lean protein.

Day 2:

- Exercise: 45-minute circuit training routine that includes bodyweight exercises such as push-ups, ■

Answer General Knowledge Questions



Who invented the first printer?



The first printer was invented by a German goldsmith named Johannes Gutenberg in the 15th century. He developed a printing press that used movable type, which made it possible to print books and other documents quickly and cheaply. The Gutenberg press used metal movable type, which was set into a wooden form and inked, then pressed onto paper. This invention revolutionized the way information was disseminated and made the mass production of books possible.

Gutenberg's invention of the printing press is widely regarded as one of the most important events in the second millennium, it is considered the most important invention of the second millennium, after the invention of the wheel.

(Ref: Top 10 Chat GPT Use Cases - Simplilearn)

Applications of Prompts to Marketing

YHK

LinkedIn Post Generator

(Ref: A Beginner's Guide to Prompt Engineering with ChatGPT - Datacamp)

- 1 Act as a social media copywriter. Create a LinkedIn post about a webinar titled "Generative AI Applications for Enterprise Organizations".
- 3 Unlocking the Power of Creative Automation". Follow my instructions and follow them very carefully! Do not deviate away from my instructions!
- 5
- 7 1. Provide a step by step reasoning of why you're making the decisions you are making
- 9 2. Write an engaging, professional LinkedIn post.
3. Make your LinkedIn post around 800 characters.
- 11 4. Use small paragraphs, add lists and line breaks, a small amount of emojis, to make the post easier to read.
- 13 5. Have a credible, professional, and accessible voice and tone. A good example would be that of DataCamp, McKinsey, and other reputable organizations.
- 15 6. Avoid bad copy.
- 17 7. Avoid inaccuracies.

Twitter Thread Creator

(Ref: A Beginner's Guide to Prompt Engineering with ChatGPT - Datacamp)

- 1 Act as a social media copywriter. Create a Twitter thread about a webinar titled "Generative AI Applications for Enterprise Organizations: Unlocking the Power of Creative Automation". Follow my instructions. and follow them very carefully! Do not deviate away from my instructions!
- 7 1. Provide a step by step reasoning of why you're making the decisions you are making
- 9 2. Write an engaging twitter thread.
- 11 3. Make your twitter thread post around 'n' tweets long
- 13 4. Make your twitter thread informative, engaging, and visually appealing by using one emoji per tweet.
- 15 5. Have a credible, professional, and accessible voice and tone. A good example would be that of DataComp, McKinsey, and other reputable organizations.
6. Avoid bad copy.
7. Avoid inaccuracies

Ad Copy Creator

(Ref: A Beginner's Guide to Prompt Engineering with ChatGPT - Datacamp)

Act as a paid media copywriter. Create {Social Channel} paid ad copy about a
2 webinar titled "Generative AI Applications for Enterprise Organizations:
Unlocking the Power of Creative Automation". Follow my instructions.
4 and follow them very carefully! Do not deviate away from my
instructions!
6
1. Provide a step by step reasoning of why you're making the decisions
8 you are making
2. Write an engaging {platform} ad, that will maximize conversions.
10 3. Make your {platform} post is around {character limit} long
4. Have a credible, professional, and accessible voice and tone. A
12 good example would be that of DataComp, McKinsey, and other reputable
organizations.
6. Avoid bad copy.
14 7. Avoid inaccuracies
8. Provide at least 3 variations

Email Generator

(Ref: A Beginner's Guide to Prompt Engineering with ChatGPT - Datacamp)

- 1 Act as a sales person. Create a cold email to a prospect discussing {service they might be interested **in**} **and** how it can be useful **for** their organizations. Follow my instructions **and** follow them very carefully! Do **not** deviate away **from** my instructions!
- 5
- 7 1. Provide a step by step reasoning of why **you're making the decisions** you are making
- 9 2 Make sure the email is professional, personable, concise, and useful
- 11 3. Make sure to speak to their pain point, as {title}, the prospect usually has {x} pain point
- 13 4. Avoid bad copy.
- 15 5. Be respectful of their time, do not add any useless details about how you prepared for writing this email
6. Avoid inaccuracies.
7. Make sure the email is at most 100 words long

Contract Reviewer

(Ref: A Beginner's Guide to Prompt Engineering with ChatGPT - Datacamp)

Act as a lawyer. Explain the following legal language to me. Follow my
instructions and follow them very carefully.

1. Provide a step by step reasoning of why you're making the decisions
you are making

2. Explain the legal language to me as a layman. I am not a lawyer.

3. Avoid inaccuracies.

"Inspection of Goods & Rejection. The Buyer is entitled to inspect the
Goods upon delivery. If the Goods are unacceptable for any reason,
the Buyer must reject them at the time of delivery or within five (5)
business days from the date of delivery. If the Buyer has not rejected
the Goods within five (5) business days from the date of delivery, the
Buyer shall have waived any right to reject that specific delivery of
Goods. In the event the Buyer rejects the Goods, the Buyer shall allow
the Seller a reasonable time to cure the deficiency. A reasonable time
period shall be determined by industry standards for the particular goods
as well as the Seller and the Buyer.

Customer Support Problem Solver

(Ref: A Beginner's Guide to Prompt Engineering with ChatGPT - Datacamp)

Act as a customer service representative. Please respond to the
following customer ticket. Follow my instructions **and** follow them very
carefully! Do **not** deviate away **from** my instructions!

1. Provide a step by step reasoning of why you're making the decisions
you are making

2. Make sure your response is comprehensive, concise, clear, and
cordial

3. Provide the customers with the answer outlined below.

4. Avoid inaccuracies.

5. Set a word count limit of 50 words long

- Customer Problem Example used: Will there be a recording of the
webinar available?

- Solution: Yes, webinars and recordings will be sent to you via email within
a few days.

Creating Social Media Posts

- ▶ Basic Prompt: "Write a tweet promoting our new product launch in 280 characters or less."
- ▶ Comprehensive Prompt
 - ▶ Context: You are a seasoned Marketing professional working for a well-established company in the tech industry. Your company has recently launched a new product and is looking to generate buzz and engage with its target audience through social media platforms. As the lead marketer, you are responsible for creating compelling social media posts that effectively promote the product, drive user engagement, and ultimately contribute to increasing sales and brand awareness.
 - ▶ Prompt: Create a series of five social media posts (one for each major platform) that effectively promote the company's new product. Each post should be concise, visually appealing, and tailored to the specific platform's requirements and audience preferences. Your goal is to capture the attention of the target audience, spark their interest, and encourage them to take action (e.g., visit the company's website, sign up for a newsletter, or make a purchase).
 - ▶ Guardrails:
 - ▶ The total character count for each social media post should not exceed 280 characters for Twitter, 2,200 characters for LinkedIn, and 2,200 characters for Facebook.
 - ▶ Each post should include relevant hashtags, mentions, or links, as appropriate, to maximize visibility and encourage social sharing.
 - ▶ Ensure that the language and tone of the posts align with the company's brand

Creating Social Media Posts

Comprehensive Prompt

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 - ▶ Each post should include relevant hashtags, mentions, or links, as appropriate, to maximize visibility and encourage social sharing.
 - ▶ Ensure that the language and tone of the posts align with the company's brand voice and values.
 - ▶ Utilize compelling visuals, such as images or videos, to enhance the impact of each post.
 - ▶ Tailor the content and format of the posts to suit the specific platform's requirements and audience preferences. For example, use hashtags and concise messaging for Twitter, a more professional tone for LinkedIn, and engaging storytelling for Facebook.

Example Social Media Posts

- ▶ Twitter Post (280 characters max): "Introducing our game-changing product that will revolutionize your life! Discover how our [Product Name] boosts productivity, saves time, and amplifies results. Click the link below to learn more! #ProductLaunch #TechInnovation #BoostYourLife"
- ▶ LinkedIn Post (2,200 characters max): "Attention professionals! We're excited to announce our latest breakthrough – [Product Name]. Designed to streamline workflows and optimize efficiency, it's the perfect tool to elevate your productivity game. Join the revolution today! [Include compelling visual and link] #ProductivityTools #WorkSmarter #LinkedInExclusive"
- ▶ Facebook Post (2,200 characters max): "Attention all dreamers and doers! We're thrilled to introduce [Product Name], the ultimate solution to help you achieve your goals. Dive into the possibilities, unleash your potential, and embark on a journey of success with our game-changing product. [Include captivating video and call-to-action] #DreamBig #SuccessStories #AchieveMore"
- ▶ Instagram Post (2,200 characters max): "Ready to level up your game? Introducing [Product Name], the game-changer you've been waiting for! Take charge of your destiny and unlock new possibilities with our revolutionary tool. Double tap if you're excited to learn more! [Include eye-catching image and swipe-up link] #GameChanger #UnlockPotential #InstaInnovation"
- ▶ TikTok Post (280 characters max): "Brace yourself for a mind-blowing experience! Get ready to witness the future of [Product Category] with our game-changing [Product Name]. Join the trendsetters, unlock your potential, and transform your life with this revolutionary tool! #ProductLaunch #TikTokTrendsetters #GameChanger"

Writing Email Subject Lines

- ▶ Basic Prompt: "Craft a subject line for our upcoming newsletter that will entice subscribers to open it."

Generating Blog Post Titles

- ▶ Basic Prompt: "Come up with a catchy title for a blog post about the benefits of our product."

Creating Ad Copy

- ▶ Basic Prompt: "Write a Facebook ad that will encourage users to sign up for our free trial."

Developing Website Copy

- ▶ Basic Prompt: "Write a landing page headline that will grab the attention of visitors and encourage them to learn more about our product."

Crafting Product Descriptions

- ▶ Basic Prompt: "Write a product description that highlights the key features and benefits of our new release."

Creating Video Scripts

- ▶ Basic Prompt: "Write a script for a product explainer video that will engage viewers and encourage them to learn more about our offering."



Developing Podcast Episode Titles

- ▶ Basic Prompt: "Come up with a title for our next podcast episode that will entice listeners to tune in."

Writing Press Releases

- ▶ Basic Prompt: "Craft a press release announcing our latest funding round that will grab the attention of journalists and investors."

Developing Case Studies

- ▶ Basic Prompt: "Write a case study that showcases how our product helped a customer achieve their goals."

Creating Infographics

- ▶ Basic Prompt: "Develop an infographic that illustrates the key benefits of our product in a visually engaging way."

Crafting Social Media Ad Copy

- ▶ Basic Prompt: "Write a Twitter ad that will encourage users to click through to our landing page and learn more about our product."

Developing Email Body Copy

- ▶ Basic Prompt: "Write the body copy for an email promoting our upcoming webinar that will encourage recipients to register."

Creating Website Headlines

- ▶ Basic Prompt: "Write a headline for our homepage that will grab the attention of visitors and encourage them to explore our site."

Developing Product Demo Scripts

- ▶ Basic Prompt: "Write a script for a product demo video that will showcase the key features and benefits of our offering."

Crafting Social Media Captions

- ▶ Basic Prompt: "Write an Instagram caption that will encourage users to engage with our brand and share our content."

Developing White Paper Titles

- ▶ Basic Prompt: "Come up with a title for our latest white paper that will entice readers to download and read it."

Creating Webinar Titles

- ▶ Basic Prompt: "Come up with a title for our upcoming webinar that will encourage attendees to register and tune in."

Developing Email Subject Lines for Abandoned Cart Emails

- ▶ Basic Prompt: "Craft a subject line for an abandoned cart email that will encourage customers to complete their purchase."

Creating Social Media Graphics

- ▶ Basic Prompt: "Develop a social media graphic that highlights the key benefits of our product in a visually engaging way."

Crafting Ad Headlines

- ▶ Basic Prompt: "Write a headline for a Google ad that will encourage users to click through to our landing page and learn more about our product."

Developing Email Body Copy for Welcome Emails

- ▶ Basic Prompt: "Write the body copy for a welcome email that will encourage new subscribers to engage with our brand and learn more about our offerings."

Creating Social Media Videos

- ▶ Basic Prompt: "Develop a short video for Instagram that showcases the key features and benefits of our product."

Crafting Ad Descriptions

- ▶ Basic Prompt: "Write a description for a Facebook ad that will encourage users to click through to our landing page and learn more about our product."

Developing Email Subject Lines for Promotional Emails

- ▶ Basic Prompt: "Craft a subject line for a promotional email that will encourage recipients to take advantage of our limited-time offer."

More Prompts

- ▶ Suggest some effective marketing strategies for a [startup / business / product / company]
- ▶ How to improve social media engagement and increase followers for [product / business]?
- ▶ What are some creative ways to promote [product or service name] on social media?
- ▶ What are the most important SEO techniques for improving website traffic?
- ▶ What are some effective strategies for improving the SEO of a [type of website]?
- ▶ Can you help me come up with a creative advertising campaign for a new [product name] launch?
- ▶ How can I analyze and interpret data from my marketing campaigns to make better decisions?
- ▶ What are some best practices for email marketing to increase open rates and click-through rates?
- ▶ How can I leverage influencer marketing to promote my [product / service name / brand]?
- ▶ Can you provide some tips for creating a successful content marketing strategy?
- ▶ What are the most effective ways to convert website visitors into customers?
- ▶ How can I optimize my landing pages for better conversion rates?

More Prompts

- ▶ Suggest a catchy slogan for [product or service name]
- ▶ Create a list of potential target audiences for [product or service name]
- ▶ Develop a content marketing plan for [product or service name] that includes blog posts, social media, and email campaigns
- ▶ What are some proven methods for building brand awareness for [company / product name] among a wider audience?
- ▶ Create a buyer persona for [product or service name] that includes their demographics, interests, and pain points
- ▶ What are some effective ways to measure the ROI of [marketing campaign or strategy]?
- ▶ Develop a lead nurturing email campaign for [product or service name] that encourages prospects to take action
- ▶ Provide some ideas for blog posts about [topic]
- ▶ Write a description for [product or service or company]
- ▶ Suggest inexpensive ways to promote [product or service or company] without social media
- ▶ How to obtain high quality backlinks to improve [website] SEO

Conclusions

Advantages

- ▶ Conversational Abilities
- ▶ Solving Complex Problems
- ▶ Retaining Previous Information
- ▶ Will replace mundane language tasks, How to articles, homework, etc

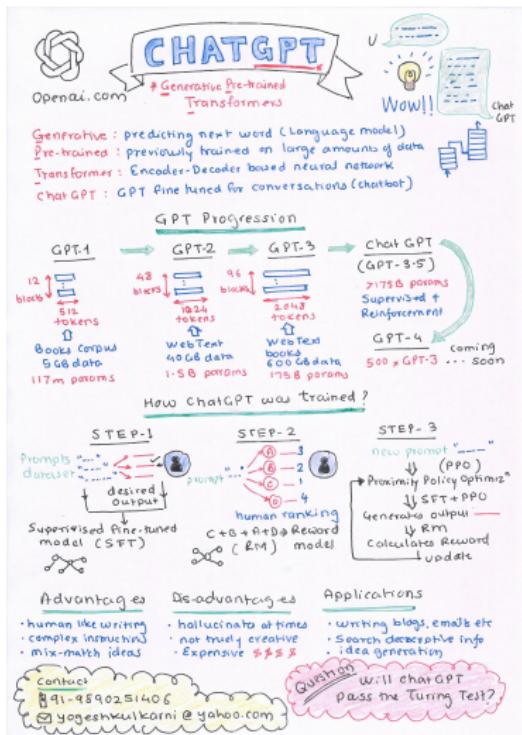
Dis-advantages

- ▶ Sensitive to Input Phrasing
- ▶ Cannot replace humans for innovation, for which data does not exist already
- ▶ Keeps “hallucinating”: Tends to write plausible but incorrect content with confidence
- ▶ May not get language structure right all the time, e.g try getting ghazal written

Compared to humans?

- ▶ Although GPT models are far more knowledgeable due to vast training (GPT-3 was trained on 499B tokens, GPT-4 on 1.4 T tokens whereas a human can read about 5.26B tokens in 80 years)
- ▶ It's not about the volume of data ...
- ▶ Children can talk long before they reach adulthood, and it's likely that < 1B tokens is enough for a human to master language. Need to figure out how nature has made her neural network so efficient.
- ▶ Imagine the pretraining done over billions of years at the time a baby comes ready with

My Sketchnote



(Ref: <https://medium.com/technology-hits/overview-of-chatgpt-95f4b43645c0>)

The After-shocks

ChatGPT vs Google: Who is better?



Google: almost latest data, gives source, not trainable, looks more accurate

ChatGPT: a bit old data, no source, trainable, hallucinates

(Ref: ChatGPT Explained: Complete A-Z Guide - Kripesh Adwani)

Will ChatGPT Kill Jobs?



Repetitive, boring and standard, language based jobs, for sure. Need to be more creative, experiential to stand against ChatGPT.

(Ref:ChatGPT Explained: Complete A-Z Guide - Kripesh Adwani)

New Job Roles?

Prompt Engineer: Preparing input to AI effectively to get the desired answer.
Will need to AI works in the background plus domain knowledge. Give context, examples etc to prime the model to give short specific answers than the usual page-long ones (davinci GPT3 in this case)

Playground Q&A Save View code Share ...

I am a highly intelligent question answering bot. If you ask me a question that is rooted in truth, I will give you the answer. If you ask me a question that is nonsense, trickery, or has no clear answer, I will respond with "Unknown".

Q: What is human life expectancy in the United States?
A: Human life expectancy in the United States is 78 years.

Q: Who was president of the United States in 1955?
A: Dwight D. Eisenhower was president of the United States in 1955.

Q: Which party did he belong to?
A: He belonged to the Republican Party.

Q: What is the square root of banana?
A: Unknown

Q: How does a telescope work?
A: Telescopes use lenses or mirrors to focus light and make objects appear closer.

Q: Where were the 1992 Olympics held?
A: The 1992 Olympics were held in Barcelona, Spain.

Mode: text-davinci-003
Temperature: 0
Maximum length: 100
Stop sequences: Enter sequence and press Tab
Top P: 1
Frequency penalty: 0
Presence penalty: 0

(Ref: Advanced ChatGPT Guide - How to build your own Chat GPT Site - Drian Twarog)

The Hype



Elon Musk ✅ @elonmusk · Dec 4

Replies to @sama

ChatGPT is scary good. We are not far from dangerously strong AI.

...



François Chollet ✅ @fchollet · 8h

With apps like Midjourney, Lensa, and ChatGPT, the age of consumer AI has finally arrived.

...



@jh@sigmoid.social (Mastodon) @jeremyphoward · 9h

...

I remember well when Google was first released. I felt confident that it would become a critical tool that we'd all rely on.

I haven't felt that way again, until now: ChatGPT.

In just a few days I've gotten so much out of it.

(Ref: ChatGPT - Intro & Potential Impact Sudalai Rajkumar, SRK)

Finally, from horses mouth!!



Sam Altman  @sama · 10 dic.

ChatGPT is incredibly limited, but good enough at some things to create a misleading impression of greatness.

it's a mistake to be relying on it for anything important right now. it's a preview of progress; we have lots of work to do on robustness and truthfulness.

877 3.856 27,5 mil

(Ref: ChatGPT: training process, advantages, and limitations - By Sergio Soage, Machine Learning Engineer at Aivo)

References

- ▶ Let's build GPT: from scratch, in code, spelled out: Andrej Karpathy
- ▶ ChatGPT and Reinforcement Learning - CodeEmporium

Thanks ...

- ▶ Search "**Yogesh Haribhau Kulkarni**" on Google and follow me on LinkedIn and Medium
- ▶ Office Hours: Saturdays, 2 to 5pm (IST); Free-Open to all; email for appointment.
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(Generated by Hugging Face QR-code-AI-art-generator,
with prompt as "Follow me")