

TITLE : prompt engineering portfolio

SUbtile : Real-world use cases for azure open ai and chatgpt

📁 **AI Portfolio:** Prompt Engineering with Azure OpenAI (GPT-35-Turbo | Version: 0125)

🌐 **Platform:** Azure OpenAI Studio

Model: gpt-35-turbo

Deployment Date: 2025-04-17

Prompt Engineering Techniques Explored: Role prompting, Few-shot prompting, Chain-of-thought, Zero-shot classification, and Input formatting.



Prompt Portfolio

✦ 1. Zero-Shot Prompt: Travel Recommendation

Prompt Title: Quick Travel Advisor

Technique: Zero-shot

Explanation:

Zero-shot prompting is used when the model is asked to generate output without any specific prior examples. The model relies on its existing knowledge base and contextual understanding to create an appropriate response. This approach works best for tasks that involve general knowledge or creative solutions without needing structured examples.

Prompt: Suggest a 3-day travel itinerary for someone visiting Manali for the first time. Include top attractions, local food suggestions, and activities to try.

Why It's Useful:

Zero-shot prompts are useful when you want to generate responses in a flexible, open-ended manner without the need for example-driven training. It enables the model to think independently and apply its broad knowledge to a wide range of scenarios.

Potential Real-World Applications:

- **Tourism & Travel Industry:** AI-driven travel assistants that help users plan trips, suggest itineraries, and offer personalized travel advice.
- **Customer Support:** AI systems providing instant recommendations or solutions based on customer queries, with no prior examples needed.
- **Personalized Recommendations:** Tools that suggest activities, restaurants, or experiences based on user preferences and location.

OUTPUT:

DAY-01

- **Morning:** Arrive in Manali and check into your accommodation. Start your day with a visit to Hadimba Devi Temple, a beautiful wooden temple surrounded by cedar forests.
- **Afternoon:** Enjoy a leisurely stroll at Manali Mall Road, where you can shop for souvenirs and taste local snacks like momos and thukpa.
- **Evening:** Head to Solang Valley for adventure activities like paragliding, zorbing, and ropeway ride. Don't miss the stunning views of snow-capped mountains at sunset.

DAY-02

- **Morning:** Visit Rohtang Pass, a high mountain pass known for its snow-capped peaks and breathtaking landscapes. Enjoy activities like snow biking and skiing.
- **Afternoon:** Have lunch at a local dhaba and try Himachali cuisine dishes like sidu, kullu trout, and dham.
- **Evening:** Explore Old Manali, known for its hippie culture and vibrant cafes. Visit Manu Temple and enjoy a riverside walk along the Beas River.

DAY-03

- **Morning:** Embark on a scenic drive to Naggar Castle, a historic fort with stunning views of the Kullu Valley. Explore the art gallery and enjoy a traditional Himachali meal.
- **Afternoon:** Visit Vashisht Temple and take a dip in the natural hot springs for a relaxing experience.
- **Evening:** End your trip with a visit to Jogini Falls for a short trek and serene views of the waterfall. Enjoy a bonfire and local folk dance performances in the evening.

This itinerary offers a mix of popular attractions, local cuisine experiences, and adventure activities to make the most of your 3-day trip to Manali.

✦ 2. Few-Shot Prompt: Interview Question Generator

Prompt Title: HR Interview Assistant

Technique: Few-shot

Explanation: Few-shot prompting provides the model with a small number of examples to guide it toward producing desired results. This technique helps the model understand the pattern, tone, or structure expected, which is especially useful for tasks like generating interview questions, product descriptions, or creative writing.

Prompt: Generate 3 interview questions for a frontend developer position.

Examples:

Q1: What's the difference between HTML and XHTML?

Q2: How do you manage component state in React?

Q3: Can you explain the concept of the virtual DOM?

Why It's Useful:

Few-shot prompting helps provide clarity on what type of output is needed while still allowing the model to be creative and flexible. It's ideal for scenarios where the model needs to understand specific expectations or patterns.

Potential Real-World Applications:

- **Recruitment & HR:** AI-driven tools for generating interview questions or even automating part of the hiring process by filtering resumes and testing candidate responses.
- **Content Creation:** Generating content for blogs, social media posts, or emails based on a few guiding examples.
- **Customer Interaction:** Personalizing sales scripts or support queries based on previous conversations or user preferences.

OUTPUT :

Q1: Can you discuss the importance of responsive design in frontend development and provide examples of how you have implemented it in your previous projects?

Q2: How do you handle performance optimization in frontend web development, particularly when

dealing with large datasets or complex user interfaces?

Q3: Can you walk us through your approach to debugging and troubleshooting frontend issues, including tools and techniques you commonly use in your development workflow?

✦ 3. Chain-of-Thought Prompt: Product Suggestion

Prompt Title: Budget-Friendly Gadget Finder

Technique: Chain-of-Thought (CoT)

Explanation:

Chain-of-thought prompting breaks down the problem into sequential reasoning steps, ensuring the AI arrives at a logical and comprehensive answer. By guiding the model to think through each part of a task, you can improve accuracy, avoid mistakes, and help the model make more informed decisions.

Prompt: A customer is looking for a smartwatch under ₹5000 with at least 5-day battery life and health tracking features. Think step-by-step:

1. Check the price range.
2. Filter based on battery and features.
3. Compare brands and ratings.
4. Suggest the top 2 with reasoning.

Why It's Useful:

Chain-of-thought prompting helps the model handle complex tasks by focusing on each individual step. It's perfect for scenarios where the outcome requires reasoning and consideration of multiple factors, rather than just a direct answer.

Potential Real-World Applications:

- **E-commerce & Retail:** AI-based product recommendation engines that take into account multiple user preferences (price, features, brand, reviews).
- **Financial Services:** AI-driven investment tools that calculate risk, return, and portfolio diversification by thinking through each step in the process.
- **Healthcare:** AI tools that assist doctors by providing step-by-step diagnostic suggestions based on patient symptoms and history.

OUTPUT :

I. **Check the price range:**

Search for smartwatches under ₹5000 to ensure they meet the customer's budget requirement.

II. **Filter based on battery and features:**

Look for smartwatches with a battery life of at least 5 days and health tracking features like heart rate monitoring, sleep tracking, and activity tracking.

III. **Compare brands and ratings:**

Compare the specifications and customer reviews of smartwatches from popular brands known for their quality and reliability in the wearable tech market.

IV. **Suggest the top 2 with reasoning:**

Based on the criteria provided, here are the top 2 smartwatches under ₹5000:

- **Noise ColorFit Pro 2:** This smartwatch offers a battery life of up to 10 days, heart rate monitoring, sleep tracking, and multiple sports modes. It has positive reviews for its accurate tracking and affordable price point.
- **Realme Watch:** With a battery life of up to 9 days, this smartwatch features 24/7 health tracking, including heart rate monitoring, blood-oxygen level monitoring, and personalized fitness guidance. It is praised for its sleek design and comprehensive health tracking features.

conclusion :

These two smartwatches meet the customer's requirements for battery life, health tracking features, and affordability, making them top recommendations for consideration.

★ 4. **Role-Based Prompt:** Customer Service Chatbot

Prompt Title: Empathetic Support Agent

Technique: Role-based

Explanation:

Role-based prompting asks the model to assume a specific personal or role, guiding it to generate context-appropriate responses. By defining a role (e.g., customer service agent, chef, doctor), the model can tailor its responses to align with the expected behavior, tone, and knowledge of that personal.

Prompt:

Act as a customer support agent. A customer is upset because their order didn't arrive before their

international trip. Write a friendly, empathetic response and offer a ₹1000 gift voucher they can use during their trip.

Why It's Useful:

Role-based prompting ensures the model generates responses that are consistent with specific personalities or professional roles. It's especially useful for customer-facing applications, where tone, empathy, and professionalism are key.

Potential Real-World Applications:

- **Customer Support:** AI-driven chatbots or virtual assistants that provide personalized, empathetic customer service, resolving issues related to orders, payments, or complaints.
- **Virtual Assistants:** Role-based AI assistants that act as personal assistants, advisors, or mentors for various industries (e.g., education, finance, health).
- **Interactive Entertainment:** Creating conversational characters or NPCs (Non-Player Characters) in games and simulations that have specific roles, personalities, and story arcs.

OUTPUT:

Dear valued customer,

I am truly sorry to hear that your order did not arrive in time for your international trip. I understand how disappointing and frustrating this must be for you, and I sincerely apologize for any inconvenience it may have caused.

To make amends for the delay and to show our appreciation for your understanding, I would like to offer you a ₹1000 gift voucher that you can use during your trip. We hope that this gesture of goodwill helps make your travel experience a little brighter and more enjoyable.

Once again, I apologize for the inconvenience and thank you for your patience and understanding. If there is anything else we can do to assist you further, please do not hesitate to let us know.

Warm regards,

[Your Name]

Customer Support Team
