

GPT Survey: A Programmer's Perspective

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Outline

- 1 Lesson 1: Prompt Engineering: Principles, Techniques, and Tools
- 2 Lesson 2: Case Study: Become a Full-stack Engineer in 1 day
- 3 Lesson 3: Integrate GPT in Whole Coding Lifecycle
- 4 Lesson 4: Cutting-Edge GPT Projects and Showcases
- 5 Lesson 5: Customize GPT for More Power
- 6 References

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Lesson 1: Prompt Engineering: Principles, Techniques, and Tools

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Outline of Lesson 1

- 1 Lesson 1: Prompt Engineering: Principles, Techniques, and Tools
 - Prompt Workflows
 - Prompt Principles
 - Prompt Techniques
 - Tools and Extensions

Prompt Workflows

The Chat-GPT Cheat Sheet

Basic Structure of a Prompt:
Acting as a [ROLE] perform [TASK] in [FORMAT]

Act as a [ROLE]	Create a [TASK]	show as [FORMAT]
Marketer	Headline	A Table
Advertiser	Article	A List
Mindset Coach	Essay	Summary
Best Selling Author	Book Outline	HTML
Therapist	Email Sequence	Code
Website Designer	Social Media Post	Spreadsheet
Journalist	Product Description	Graphs
Inventor	Cover Letter	CSV file
Chief Financial Officer	Blog Post	Plain Text file
Copywriter	SEO Keywords	JSON
Prompt Engineer	Summary	Rich Text
Accountant	Video Script	PDF
Lawyer	Recipe	XML
Analyst	Sales Copy	Markdown
Ghostwriter	Analysis	Gantt Chart
Project Manager	Ad Copy	Word Cloud

Linked Prompting

- 1 - Provide me with the ideal outline for an effective & persuasive blog post.
- 2 - Write a List of Engaging Headlines for this Blog post based on 1.Topic.
- 3 - Write a List of Subheadings & Hooks for this same Blog post
- 4 - Write a List of Keywords for this Blog.
- 5 - Write a List of Compelling Call-to-Actions for the blog post
- 6 - Combine the best headline with the best Subheadings, Hooks, Keywords and Call-to-Action to write a blog post for [Topic]
- 7 - Re-write this Blog Post in the [Style], [Tone], [Voice] and [Personality].

Effective Use of this Powerful Tool Can Propel Your Business To The Forefront Of This Modern Business Landscape.

Prompt Priming

ZERO - "Write me 5 Headlines about [Topic]"

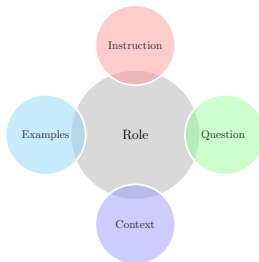
SINGLE - "Write me 5 Headlines about [Topic]. Here is an example of one headline: 5 Ways to Lose Weight"

MULTIPLE - "Write me 5 Headlines about [Topic]. Here is an example of some headlines: 5 Ways to Lose Weight, How to Lose More Fat in 4 Weeks, Say Goodbye to Stubborn Fat. Find a faster way to Lose Weight Fast"

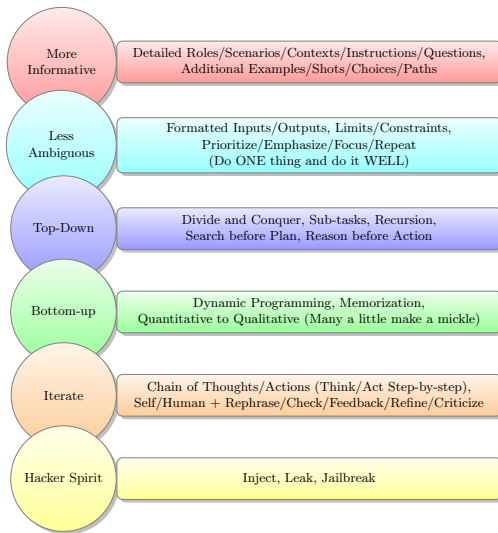
Prompts For Biz Owners

- Give me a list of inexpensive ideas on how to promote my business better?
- Acting as a Business Consultant, What is the best way to solve this problem of [Problem].
- Create a 30 Day Social Media Content Strategy based on [Topic 1] & [Topic 2].

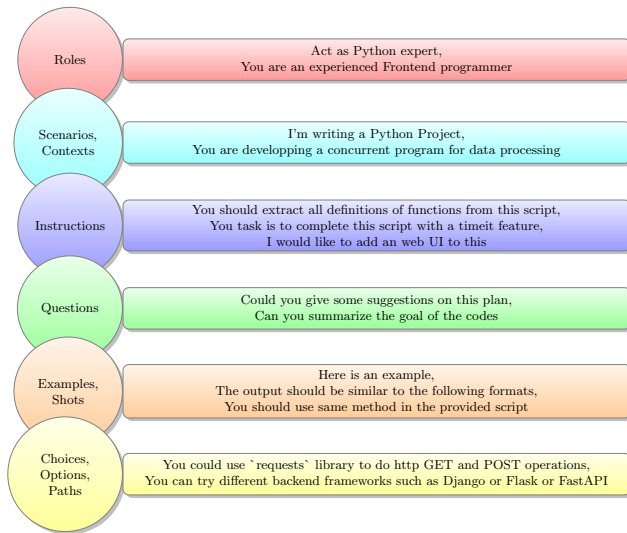
By @shaneozard



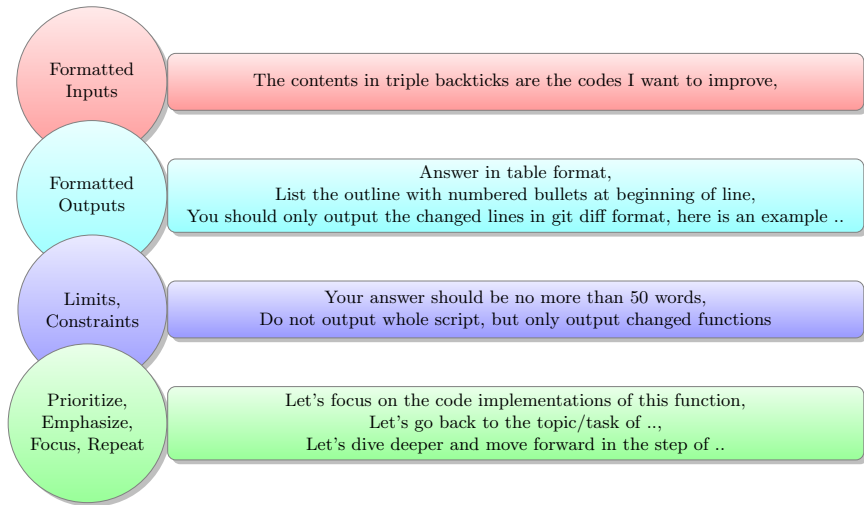
Prompt Principles



Prompt Techniques: More Informative



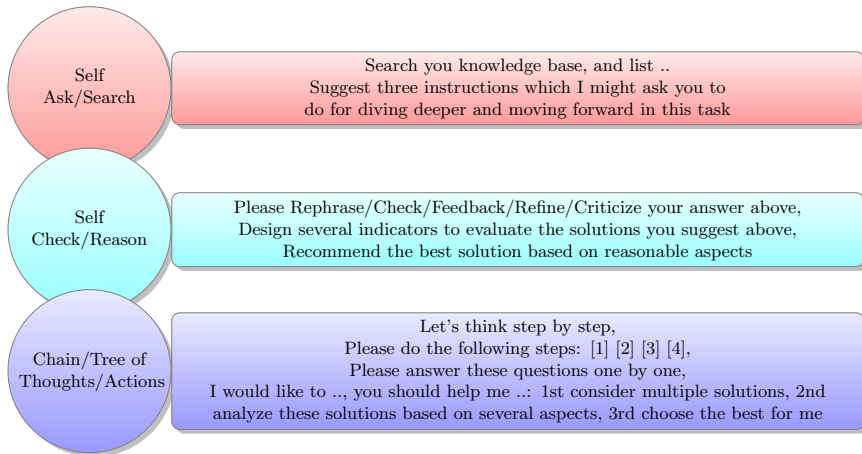
Prompt Techniques: Less Ambiguous



Prompt Techniques: Top-Down

Prompt Techniques: Bottom-up

Prompt Techniques: Iterate



Prompt Techniques: Hacker Spirit

Search Engine is Still Your Friend

Human Skills is Still Important

GPT applications comparisons

Tools and Extensions

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Lesson 2: Case Study: Become a Full-stack Engineer in 1 day

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Outline of Lesson 2

- 2 Lesson 2: Case Study: Become a Full-stack Engineer in 1 day
 - Software Development Life Cycle

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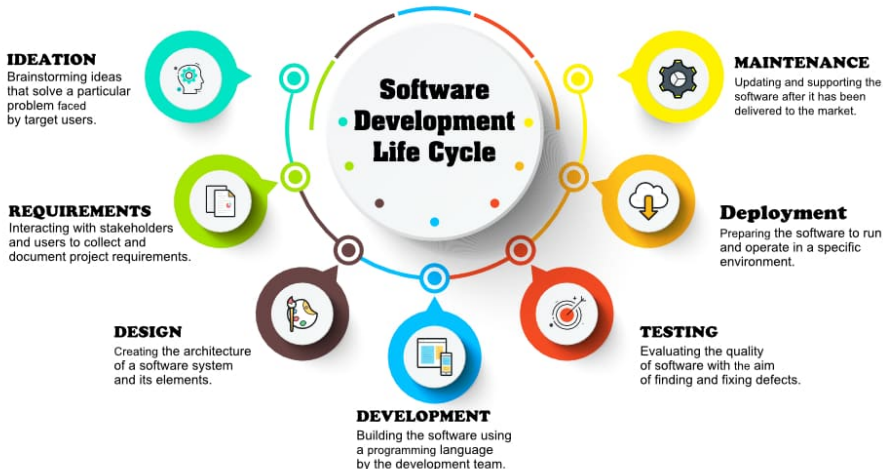
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Software Development Life Cycle



Let's Start

A Hello World Case

Here is where we start.

You

Write a Scrawler for me.

Bing AI

I'm sorry, but I'm not able to write a web scraper for you. However, I can provide you with information on how to write one yourself or where to find resources to learn how to do so. Would you like me to help you with that?

One Small Step for Prompt, One Giant Leap for Response

Little change makes huge effects

Add programming language; Use Scraper that AI understood.

You

Provide a Python Scraper script.

Bing AI

Here is a basic Python script that can be used as a starting point for writing a web scraper:

... (# Python codes Here)

This script uses the 'requests' and 'BeautifulSoup' libraries to fetch and parse the HTML of a web page. You can then use the methods provided by 'BeautifulSoup' to find and extract the data you want from the page.

Keep in mind that this is just a basic example and you may need to modify it to fit your specific needs. Additionally, make sure to follow any terms of service or usage policies for the website you are scraping.

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Lesson 3: Integrate GPT in Whole Coding Lifecycle

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Outline of Lesson 3

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Lesson 3: Integrate GPT in Whole Coding Lifecycle

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Lesson 4: Cutting-Edge GPT Projects and Showcases

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Outline of Lesson 4

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Lesson 5: Customize GPT for More Power

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Outline of Lesson 5

5 Lesson 5: Customize GPT for More Power

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Lesson 5: Customize GPT for More Power

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References I

1. SPQA: The AI-based Architecture That'll Replace Most Existing Software.
- <https://danielmiessler.com/blog/spqa-ai-architecture-replace-existing-software>
2. Introduction to prompt engineering - Azure OpenAI.
- **Introduction:** <https://learn.microsoft.com/en-us/azure/cognitive-services/openai/concepts/prompt-engineering>
- **Techniques:** <https://learn.microsoft.com/en-us/azure/cognitive-services/openai/concepts/advanced-prompt-engineering>
3. Azure OpenAI Service models.
- <https://learn.microsoft.com/en-us/azure/cognitive-services/openai/concepts/models>
4. Chat GPT For Programming: 100+ Coding Prompts For Chat GPT.
- <https://www.greataiprompts.com/chat-gpt/best-coding-prompts-for-chat-gpt>
5. Chat-GPT Cheat Sheet V2 : coolguides.
- **Reddit:** https://www.reddit.com/r/coolguides/comments/12ouw8o/chatgpt_cheat_sheet_v2
- **Cheatsheet:** <https://i.redd.it/eunvmybl9cua1.png>
6. ChatGPT Prompt Engineering Principles for Developers — Clarity and Specificity in Instructions.
- <https://levelup.gitconnected.com/chatgpt-prompt-engineering-principles-for-developers-clarity-and-specificity-in-instructions-61f60ffd1eed>
7. How to Communicate with ChatGPT – A Guide to Prompt Engineering.
- <https://www.freecodecamp.org/news/how-to-communicate-with-ai-tools-prompt-engineering>
8. Learn Prompting: Your Guide to Communicating with AI.
- **Doc:** <https://learnprompting.org/docs/intro>
- **GitHub:** https://github.com/trigaten/Learn_Prompting

References II

9. Prompt Engineering Guide.
 - Doc: <https://www.promptingguide.ai/>
 - GitHub: <https://github.com/dair-ai/Prompt-Engineering-Guide>
10. StarCoder: A State-of-the-Art LLM for Code.
 - HuggingFace: <https://huggingface.co/bigcode/starcoder>
 - GitHub: <https://github.com/bigcode-project/starcoder>
 - Blog: <https://huggingface.co/blog/starcoder>
 - Paper: <https://drive.google.com/file/d/1cN-b9GnWtHzQRoE7M7gAEyivY0kl4BYs/view>
11. Harnessing the Power of LLMs in Practice: A Survey on ChatGPT and Beyond.
 - arXiv: <https://arxiv.org/abs/2304.13712>
 - GitHub: <https://github.com/mooler0410/llmspracticalguide>
12. ChatGPT Prompt Engineering for Developers.
 - Official Course: <https://www.deeplearning.ai/short-courses/chatgpt-prompt-engineering-for-developers/>
 - Notebooks: <https://github.com/datawhalechina/prompt-engineering-for-developers/tree/main>
 - Bilibili: <https://www.bilibili.com/video/BV1No4y1t7Zn>
13. FlowGPT — the best ChatGPT prompts&AI prompts community.
 - <https://flowgpt.com/>
14. awesome-chatgpt-prompts: This repo includes ChatGPT prompt curation to use ChatGPT better.
 - GitHub: <https://github.com/f/awesome-chatgpt-prompts>
 - Webpage: <https://prompts.chat/>
 - HuggingFace: <https://huggingface.co/datasets/fka/awesome-chatgpt-prompts>
15. The Art of ChatGPT Prompting: A Guide to Crafting Clear and Effective Prompts.
 - <https://app.gumroad.com/d/e2e51298d50b8c1bd6c6950a6d11a772>

References III

16. PGF/TikZ Manual.

- [PDF](http://mirrors.ctan.org/graphics/pgf/base/doc/pgfmanual.pdf): <http://mirrors.ctan.org/graphics/pgf/base/doc/pgfmanual.pdf>
- [Online Doc](https://tikz.dev/): <https://tikz.dev/>
- [GitHub](https://github.com/pgf-tikz/pgf): <https://github.com/pgf-tikz/pgf>

