



Prompt Engineering For Beginners



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From now on, respond as a Customer Support Specialist with expertise in resolving order tracking. Use clear, concise, and actionable responses tailored to meet both customer needs and company policies.

****Background Context:****

You are a Customer Support Specialist for a mid-sized e-commerce company handling 500+ customer queries daily. Your role is to support the chatbot's development by providing detailed guidance for handling order tracking. Ensure the chatbot:

- [Goal 1: e.g., "Accurately verifies purchase details before proceeding."]
- [Goal 2: e.g., "Delivers clear, empathetic communication that builds customer trust."]



ChatGPT can make mistakes. Check important info.



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Introducing Today's Project!

In this project, we will demonstrate prompt engineering. We're doing this project to learn different techniques and applications of prompt engineering, from basic techniques (e.g. roles), to meta prompts and even prompt templates for apps.

Tools and Techniques

The AI model we used was ChatGPT. Key techniques we learnt include reverse engineering, prompt chaining, clarifying questions, meta-prompt creation and writing a prompt template for an AI app!

Project reflection

This project took us approximately two hours, including demo time. The most challenging part was definitely writing our own prompt template (it gets very detailed)! It was most rewarding to see the BIG impact that small changes in a prompt can make.

We did this project today to learn about prompt engineering and 9 different techniques. This project definitely met our goals and built our skills in creating templates that can help with automating prompt generation or build AI tools.



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Starting the Conversation

Prompt engineering is a technique/process where instructions are given to AI models in a way that guides the model to give specific, useful and accurate results. AI tools use prompts behind the scene by converting user input/button clicks to prompts.

We started our project with a basic prompt, asking ChatGPT "What do I do in a tech conference?"

Our initial impressions of the response are that it's helpful as a generic overview of conferences, but it's missing personalised tips based on the reader's existing experience level. It also doesn't address specific types of conferences e.g. tech.

The screenshot shows a dark-themed interface with a light gray header bar containing the text "What should I do in a conference?". Below this is a message from a user icon (a person with curly hair) followed by a list of five numbered tips:

1. **Plan Ahead:** Review the conference schedule in advance. Choose sessions that align with your interests or professional goals. Planning ahead helps you maximize your time.
2. **Network:** Conferences are great for meeting industry peers, potential mentors, and influencers. Prepare a brief introduction about yourself, and don't hesitate to exchange contact information.
3. **Participate:** Engage in discussions, ask questions during sessions, and join workshops. Active participation can enhance your learning and make you more memorable to others.
4. **Take Notes:** Capture key points, ideas, and contacts. Notes will be helpful for reflecting on the experience and following up on connections and opportunities.
5. **Follow Up:** After the conference, reach out to the people you met. A quick message referencing your conversation can help establish a lasting professional relationship.

A small note at the bottom right of the list reads: "Share knowledge: Share what you've learned with your team or community. It could be..."



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Basic Prompt Techniques

Foundational strategies to refine our basic prompt include defining a role and audience, asking clarifying questions, decomposition and specifying the output format e.g. tone, length, language level.

Once we used these techniques, we noticed that the AI's response changed by becoming more specific and with more confidence about understanding our use case. We thought the techniques that made the biggest difference were asking clarifying questions.

The screenshot shows a ChatGPT interface with the following content:

Prompt: Write the guide for aliens attending their first tech conference.

OUTPUT FORMAT

- Format: Bulletpoint list, with points bucketed into 3 main categories.
- Length: 200 words.
- Tone: Informative and neutral. Pepper in some light-hearted comments.
- Language level: Jargon free and accessible to a general audience.
- Constraints: Focus only on strategies during the conference itself, not before or after.

Blending In with Humans

- Dress like a human: Stick to neutral colors, simple shirts, jeans, or business casual attire. Avoid glowing fabrics or spacesuits—save those for after-hours.
- Stay calm if your appearance falters: If your antenna slips or skin glows, laugh it off as a “cool gadget” or a creative cosplay.
- Eat cautiously: Stick to familiar-looking human foods. Humans may find your preference for glowing space berries suspicious.

Mastering Human Networking

- Use universal greetings: A firm handshake (or fist bump) paired with “Hi, I’m [your name]!”

Message ChatGPT

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Advanced Techniques

More advanced techniques include prompt chaining, where we divide an initial request into two parts - the output for the first prompt is the input for the second prompt. For example, we asked for common scenarios before asking for actionable advice.

Another technique is self-critiquing, which means asking the AI model to evaluate the quality of its own response. ChatGPT responded to this with an outline of strengths, improvement areas and even the ability to implement on its own feedback.

You are an expert in alien behaviours and tech conferences.

Critique this guide for gaps, unclear steps, or inconsistencies.
Evaluate whether the tone is appropriate for speaking with aliens.

Here's a critique of the guide, focusing on gaps, clarity, and tone for effectively addressing aliens attending tech conferences:

Strengths

- Tone Appropriateness:**
The guide adopts a friendly, humorous tone that feels inviting and relatable. This approach works well for engaging aliens who might be navigating human conferences for the first time, as it avoids intimidation.
- Practical Advice:**

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Specialized Techniques

Reverse engineering is helpful when you are wanting to generate a specific prompt that will help you create your model response. We used this technique to reverse engineer an existing post on the topic, and replicate with ChatGPT's suggested prompt.

Creative frameworks are specific layouts for explaining different kinds of things. For example, the STAR framework is great for storytelling, while Problem-Solution-Benefit us great for problem solving. You can use this to analyze in a specific way.

Here's a precise prompt to generate such output:

Role: You are a witty content creator crafting fun, quirky, and engaging social media posts with a tech-savvy audience in mind.

Tone: Use a humorous, playful, and slightly absurd tone, with a mix of light sarcasm and relatability.

Objective: Write a satirical, step-by-step guide titled "How to Blend in at a Tech Conference (Alien Edition)." Make it feel like advice for extraterrestrials trying to fit in among humans at a tech conference. Each step should be short, punchy, and comical, incorporating tech culture clichés (like startup hoodies, buzzwords, or awkward networking).

Constraints:

- Keep the content under 200 words.
- Use numbered steps for clarity.
- Include a clever sign-off at the end (e.g., "Good luck, Earthling!").
- Avoid overly technical jargon or niche references.

Example Output Structure: 1 Step Title: A funny, exaggerated step written in a short sentence.
Explanation: Add one or two relatable or silly r-tails. ↓

Now generate the guide!

Message ChatGPT

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Meta Prompts

A meta-prompt is a prompt that gets ChatGPT to become a prompt writer for us. I structured my meta-prompt by layering multiple techniques, and writing headers for each technique e.g. role and audience context, decomposition, reverse engineering etc.

We tested our meta-prompt by asking it to generate a prompt related to attending a tech conference. The generated prompt automatically incorporated techniques like role and audience context, specific output format (tone and language were mentioned).

We noticed the generated prompt missed instructions we defined, like self-critiquing, and it eventually lost context of frameworks and follow-up prompts (prompt chaining). This is because the AI model was overwhelmed by the meta prompt instructions.

You are a highly skilled AI assistant specializing in crafting prompts for complex scenarios.

Follow these best practices whenever I give you a topic to ensure precision, clarity, and audience alignment:

Clarify and refine:

- Before generating an answer, ask clarifying questions. Focus on gathering missing details or narrowing the scope of the request.
- If the request is ambiguous, provide two or three interpretations and ask the user to confirm.
- Highlight assumptions or unknowns for further exploration.

Define your role and audience:

- Assign yourself a specific role (e.g., teacher, expert, storyteller) tailored to the scenario.
- Ask me to specify the audience, tone, and level of detail to match their needs.



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Prompt Templates

We also started a project extension, where we roleplay as an AI engineer writing a prompt template for an AI app. We set up ChatGPT to become a customer support manager to provide feedback. Our prompt template will focus on order tracking.

Our initial prompt template identified our stakeholder's needs by discussing current issues and solutions. Our initial prompt template includes the desired tone, steps to resolve the issue, background context, escalation criteria and example scripts

The feedback we received was to include more edge cases like the customer not having an order ID, or wanting refund. To respond to feedback, we updated our template to include the mentioned edge cases, and including an example successful conversation

Got it! Here's how I'd tailor my response as a Customer Support Specialist with expertise in order tracking:

Example Conversation Draft:

Chatbot:

Hi there! I'm here to help with your order. Could you please share your order ID or the email used to place the order so I can check the status for you?

Customer:

Sure, it's 12345ABC.

Chatbot:

Thanks for sharing that! Let me take a quick look. One moment, please.

(Gathers and verifies order details in the system.)

Chatbot:



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