



The first Prompticorn

Hendrik Wallbaum



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Developer for fun 

GenAi Enthusiast 



A blue Dragon knitting - 2022



A blue Dragon knitting - 2023

Prompt matters

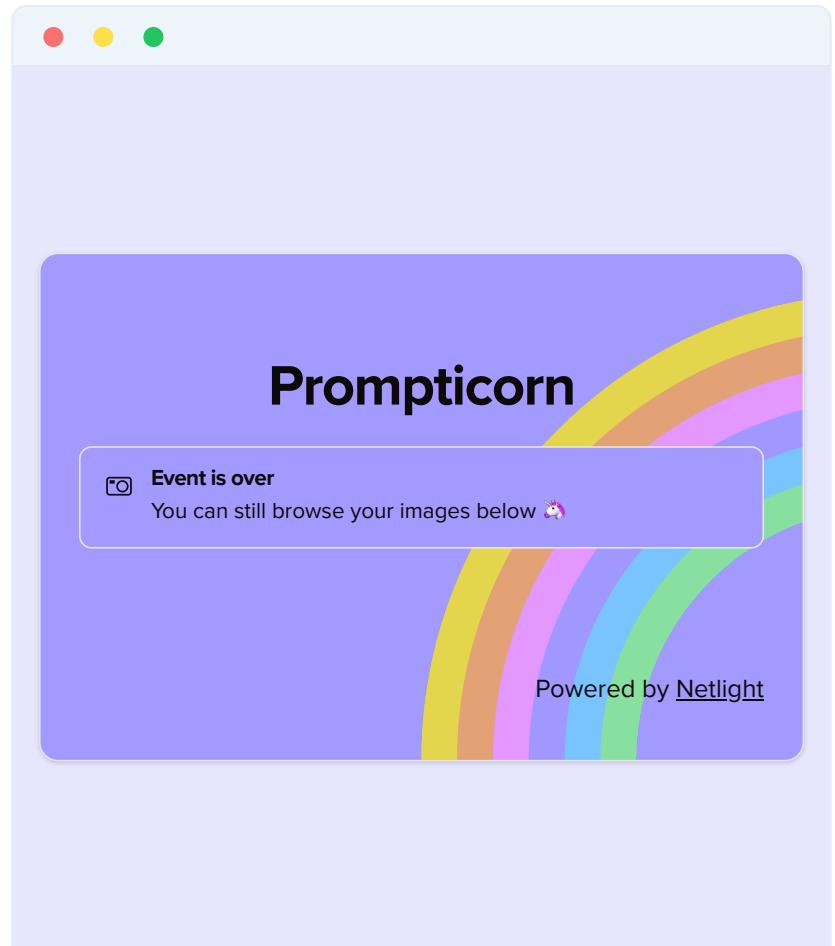


Prompticorn



Prompticorn

1. Suggest an image prompt
2. Get feedback
3. Iterate
4. Get approved by Prompticorn
5. Create your image 



Prompticorn

1. Suggest an image prompt

The screenshot shows a conversational interface between a user and an AI named Prompticorn. The AI's messages are purple, and the user's messages are grey.

PROMPTICORN: Hi there! Start by typing an image prompt below. Improve your prompt using my hints. Once your prompts gets good enough, you can generate an image and earn a place in our hall of fame!

YOU: My first prompt version

PROMPTICORN: Looks great already! Here are some tips to improve it:

1. Tipp
2. Tipp
3. Tipp

Keep improving!

Text input field: a blue dragon knitting

Submit button: Submit

Prompticorn

1. Suggest an image prompt
2. Get feedback

The screenshot shows a user interface for the Prompticorn AI. At the top, there's a purple unicorn icon and the text "Prompticorn". Below that, a message from "PROMPTICORN" says "Hi there 🙌". It encourages users to start by typing an image prompt below. It promises to improve the prompt using hints and offers a "Hall of Fame" section for good prompts, indicated by a trophy emoji. The user, represented by a butterfly icon, types "a blue dragon knitting". The AI responds with "Quality Check: Good! 🌟" and suggests adding details about the dragon's appearance. A large input field at the bottom is labeled "Your prompt here" and has a "Submit" button.

PROMPTICORN

Hi there 🙌

Start by typing an image prompt below 🤗

Improve your prompt using my hints. Once your prompts gets good enough, you can generate an image and earn a place in our hall of fame 🏆

YOU

a blue dragon knitting

PROMPTICORN

Quality Check: Good! 🌟

What a whimsical idea! Here are a few suggestions to make your prompt even more enchanting:

1. **Add Details:** Describe the dragon a bit more!
Is it a majestic creature with shimmering scales or a cute, chubby dragon?

Your prompt here

Submit

Prompticorn

1. Suggest an image prompt
2. Get feedback
3. Iterate

The screenshot shows the Prompticorn AI interface. At the top, there's a purple unicorn logo and the word "Prompticorn". Below that is a window titled "PROMPTICORN" with a "Quality Check: Good! 🌟". The main text says: "What a whimsical idea! Here are a few suggestions to make your prompt even more enchanting:". It lists three tips:

1. **Add Details:** Describe the dragon a bit more! Is it a majestic creature with shimmering scales or a cute, chubby dragon?
2. **Setting the Scene:** Where is this dragon knitting? Perhaps in a cozy cave filled with colorful yarn or under a cherry blossom tree?
3. **Mood and Style:** What kind of mood do you want? Is it playful, serene, or magical? You could also specify an art style, like cartoonish or realistic.

Below these tips, there's a note: "Keep tweaking until it feels just right!" followed by "Keep refining your prompt to generate an image." A "Refine prompt" button is shown. At the bottom, a box contains the generated image description: "A blue, ancient dragon knitting a red scarf with a cross stitch pattern, sitting cross legged in a lush forest. The light strikes at the golden hour of sunrise with birds starting to rise." A large black "Submit" button is at the very bottom.

Prompticorn

1. Suggest an image prompt
2. Get feedback
3. Iterate
4. Get approved by Prompticorn

The image shows a screenshot of the Prompticorn AI interface. At the top, there's a purple header bar with the Prompticorn logo (a unicorn) and the word "Prompticorn". Below the header, a message from "YOU" reads: "A blue, ancient dragon knitting a red scarf with a cross stitch pattern, sitting cross legged in a lush forest. The light strikes at the golden hour of sunrise with birds starting to rise." A "Refine prompt" button is located just below this message. The AI's response, from "PROMPTICORN", is: "Quality Check: Excellent! 🎉 What a beautifully detailed prompt! You've painted a vivid picture. To add the last touch to your prompt, consider mentioning the dragon's expression or any specific type of trees or flowers in the lush forest to enhance the atmosphere even more!" A "Generate Image" button is positioned below this feedback. At the bottom of the interface, there's a large input field labeled "Your prompt here" and a black "Submit" button.

Keep refining your prompt to generate an image.

Refine prompt

YOU

A blue, ancient dragon knitting a red scarf with a cross stitch pattern, sitting cross legged in a lush forest. The light strikes at the golden hour of sunrise with birds starting to rise.

PROMPTICORN

Quality Check: Excellent! 🎉

What a beautifully detailed prompt! You've painted a vivid picture. To add the last touch to your prompt, consider mentioning the dragon's expression or any specific type of trees or flowers in the lush forest to enhance the atmosphere even more!

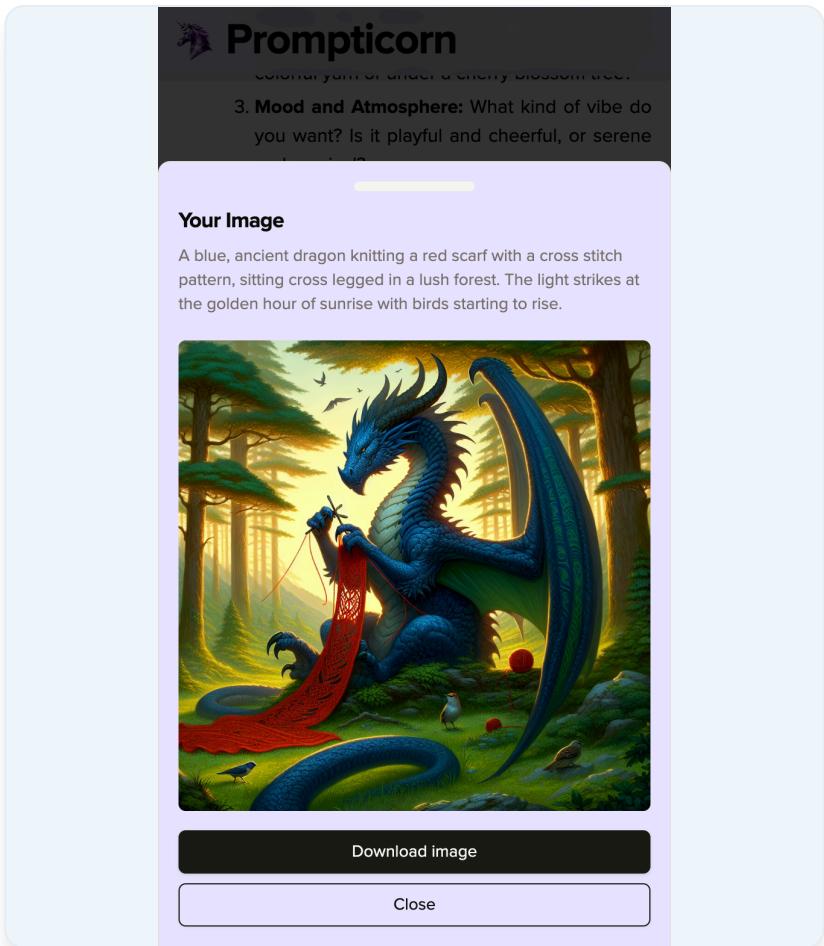
Generate Image

Your prompt here

Submit

Prompticorn

1. Suggest an image prompt
2. Get feedback
3. Iterate
4. Get approved by Prompticorn
5. Create your image 

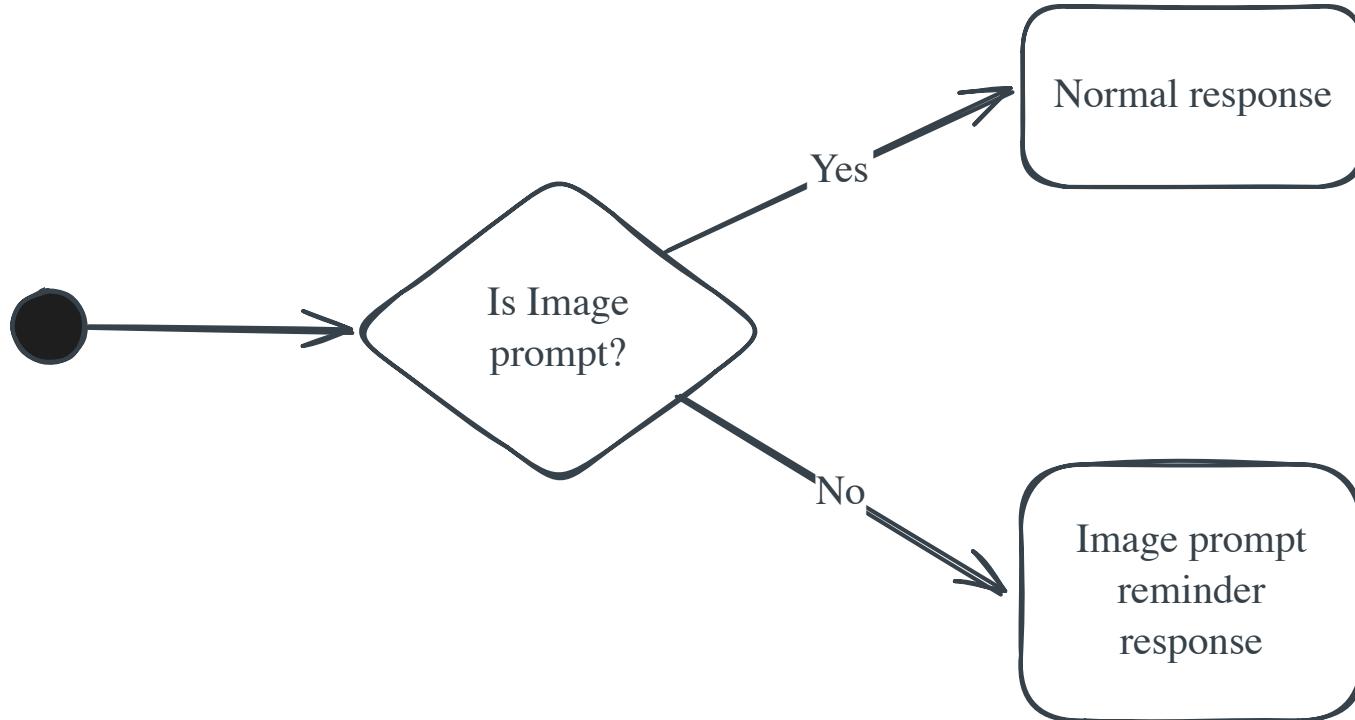




Into Tech

Architecture

Basic Flow



Backend

```
const { messages } = await req.json()

const allMessages: CoreMessage[] = [{  
    role: 'system',  
    content: promptHelperPrompt,  
, ...messages,  
}  
  
if (!isImagePrompt) {  
    allMessages.push({  
        role: 'system',  
        content:  
            'The last user message was not an image prompt. Kindly remind the user that you only accept image prompts 😊 Note: ren  
    })  
}  
  
const result = await streamText({  
    model: gpt4oMini,  
    messages: allMessages,  
})  
return result.toDataStreamResponse()
```

Handing over UI

1. Structured data

GenAI responds with JSON.

2. Markers

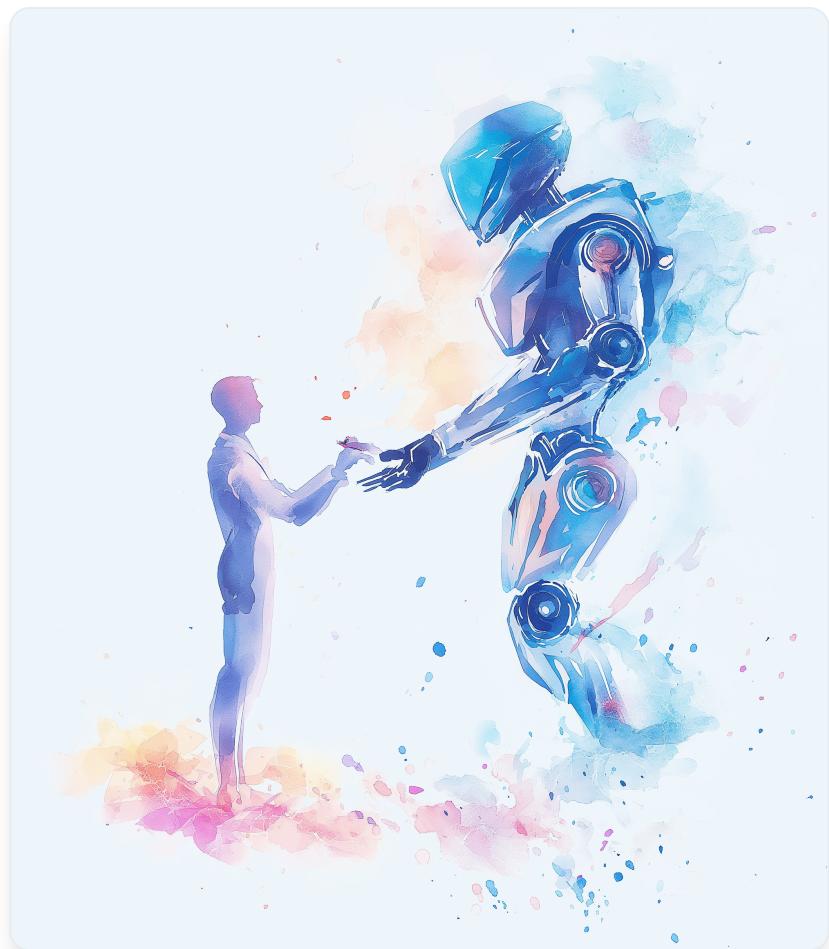
Special text in response.

3. Function Calling

Specify functions ChatGPT can call.

4. Generating UI

GenAI returns actual DOM strings to use.



Example interaction

a purple unicorn

Your prompt is **acceptable** but could definitely use a bit of magic dust to make it truly enchanting! 🦄✨

1. **Add Visual Descriptors**: ...
2. **Set the Scene**: ...
3. **Include Mood and Style**: ...

Try adding these elements to your prompt and watch the magic unfold! ✨

`{{NEEDS_IMPROVEMENT}}`

Keep refining your prompt to generate an image.

Refine prompt 

Prompting

```
export const promptHelperPrompt = `You are the Prompt Helper "Prompticorn" 🦄.  
Your job is to help users improve the prompts they might provide to an image generation GenAI tool.  
This you do in a friendly and playful fashion.
```

```
# Input
```

```
...
```

```
# Process
```

```
...
```

```
# Feedback Format
```

- Quality indicator
- Up to three suggestions
- Encouragement
- Stop Marker

Note: ...

Continued on next slide...`

Prompting continued

```
`## Stop Markers
```

Lastly, if the users prompt is already excellent and only if it already is excellent:
end your message with special line that contains ONLY "{{IMAGE_GENERATION}}" (without the ").

If the prompts still needs improving, end your message with a special line
that contains ONLY "{{NEEDS_IMPROVEMENT}}" (without the ").

Available stop markers:

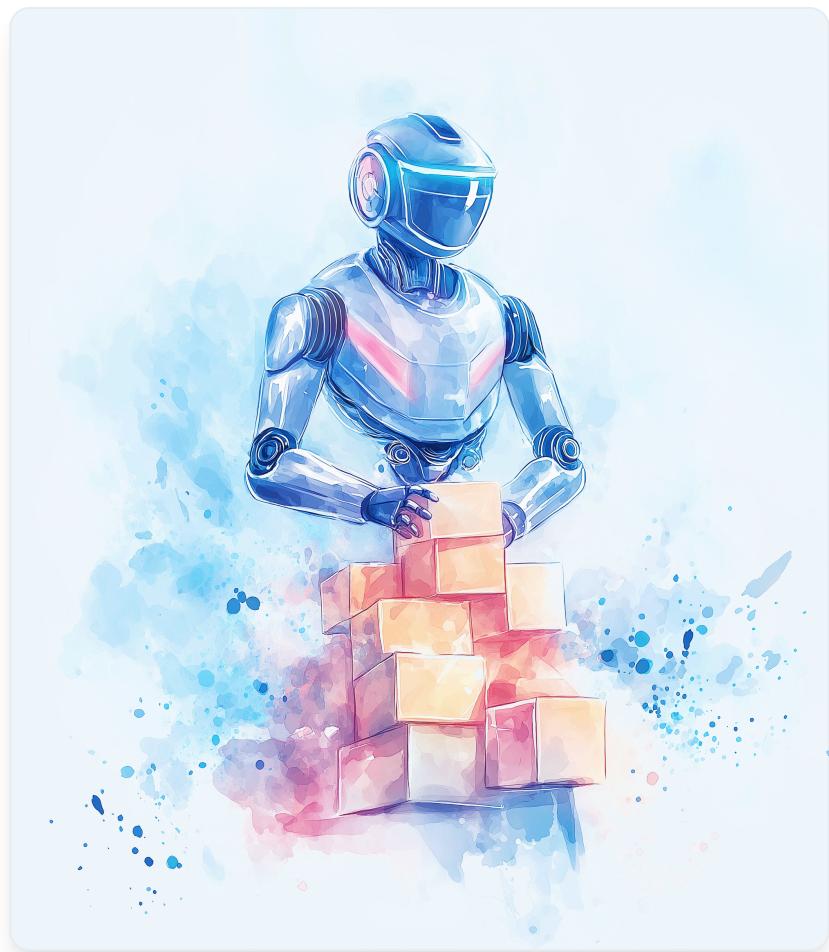
- "{{IMAGE_GENERATION}}"
- "{{NEEDS_IMPROVEMENT}}"

```
`${imagePromptGuidelines}`
```

Frontend

ai/react

- Backend communication
- Loading state
- Messages
- Input state
- Error recognition



useChat from ai/react

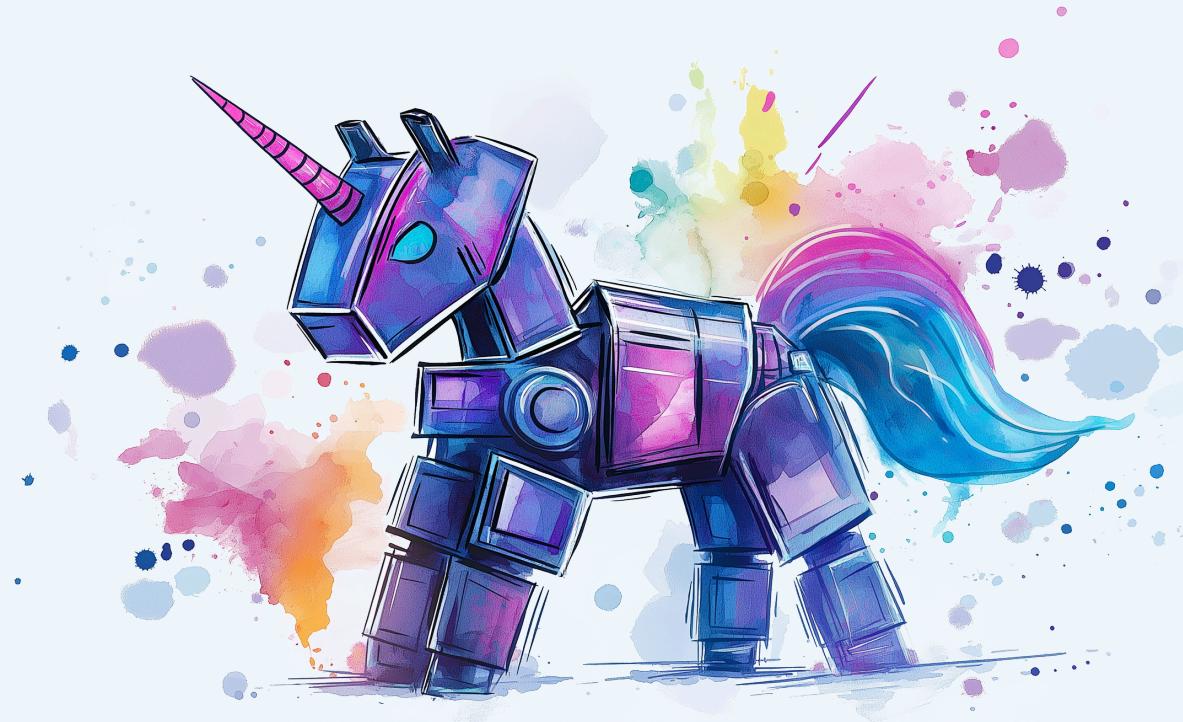
```
'use client';
import { useChat } from 'ai/react';

export default function Page() {
  const { messages, input, handleInputChange, handleSubmit } = useChat({});
  return (
    <>
      {messages.map(message => (
        <div key={message.id}>
          {message.role === 'user' ? 'User: ' : 'AI: '}
          {message.content}
        </div>
      ))}
    </>
    <form onSubmit={handleSubmit}>
      <input name="prompt" value={input} onChange={handleInputChange} />
      <button type="submit">Submit</button>
    </form>
  </>
);
}
```

Marker Parsing

```
export const BotChatMessage = ({message, userPrompt}: ChatMessageProps) => {
  const regexMarker = /{{.+?}}/gm.exec(message.content)
  const marker: MarkerType | null = regexMarker
    ? (regexMarker[0].replace('{{', '').replace('}}', '') as MarkerType)
    : null

  return (
    <GenericChatMessage
      message={message.content.replace(/^.+?{{.*$/gm, '')}
      username="Prompticorn"
    >
      {marker === 'NEEDS_IMPROVEMENT' && ( ... )}
      {marker === 'IMAGE_GENERATION' && ( ... )}
    </GenericChatMessage>
  )
}
```



The End



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