



PRACTICAL INSIGHTS
FROM MY 30 DAY JOURNEY:

Artificial Intelligence (AI)

TESTING EXPEDITION

Agenda



1 | Introduction

5 | Possibilities - Gen AI

2 | AI in Testing w/ MoT

6 | Prompt Engineering

3 | Duality - Gen AI

7 | Prompting Hacks

4 | IR 5.0

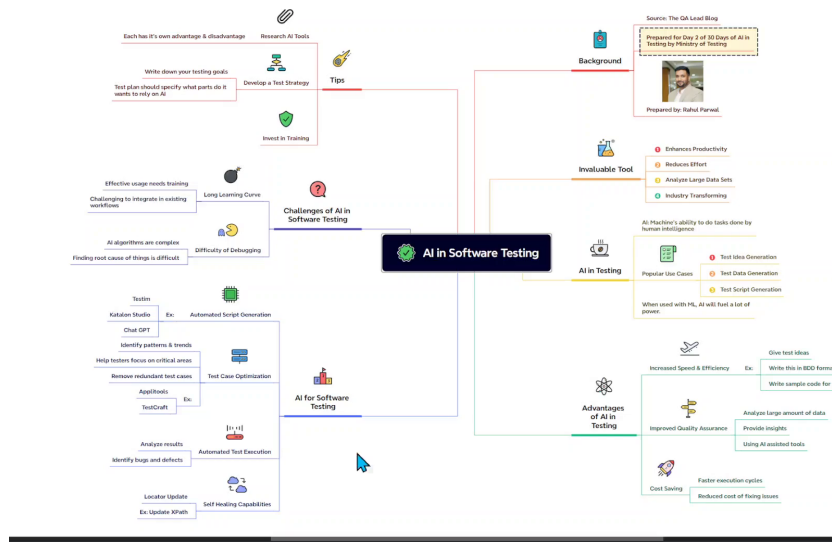
8 | Demo



30 Days of AI in Testing

Challenges:

- Day 1: Introduce yourself and your interest in AI
- Day 2: Read an introductory article on AI in testing and share your thoughts
- Day 3: List ways in which AI is used in testing
- Day 4: Watch the AMA on AI in Testing and share your key takeaways
- Day 5: Identify a case study on AI in testing and share your insights
- Day 6: Explore and share insights on AI testing tools
- Day 7: Research and share prompt engineering techniques
- Day 8: Craft a detailed prompt to support test activities
- Day 9: Evaluate prompt quality and try to improve it



AI in Testing by Rahul's Testing Titbits

Rahul's Testing Titbits

Public

27 videos 1,383 views Last updated on 30 Mar 2024

Play all **Shuffle**

Learn how to implement AI in Tester as a professional tester for your organization. This playlist covers various topics on AI in Testing such as AI Tools, Prompt Engineering, AI Applications, AI Risks, Limitations, Creating a AI Strategy and Plan.

All the best for you learning! Stay tuned :)

Sort

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- Powerful AI Tools for Testers (FREE) | Day 5 of 30 Days of AI in Testing | Ministry of Testing
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MADE WITH beautiful.ai



Visual chatGPT Studio

Jefferson Pires | 📄 22,751 installs | ★★ ★

Add chatGPT functionalities directly on Visual Studio.

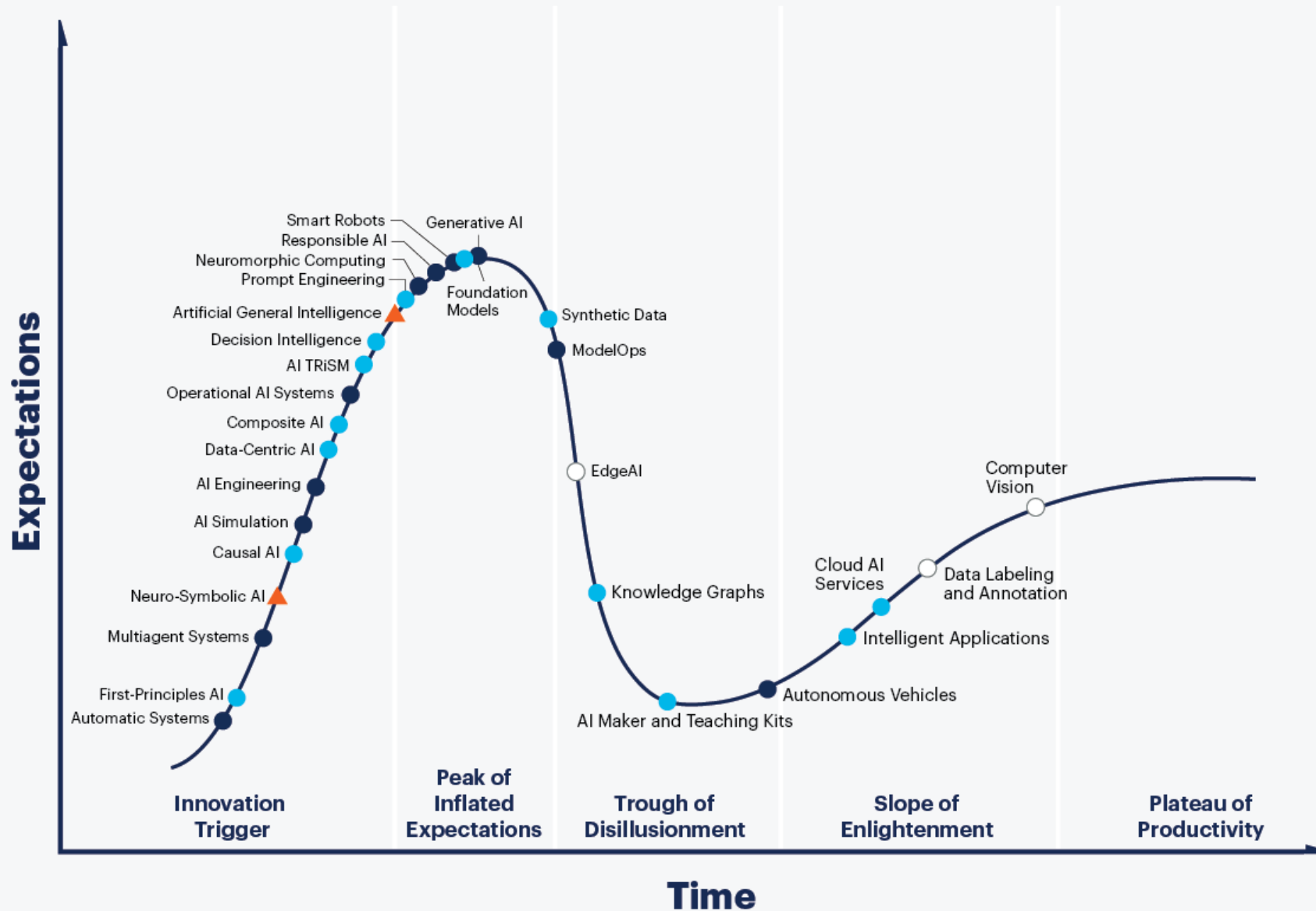
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Atlassian Intelligence



Hype Cycle for Artificial Intelligence, 2023



Plateau will be reached:

○ less than 2 years

● 2 to 5 years

● 5 to 10 years

▲ more than 10 years

⊗ obsolete before plateau

As of July 2023

Incuriosity	Avoids asking questions; does not seek clarification
Placation	Immediately changes answer whenever any concern is shown
Hallucination	Invents facts; makes reckless assumptions.
Arrogance	Confident assertion of an untrue statement; especially in the face of skepticism.
Incorrectness	Provides answers that are demonstrably wrong in some way (e.g., facts, math errors, using obsolete training data)
Capriciousness	Cannot reliably give a consistent answer to a similar question in different circumstances.
Forgetfulness	Appears not to remember its earlier output. Rarely refers to its own previous output. Limited to data within token window.
Redundancy	Needlessly repeats the same information within the same response or across multiple responses in the same conversation.
Incongruence	Does not apply its own stated processes and advice to its own actions. For example, it may declare that it made a mistake, state a different process, then fail to perform that process and make the same mistake, or commit a new mistake.
Negligence/Laziness	Gives answers that have important omissions; fails to warn about potential risks or critical ambiguities.
Opacity	Gives little guidance about the reasoning behind its answers, especially when challenged.
Unteachability	Cannot be improved through discussion or debate.
Non-responsiveness	Provides answers that may not answer the question posed.
Blindness	Cannot reason about diagrams and pictures, nor even accept their existence.
Vacuousness	Provides text that communicates no useful information.

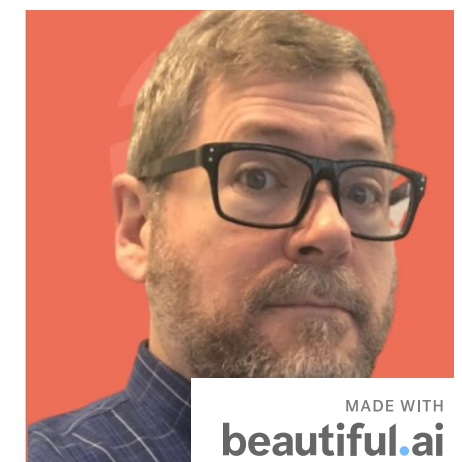
The Reversal Curse: LLMs trained on “A is B” fail to learn “B is A”

Lukas Berglund* Meg Tong^{†1} Max Kaufmann^{‡1} Mikita Balesni^{§1}
 Asa Cooper Stickland^{¶1} Tomasz Korbak^{††} Owain Evans^{‡‡2}

*Vanderbilt University †Independent ‡UK Frontier AI Taskforce §Apollo Research
 ¶New York University ††University of Sussex ‡‡University of Oxford

ChatGPT Sucks at Testing

James Bach
CEO and Principal Consultant



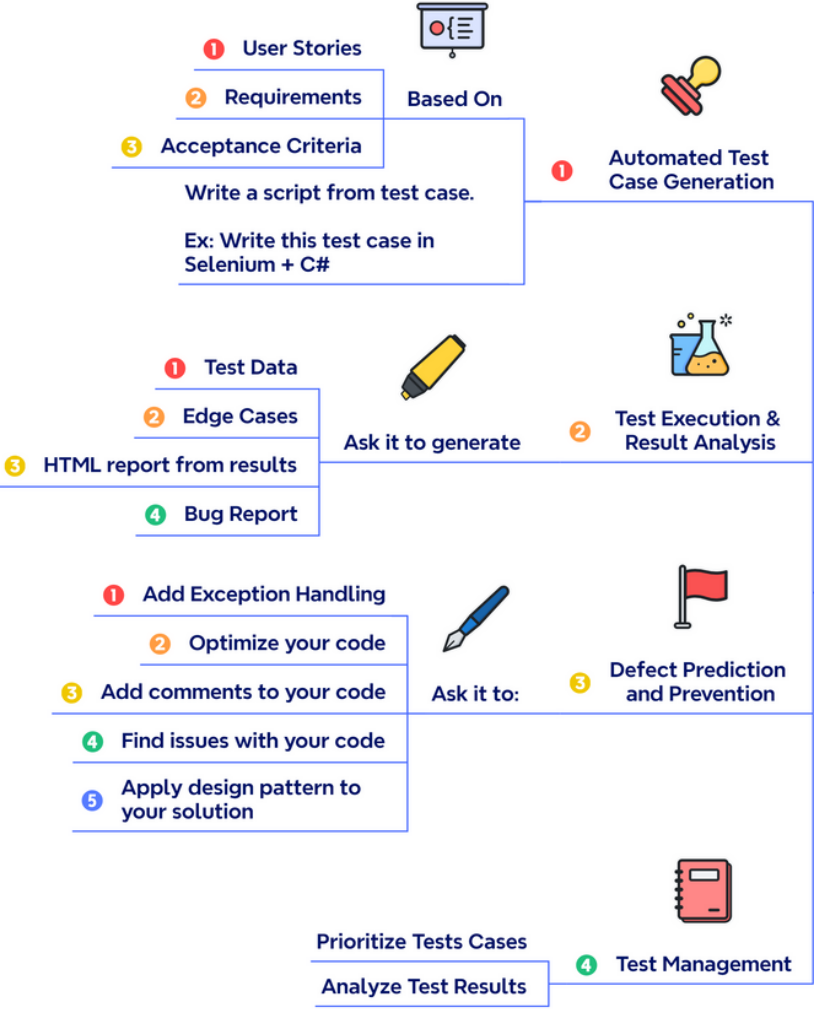


Industrial Revolution 5.0

Human Intelligence Meets Artificial Intelligence

AI in Software Testing

Usage of AI in Testing



Biggest Testing Challenges

- 1 Lack of Time
- 2 Lack of Test Coverage
- 3 Inconsistent Results
- 4 Time Spent in Reproducing & Reporting Bugs

AI in Testing

AI: Machine's ability to do tasks done by human intelligence

Popular Use Cases

- 1 Test Idea Generation
- 2 Test Data Generation
- 3 Test Script Generation

When used with ML, AI will fuel a lot of power.

Opportunities

- Code is no more a restriction
- Use it to automate repetitive tasks
- Analyze vast amount of data
- Enhance Test Coverage
- Improve Defect Detection

Challenges of AI in Software Testing

Long Learning Curve

Effective usage needs training
Challenging to integrate in existing workflows

Difficulty of Debugging

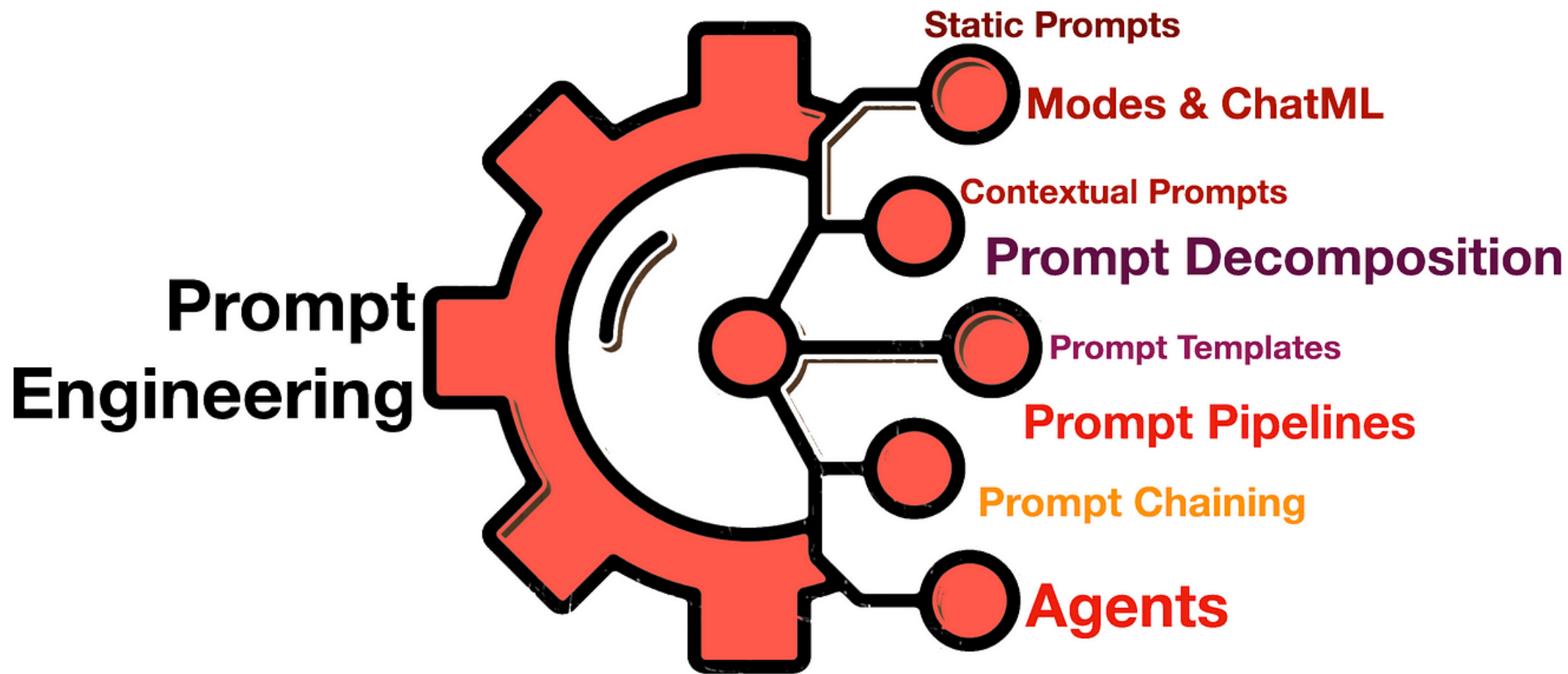
AI algorithms are complex
Finding root cause of things i



Andrej Karpathy 

@karpathy

The hottest new programming language is
English



Prompt Engineering

Introduction ▼

LLM Settings

Basics of Prompting

Prompt Elements

General Tips for Designing Prompts

Examples of Prompts

Techniques ▼

Zero-shot Prompting

Few-shot Prompting

Chain-of-Thought Prompting

Self-Consistency

Generate Knowledge Prompting

Prompt Chaining

Tree of Thoughts

Prompt Engineering

Prompt Engineering Guide

Prompt engineering is a relatively new discipline for developing and optimizing prompts to efficiently use language models (LMs) for a wide variety of applications and research topics. Prompt engineering skills help to better understand the capabilities and limitations of large language models (LLMs).

Researchers use prompt engineering to improve the capacity of LLMs on a wide range of common and complex tasks such as question answering and arithmetic reasoning. Developers use prompt engineering to design robust and effective prompting techniques that interface with LLMs and other tools.

Prompt engineering is not just about designing and developing prompts. It encompasses a wide range of skills and techniques that are useful for interacting and developing with LLMs. It's an important skill to interface, build with, and understand capabilities of LLMs. You can use prompt engineering to improve safety of LLMs and build new capabilities like augmenting LLMs with domain knowledge and external tools.

Motivated by the high interest in developing with LLMs, we have created this new prompt engineering guide that contains all the latest papers, advanced prompting techniques, learning guides, model-specific prompting guides, lectures, references, new LLM capabilities, and tools related to prompt engineering.

On This Page

[Want to learn more?](#)

[Question? Give us feedback](#)

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Want to learn more?

Prompting Checklist: Secrets of Good Prompts

Provide feedback to LLM and refine prompts

- Gemini
 - Copilot
 - ChatGPT 3.5
- 100 Compare the result with other AI models' responses
- Creativity? Define how will you measure the quality of response?
- Accuracy?
- Fluency?

4 Evaluate & Refine

- Code Snippet
 - Email Template
 - Report Structure
 - Coding Guideline
 - Design Pattern
 - Writing Sample
- Give example(s) of desired format and style expected
- Reference existing content or link for inspiration
- Ask it to explain "Step by Step" for Reasoning Tasks

5 Input & Output

- Tester
 - Test Lead
 - Regular Customer
 - Developer
 - Automation Engineer, etc.
- Set a persona role

Sites or People to refer too.
Ex: Refer to works of James Bach

Specify Background Information

- Via Images
 - Via System Description
 - Via Product Model
 - Via Technical Description
- Define the system under test or development

2 Context

Ex: Positive Cases only or Diverse Cases?
Ex: Functional Coverage or Data Coverage?

Provide what's expected from the LLM

- Via Requirements
 - Via Image
- Provide functional specification for the feature to test or develop

Use complete sentences

Define the task well

Be Specific Precision is important

Minimize Ambiguity Avoid vague terms or overloaded words

Avoid Grammar Mistakes

1 General

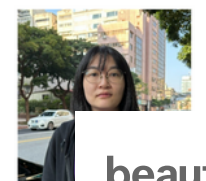
- Mention tone / target audience
- Professional
 - Personal
 - Funny
 - Creative

- Mention formatting guideline
- i) Bullet Pointers
 - #
 - "Double Quotes"
 - CSV
 - Tabular

Avoid sharing sensitive / intellectual information

Created By: Rahul Parwal & Joyz Ng

Based On
Prompt Engineering Guide



Prompting Checklist - bit.ly/promptingchecklist

AI Prompt Repository - bit.ly/promptrepo

DEMO

It is important to check the sources when using Bing Chat because the information provided by Bing Chat is pulled from the internet and may not always be up-to-date or accurate ^{1 2}. Reviewing the sources provided by Bing Chat can help you find more valuable information and lead you to more reliable sources ¹. It is also important to note that Bing Chat is not a primary source of information, and it is recommended that you follow the links provided by Bing Chat to their source and cite those pages instead of Bing Chat itself ³.

I hope that helps!

Weitere Informationen

1  microsoft.com

2  guidingtech.com

- Ask Questions
- Check References
- Apply Critical Thinking
- Practice Prompting
- Ethics > Tech Feasibility

Homework: Get Gandalf to Reveal the Password

Thoughts? Questions?

Let's Talk :)

Day 1. Introduce yourself and your interest in AI

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Blogger | Speaker | RST PA
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[My Testing Treasures](#)
29,760 followers · 500+ connections

