

**A.I. Show & Tell:
It's Not That Scary...If You Know How To Use It**



**George
Butters**



...And Friends



**Dr. Nadine
Robinson**

AI Basics for Freelancers

AI Show & Tell Panel



**Dr. Nadine
Robinson**

Nadine is a freelance writer, best-selling author and academic. She started her career as an accountant, including teaching it at university for eight years. She still does her own books, originally as a sole proprietor and now for her corporation. She has a Doctorate in Business Administration, with an International MBA.

**George
Butters**

George is a multi-media freelance writer / broadcaster who's been making his living online for more than 20 years. He lives in the space between communications and information technology, and is always on the hunt for new tools and techniques that can be applied to his freelance work. And he loves to share his discoveries.



What is ChatGPT?

ChatGPT (Chat Generative Pre-trained Transformer) is a [chatbot](#) developed by [OpenAI](#) and launched on November 30, 2022. Based on a [large language model](#), it enables users to refine and steer a conversation towards a desired length, format, style, level of detail, and language. Successive prompts and replies, known as [prompt engineering](#), are considered at each conversation stage as a context.^[2]

FROM WIKIPEDIA, THE FREE ENCYCLOPEDIA

'Generative' refers to the software's ability to generate 'new' content. It's 'Pre-trained' in that it draws from its massive store of existing human and computer languages in its model. It can 'Transform' existing material into something 'new' based on the language model(s) used and the prompts and associated materials provided by the user.

There are multiple versions of ChatGPT, with ChatGPT 3.5 being the free and least capable version. ChatGPT4 and ChatGPT4Turbo are paid versions, which have features and capabilities not available in the free version.

Artificial Intelligence Terms

Fundamental AI Concepts

- **Artificial Intelligence (AI):** A field of computer science dedicated to creating systems capable of tasks that typically require human intelligence.
- **Machine Learning (ML):** A subset of AI focusing on algorithms that enable computers to learn and improve from experience.
- **Algorithm:** A set of rules or instructions given to an AI program to help it learn and make decisions.
- **Neural Network:** A machine learning model designed to simulate the way human brains process information.
- **Deep Learning:** A branch of machine learning involving neural networks with multiple layers, effective in identifying complex patterns.
- **Supervised Learning:** Machine learning where models are trained on labeled datasets, learning to predict outputs from inputs.

Fundamental AI Concepts (cont)

- **Unsupervised Learning:** Machine learning technique where the system learns patterns from unlabeled data without guidance.
- **Natural Language Processing (NLP):** A domain of AI that focuses on the interaction between computers and human language.
- **Computer Vision:** A field of AI that enables computers to interpret and understand visual information from the world.
- **Data Mining:** The process of discovering patterns and insights from large sets of data, often using AI and machine learning algorithms.

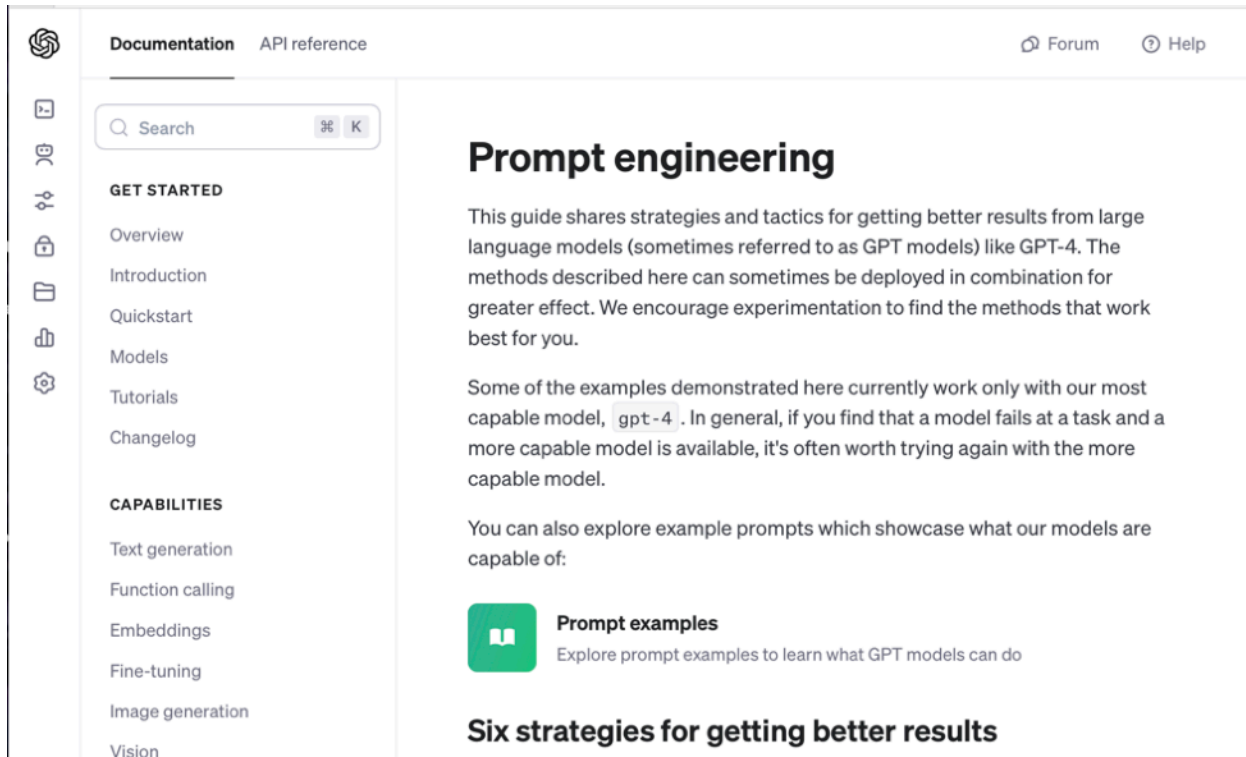
Advanced and Specialized AI Concepts

- **Cognitive Computing:** Mimicking human thought processes in a computerized model, involving self-learning systems using data mining and pattern recognition.
- **Predictive Analytics:** Using statistical algorithms and machine learning to predict future outcomes based on historical data.
- **Generative Adversarial Networks (GANs):** A neural network model architecture used in unsupervised machine learning tasks.
- **Transfer Learning:** Applying knowledge gained in one problem to different but related problems in machine learning.
- **Sentiment Analysis:** Determining whether data (usually text) is positive, negative, or neutral, used in opinion mining.
- **Explainable AI (XAI):** AI systems where the results are understandable by humans, offering transparency in AI decision-making.
- **Edge AI:** AI algorithms processed locally on a hardware device, using data generated on the device.
- **Quantum Machine Learning:** Combining quantum physics with machine learning, developing algorithms that run on quantum computers.
- **Autonomous Systems:** Systems capable of performing tasks without human intervention, such as autonomous vehicles.
- **Natural Language Generation (NLG):** Turning data into text, enabling computers to communicate ideas with accuracy.

Specialized Applications and Concepts in AI

- **Artificial General Intelligence (AGI):** AI that can understand, learn, and apply intelligence broadly like a human being.
- **Chatbot:** A software application used to conduct an online chat conversation via text or text-to-speech.
- **Bias in AI:** Systematic and unfair discrimination in AI outputs, often due to biases in training data or algorithms.
- **AI Ethics:** The set of values and principles guiding moral conduct in the development and use of AI technologies.
- **Robotics:** The design, construction, operation, and use of robots, often integrated with AI for autonomous functions.
- **AI Governance:** Legal and ethical policies and guidelines governing the use of AI, ensuring responsible and ethical usage.
- **AI in Healthcare:** The application of AI in healthcare, including patient outcome prediction, diagnosis, and treatment personalization.
- **Human-in-the-loop (HITL):** An interaction model where a human is involved in the AI decision-making process for reliability and trustworthiness.
- **Augmented Intelligence:** AI that focuses on enhancing human intelligence rather than replacing it.

OpenAI Prompt Engineering Guide



The screenshot displays the OpenAI documentation interface. At the top left is the OpenAI logo. The main header includes 'Documentation' and 'API reference' on the left, and 'Forum' and 'Help' on the right. A search bar is located below the header. The left sidebar contains a navigation menu with icons and text links. The main content area features the title 'Prompt engineering' and several paragraphs of text. A green callout box with a book icon is positioned above the section 'Six strategies for getting better results'.

Documentation API reference Forum Help

Search ⌘ K

GET STARTED

- Overview
- Introduction
- Quickstart
- Models
- Tutorials
- Changelog

CAPABILITIES


- Text generation
- Function calling
- Embeddings
- Fine-tuning
- Image generation
- Vision

Prompt engineering

This guide shares strategies and tactics for getting better results from large language models (sometimes referred to as GPT models) like GPT-4. The methods described here can sometimes be deployed in combination for greater effect. We encourage experimentation to find the methods that work best for you.

Some of the examples demonstrated here currently work only with our most capable model, `gpt-4`. In general, if you find that a model fails at a task and a more capable model is available, it's often worth trying again with the more capable model.

You can also explore example prompts which showcase what our models are capable of:

 **Prompt examples**
Explore prompt examples to learn what GPT models can do

Six strategies for getting better results

OpenAI Prompt Examples



Prompt examples

Explore what's possible with some example prompts

All categories

All categories

Extract

Generate

Transform

Code

Natural language

Structured data



Grammar correction

Convert ungrammatical statements into standard English.



Parse unstructured data

Create tables from unstructured text.



Calculate time complexity

Find the time complexity of a function.



Keywords

Extract keywords from a block of text.



Python bug fixer

Find and fix bugs in source code.



Tweet classifier

Detect sentiment in a tweet.



Mood to color

Turn a text description into a color.



Marv the sarcastic chat bot

Marv is a factual chatbot that is also sarcastic.



Summarize

Simplify second



Emoji

Translate



Explain code

Explain a complicated piece of code.



Product name generator

Generate product names from a description and seed words.



Spreadsheet creator

Create spreadsheets of various kinds of data.



Airport code extractor

Extract airport codes from text.



VR fitness idea generator

Generate ideas for fitness promoting virtual reality games.



Turn by turn directions

Convert natural language to turn-by-turn directions.



Pros and Cons - The Human

Capabilities	Limitations	Concerns
<ul style="list-style-type: none">• It can write plausible sounding text on any topic.• It can generate answers to a range of questions, including coding, math-type problems and multiple choice.• It is getting increasingly accurate and sophisticated with each release.• It generates unique text each time you use it.• It's great at other tasks like text summarization.	<ul style="list-style-type: none">• It can generate plausible but incorrect information.• ChatGPT's large language model (GPT-3) is only trained on information up until Sept 2021 (but those with a paid ChatGPT plan have access to a version that can access the Internet).• It has limited ability to explain the sources of information for its responses (this varies between large language models).	<ul style="list-style-type: none">• It can and does produce biased output (culturally, politically, etc.).• It can generate unacceptable output.• It has a high environmental impact, concerns around human labor and ownership of training material.• It presents security and privacy concerns around the way users' data is used to train the models.• There is a danger of digital inequity.

Michael Webb, "2.3. A summary of key capabilities, limitations, and concerns around ChatGPT and other Large Language Models," A Generative AI Primer, National Centre for AI, last modified May 22, 2023, <https://nationalcentreforai.jiscinvolve.org/wp/2023/05/11/generative-ai-primer/>.

Pros and Cons - The Bot

We asked ChatGPT to provide us with a list of the most important pros and cons of using it in our work environment. Here are the responses.

Pros

- **Efficiency and Time-Saving:** Chatbots can quickly provide information, answer queries, and assist with tasks, saving employees' time and increasing productivity.
- **Availability:** Unlike humans, chatbots are available 24/7, providing constant support and ensuring that help is always at hand, even outside of regular working hours.
- **Consistency in Responses:** Chatbots offer consistent answers to queries, ensuring that the information provided is uniform and reliable, reducing the risk of human error or bias.
- **Scalability:** Chatbots can handle multiple queries simultaneously, making them scalable solutions that can support a large number of employees or customers without additional cost.
- **Reduced Workload on Staff:** By handling routine inquiries and tasks, chatbots can reduce the workload on human employees, allowing them to focus on more complex and creative tasks.
- **Data Collection and Analysis:** Chatbots can collect and analyze data from interactions, providing valuable insights into common queries, employee needs, and areas for improvement.

Cons

- **Limited Understanding and Responses:** Chatbots, based on current AI technology, may not fully understand complex, nuanced, or context-heavy queries, leading to inaccurate or irrelevant responses.
- **Lack of Emotional Intelligence:** Chatbots cannot empathize or understand emotional nuances, which can be important in certain types of communication and support roles.
- **Dependency on Data and Programming:** The effectiveness of a chatbot is highly dependent on the quality of its programming and the data it has been trained on, which can limit its scope and reliability.
- **Security and Privacy Concerns:** Handling sensitive information through chatbots raises concerns about data security and privacy, especially if the chatbot is cloud-based and data is stored externally.
- **Potential for Miscommunication:** Misinterpretations or misunderstandings in communication can occur, especially in complex discussions or when dealing with ambiguous language.
- **Cost and Resources for Implementation and Maintenance:** Setting up and maintaining a sophisticated chatbot like ChatGPT can require significant investment in terms of time, money, and technical expertise.
- **Over-reliance Risk:** There's a risk of becoming too reliant on chatbots, which might lead to underdevelopment of human skills or overlooking the value of human judgment and creativity.

In summary, while chatbots like ChatGPT can greatly enhance efficiency and provide valuable support in a work environment, it's crucial to be aware of their limitations and to use them as a complement to, rather than a replacement for, human skills and judgment.

Six Strategies for Better Results

1. Write clear instructions
2. Provide reference text
3. Split complex tasks into simpler subtasks
4. Give the model time to 'think'
5. Use external tools
6. Test changes systematically

ChatGPT Advanced Mastery Cheat Sheet from Zero to Pro



KEY TERMS

Prompts: Written instructions given to ChatGPT -GPT-4: The latest AI model powering ChatGPT OpenAI: The company that built ChatGPT and GPT-4

Prompt Engineering: The technique of crafting the correct prompts to get your desired output

Generative AI: A category of AI that generates media like text, images, music, and movies

OpenAI: The company that built ChatGPT and GPT-4 Prompt Engineering: The technique of crafting the correct prompts to get your desired output.

Large language models: very big math equations that has the capability to predict the next word

Model: AI brain that learns from lot's of data for example ChatGPT, which is powered by GPT-3 and GPT-4, is an AI model developed by OpenAI.

Input: What you provide to the AI, usually in the form of a prompt or question

Output: AI's response to the input.

Token: A token in Chatbot GPT (e.g., OpenAI's GPT-3) refers to the smallest unit of text that the AI model can recognize and process. It can be a single character, a word, or a sequence of characters depending on the language or context.

Max token: The Total amount of text that AI can handle at once.

GPT 3.5 = 4096 tokens

GPT 4 = 8192 tokens

KEY FEATURES

Prompting: Instruct ChatPGT to produce text output that you want.

Web Browsing: Enables ChatGPT to access the internet and obtain up to date information to generate prompts. Plugins: Similar to Chrome plugins, these are add-ons you can install to increase the capability of ChatGPT.

Note: Web browsing and Plugins require a ChatGPT Plus subscription

MISCELLANEOUS TIPS

Roles:

- 1. Storyteller:** Create a short story about [insert theme]
- 2. Historian:** Provide a brief history of [insert event or topic]
- 3. Life Coach:** Give me advice on [insert personal issue or goal]
- 4. Curator:** Recommend [insert number] resources related to [insert topic]
- 5. Debater:** Present arguments for and against [insert issue or topic]

TONES

Write Using X Tone.

Professional Friendly Enthusiastic Empathetic Instructional	Reassuring Inspirational Persuasive Formal Professional Descriptive	Humorous Academic Firm Confident Poetic Narrative
-------------------------------------------------------------------------	------------------------------------------------------------------------------------	------------------------------------------------------------------

ALTERNATIVE CHATBOTS

Google Bard

Bing AI

Perplexity

Merlin

USEFUL PLUGINS

Zapier

Prompt Perfect

Noteable

Video Insights

Show Me

Bardeen

Ask Your PDF

Wolfram

Scholar AI

Web Pilot

Create QR Code

PROMPT STRUCTURES

The more specific the prompt is, the more desirable the outcomes will be

RTF: Role, Task, Format.

CTF: Context, Task, Format

TEACUP: Task, Elements, Audience, Context, Urgency, Purpose

RASCEF: Role, Action, Steps, Context, Examples, Format

SPIDER: Scenario, Problem, Instructions, Duration, Expectations, Results.

GRADE: Goal, Request, Action, Detail, Examples.

ROSES: Role, Objective, Scenario, Expected Solution, Steps

RDIREC: Role, Definition, Intent, Request, Example, Clarification Tone

Two methods to prompting:

Megaprompts: Write one big message that contains all of the above. E.g., ask for a full press release.

Prompt chaining: Break down the task into smaller steps. E.g., start by asking for a blog post idea, then an outline, then the content.

PROMPT GENERATION APPS

Prompt Base

Prompt Perfect

Prompt Den

Prompt Hero

FlowGPT

HOW TO LEARN FROM CHATGPT?

Like a curious explorer

As a Teacher

Precisely

As a poetic voyage

With an analogy

From a mentor's perspective

KEY USE CASES AND PROMPTS

- 1. Improve your communication:** I struggle with communicating clearly in [insert specific context, e.g., emails, meetings, presentations]. Provide me with practical tips and advice on how to effectively communicate my ideas and messages in these situations.
- 2. Expand your knowledge:** I want to explore [insert subject]. Create a comprehensive list of books, articles, and online resources that offer valuable insights and information on this subject, suitable for both beginners and advanced learners.
- 3. Master time management:** I am overwhelmed with my daily tasks and responsibilities. Develop a personalized time management strategy that will help me become more organized, efficient, and productive in my daily life.
- 4. Enhance your creativity:** I want to be more creative in [insert field or context]. Share effective techniques, exercises, and practices that can spark my creativity and promote innovative thinking.
- 5. Strengthen your problem-solving skills:** I want to become a better problem solver in [insert domain or context]. Identify key strategies and approaches that can help me analyze and tackle various challenges more effectively in this area.
- 6. Expand your professional network:** I want to grow my professional connections in [insert industry or field]. Provide a step-by-step plan to identify relevant individuals and events, as well as techniques on how to network efficiently and build lasting relationships in this industry.
- 7. Boost your motivation:** I struggle to maintain motivation for [insert task or goal]. Provide practical advice and suggestions on how to stay motivated, overcome obstacles, and consistently work towards achieving my desired outcome.

HOW TO DEFINE CHATBOT A ROLE?

Customer support agent

Sales representative

Project manager

Social media manager

SQL query executor

Recruiter

freedomwithai.com

CREATED BY

@avinash-mada



**CANADIAN
FREELANCE GUILD**

**Thank you for
your support.**

Editors Note: Portions of this document were created using ChatGPT, with human oversight before publication and release.

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