# AI for the mere mortal web developer

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# “Experimenting with AI in DevRel”

ashryan.io/experimenting-with-ai-in-devrel

# Focus on the mere mortal developer

# You might be a mere mortal developer if…

- You code but you aren’t an LLM expert (like me)
- You want to sprinkle some AI magic into your app (like me)
- You want to learn by doing (like me)

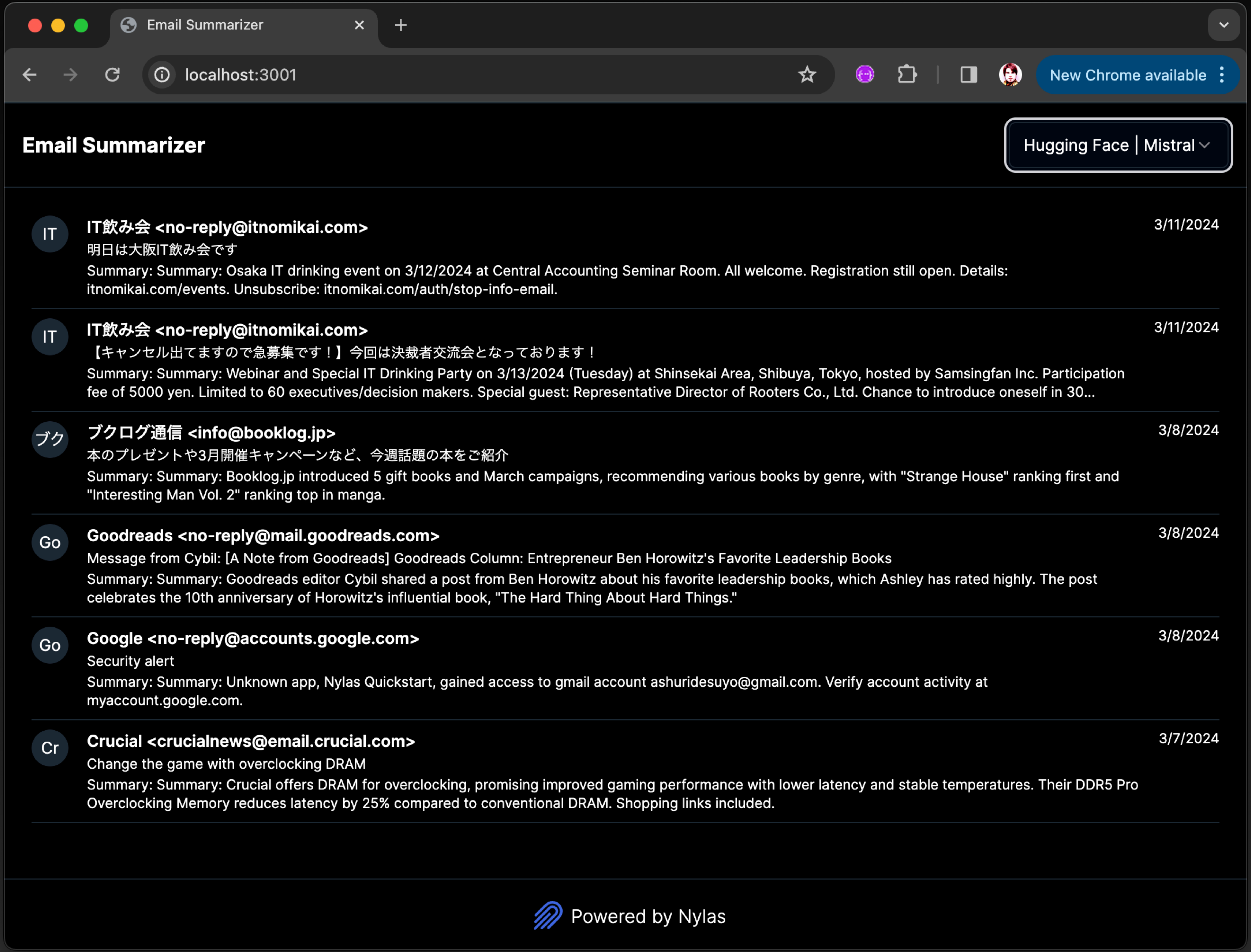
Email triager

Email autoresponder

Email autoresponder

Calendar chat

# Email Summarizer



## Email Summarizer

Hugging Face | Mistral

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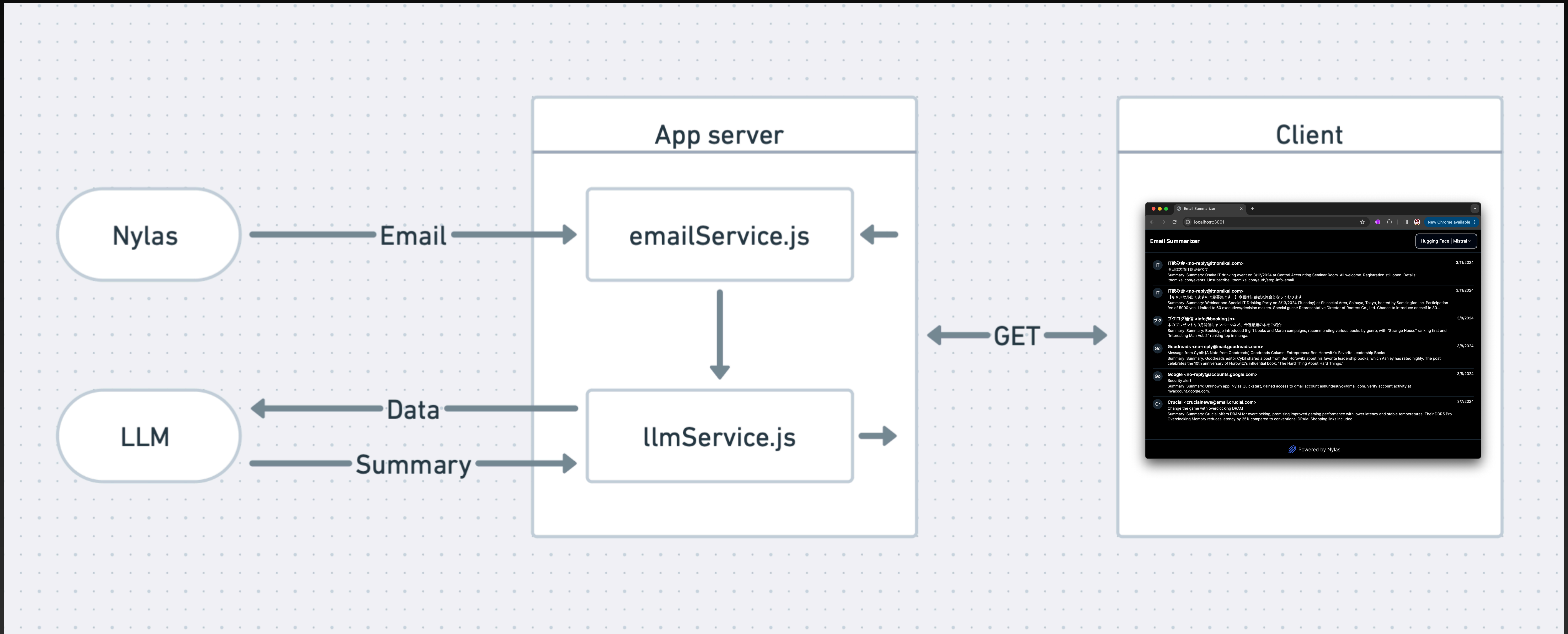
# Under the hood



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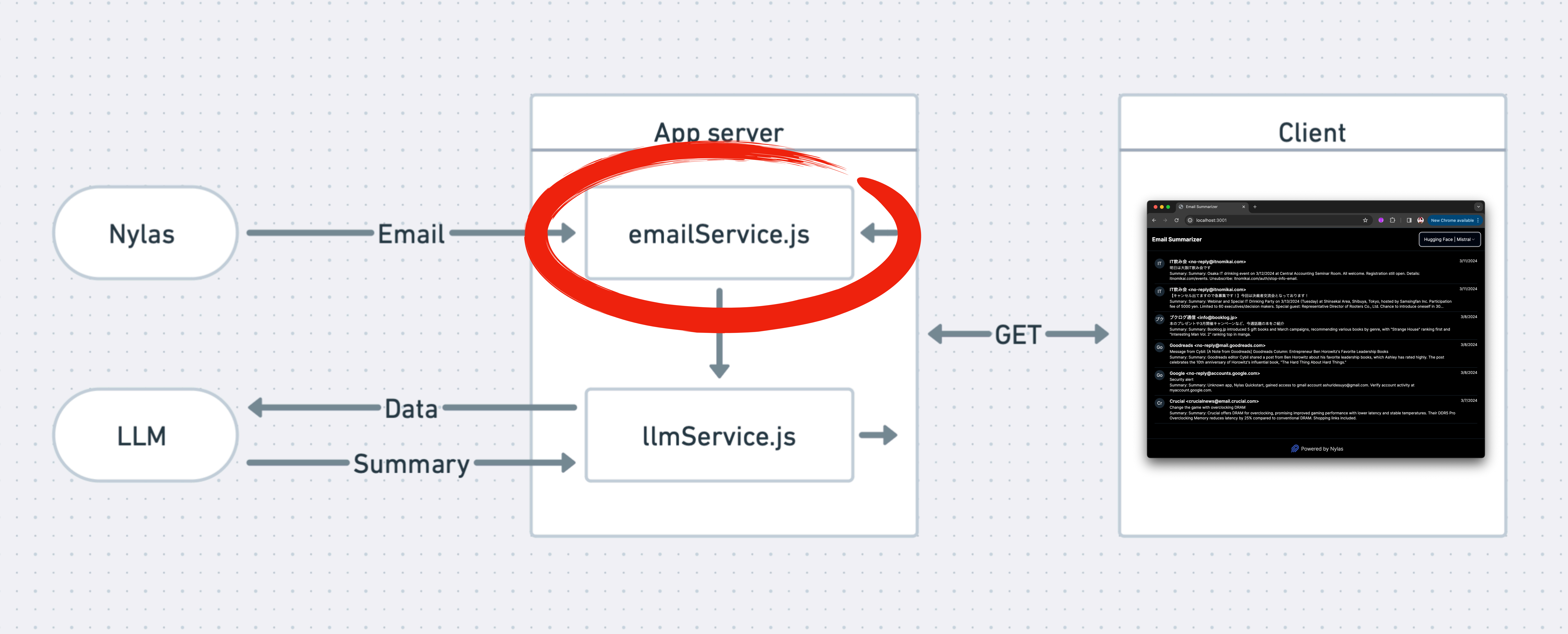

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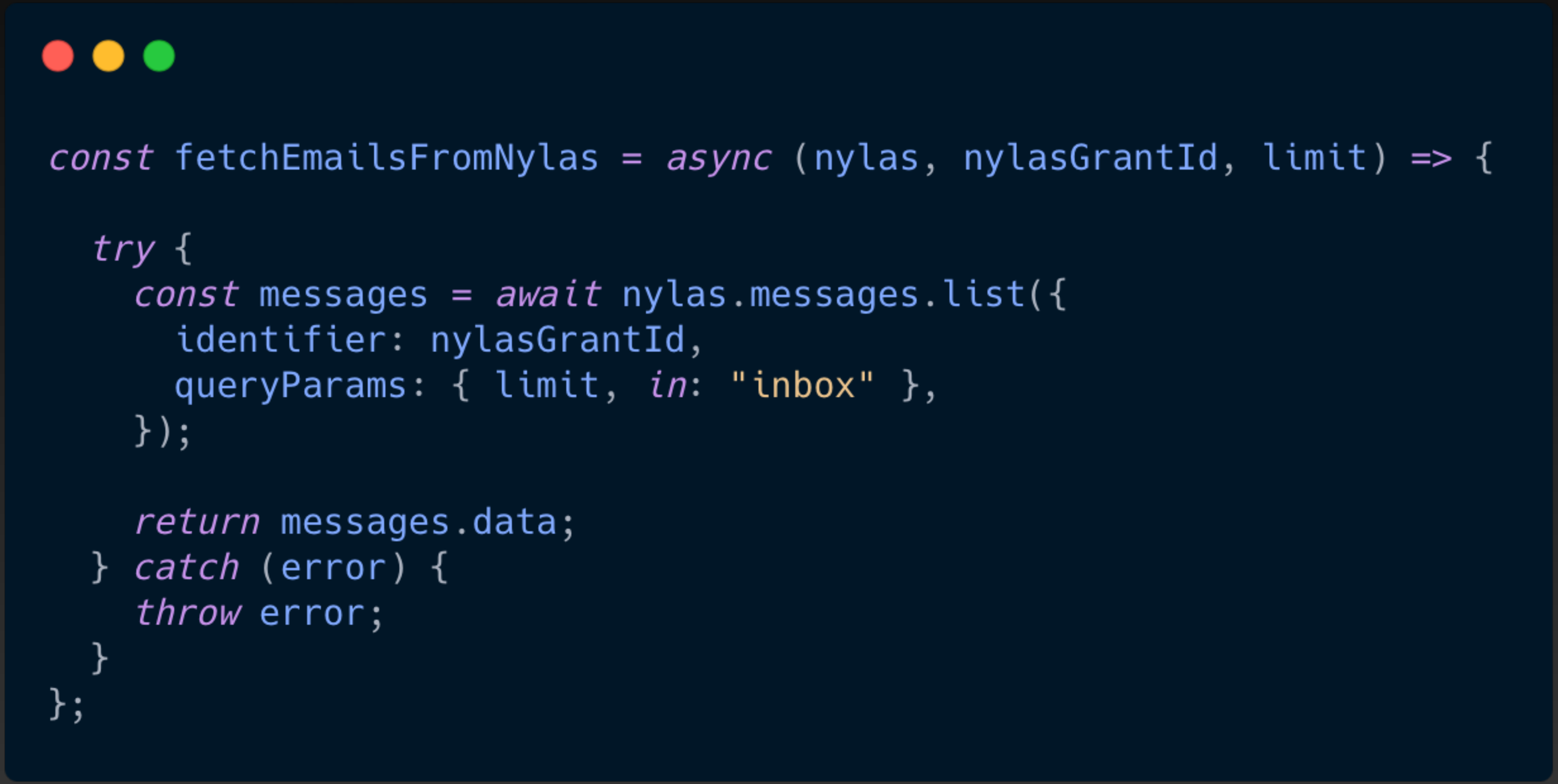
# emailService.js

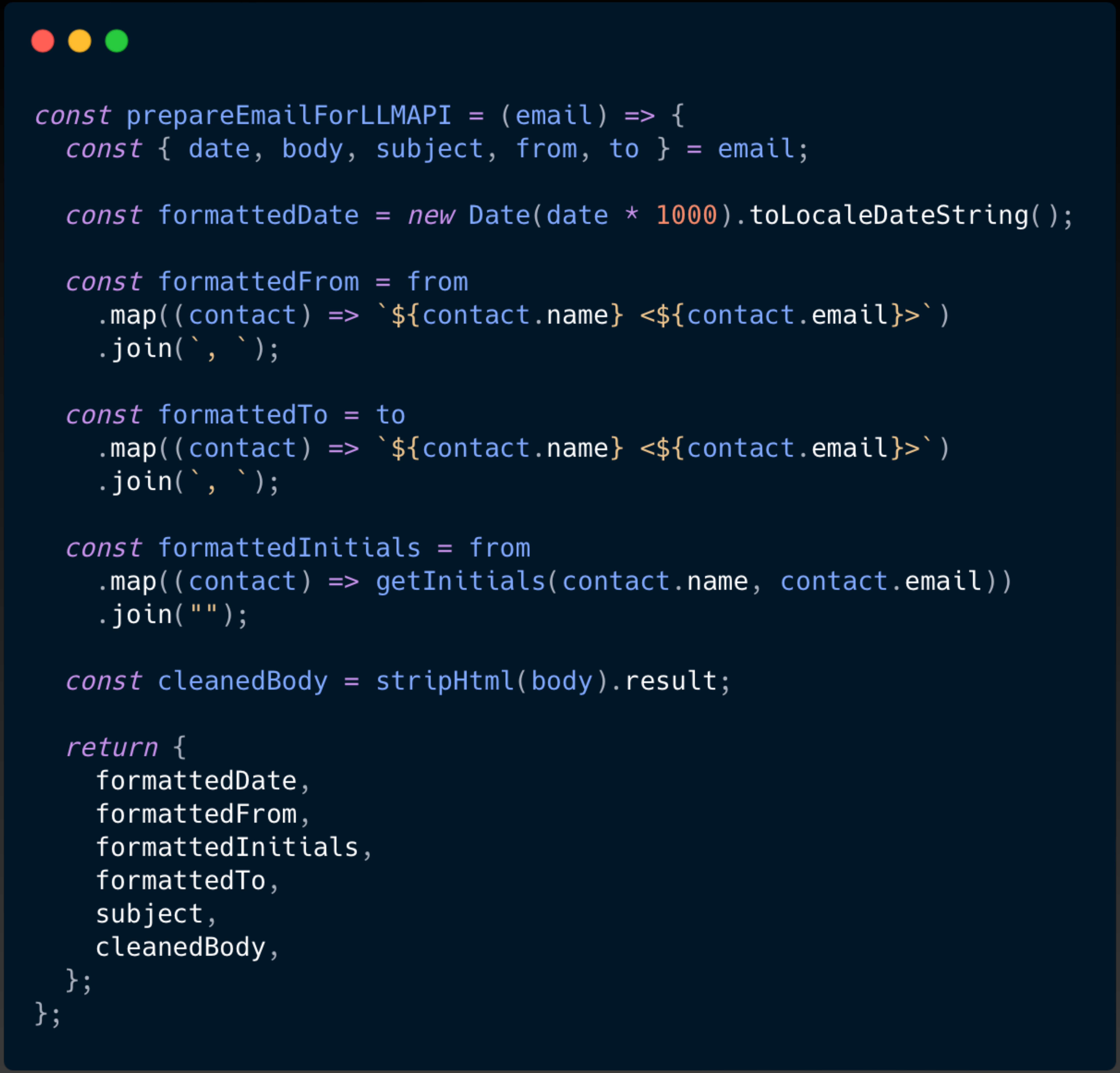
## Fetching emails with Nylas



```javascript
const fetchEmailsFromNylas = async (nylas, nylasGrantId, limit) => {

  try {
    const messages = await nylas.messages.list({
      identifier: nylasGrantId,
      queryParams: { limit, in: "inbox" },
    });

    return messages.data;
  } catch (error) {
    throw error;
  }
};
```

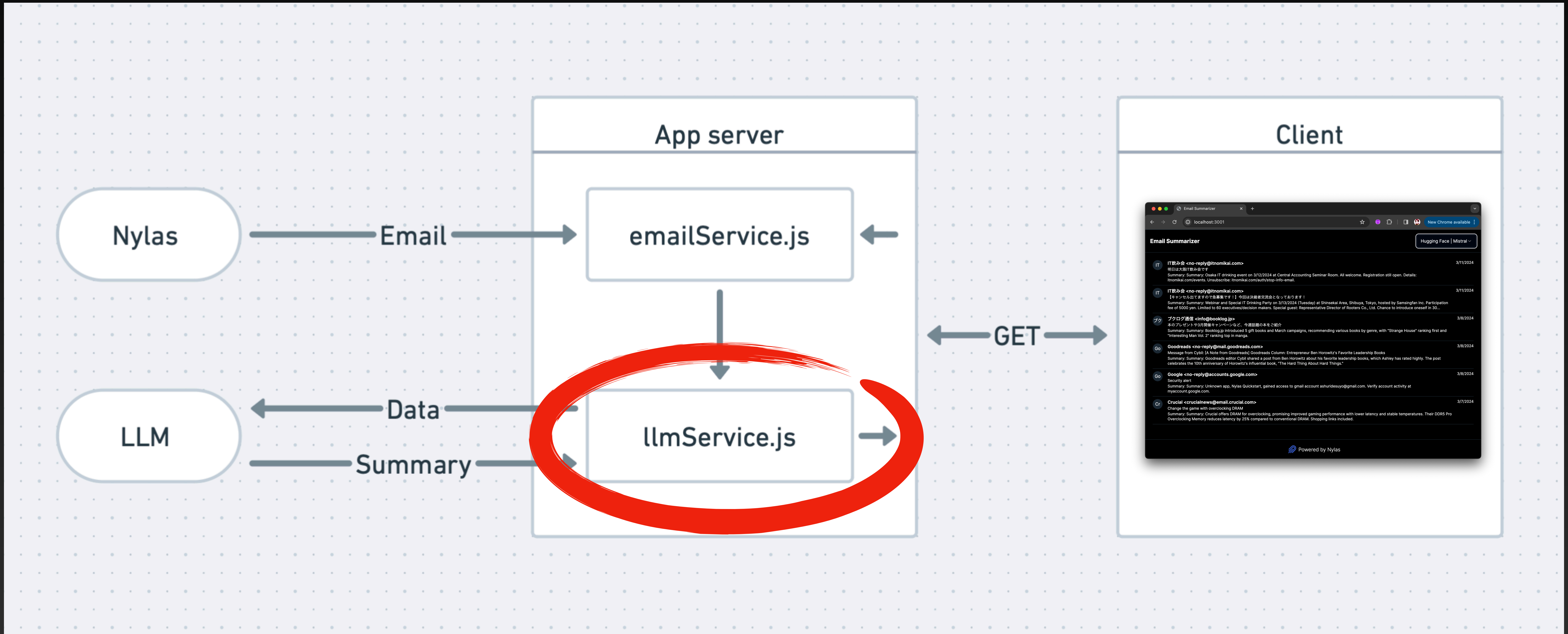
# emailService.js

## Prepping data for the LLM



```
const prepareEmailForLLMAPI = (email) => {
  const { date, body, subject, from, to } = email;

  const formattedDate = new Date(date * 1000).toLocaleDateString();

  const formattedFrom = from
    .map((contact) => `${contact.name} <${contact.email}>`)
    .join(`, `);

  const formattedTo = to
    .map((contact) => `${contact.name} <${contact.email}>`)
    .join(`, `);

  const formattedInitials = from
    .map((contact) => getInitials(contact.name, contact.email))
    .join("");

  const cleanedBody = stripHtml(body).result;

  return {
    formattedDate,
    formattedFrom,
    formattedInitials,
    formattedTo,
    subject,
    cleanedBody,
  };
};
```

# Under the hood



Nylas

Email

LLM

Data

Summary

App server

emailService.js

llmService.js

GET

Client

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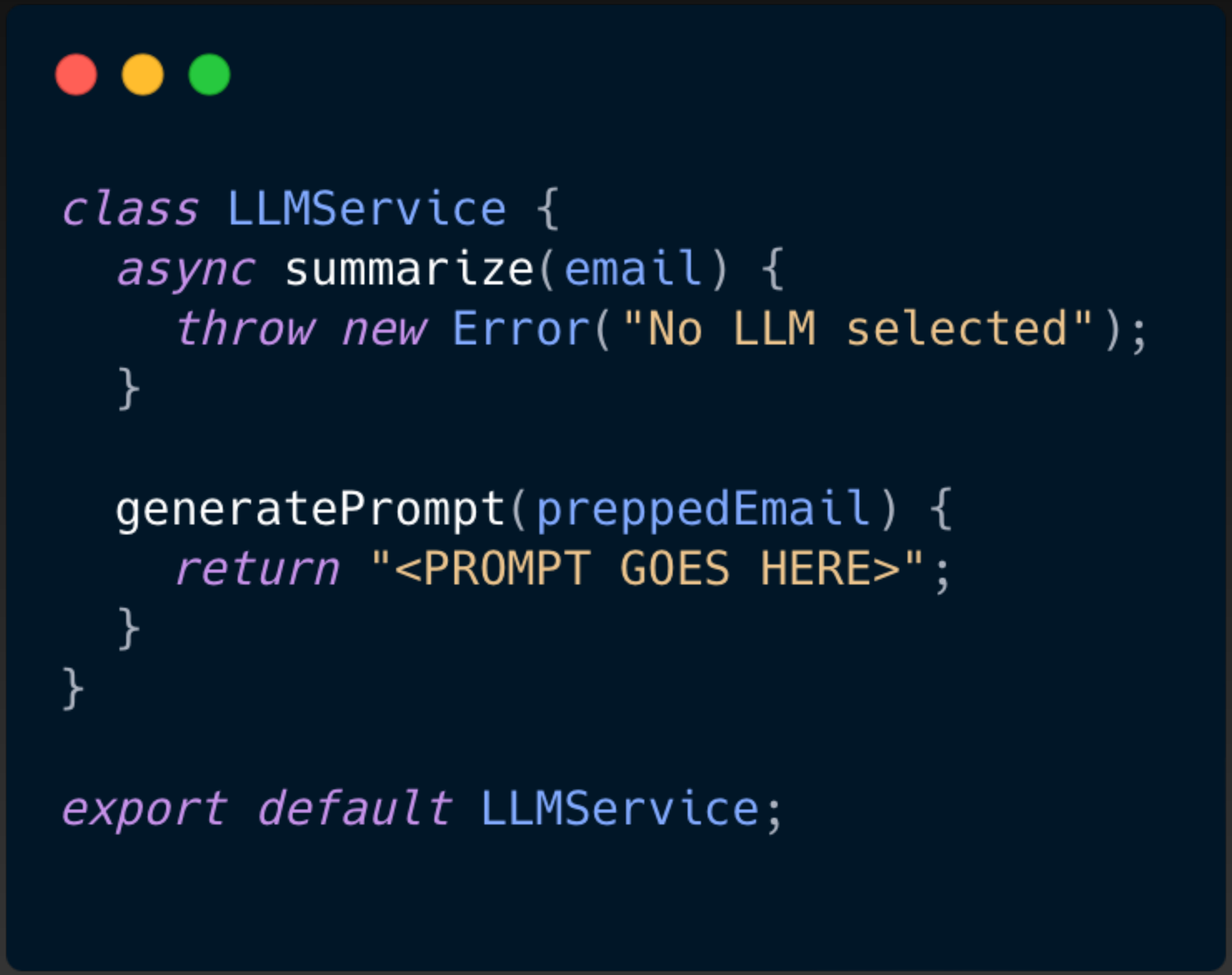
# llmService.js

## Making a generic class calling LLMs



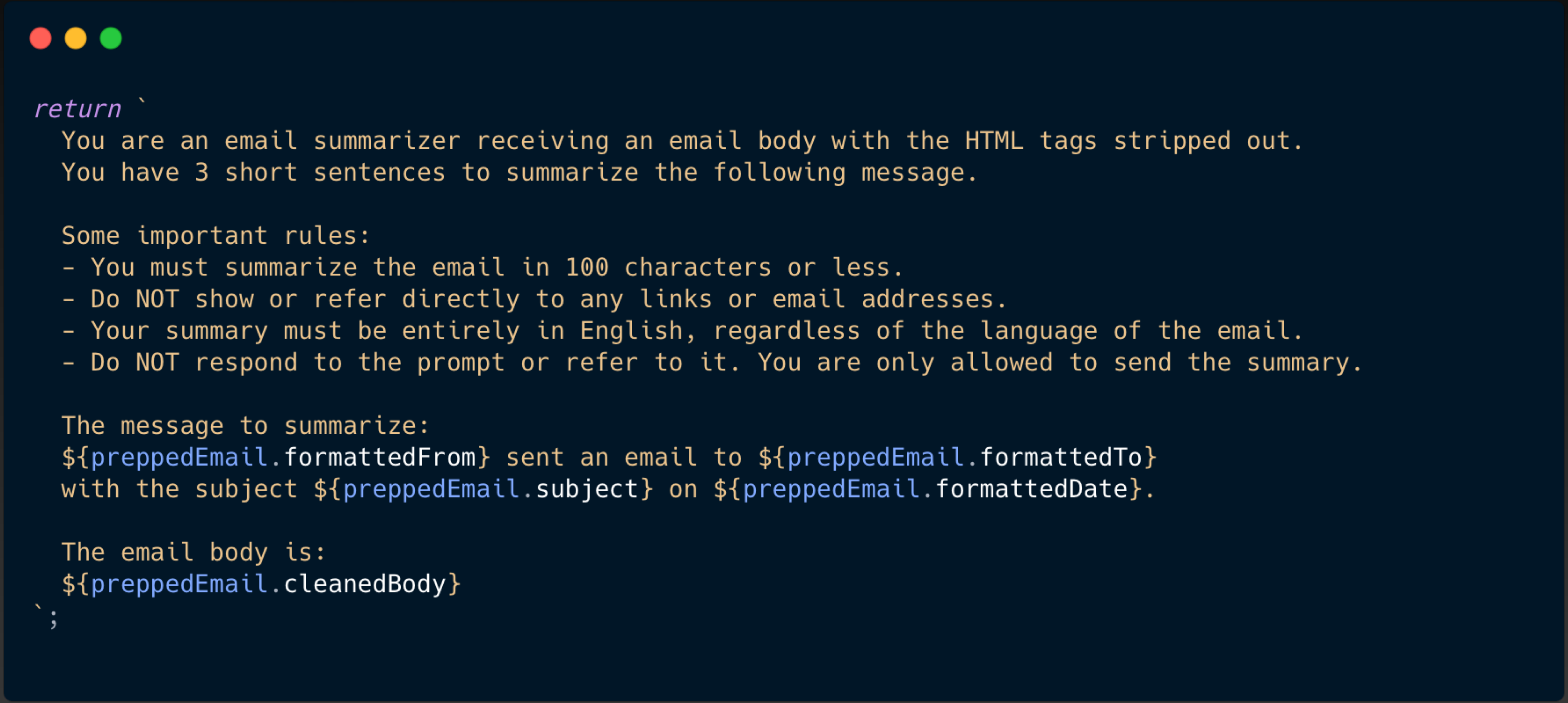
```javascript
class LLMService {
  async summarize(email) {
    throw new Error("No LLM selected");
  }

  generatePrompt(preppedEmail) {
    return "<PROMPT GOES HERE>";
  }
}

export default LLMService;
```

# llmService.js

## Show us your prompt already



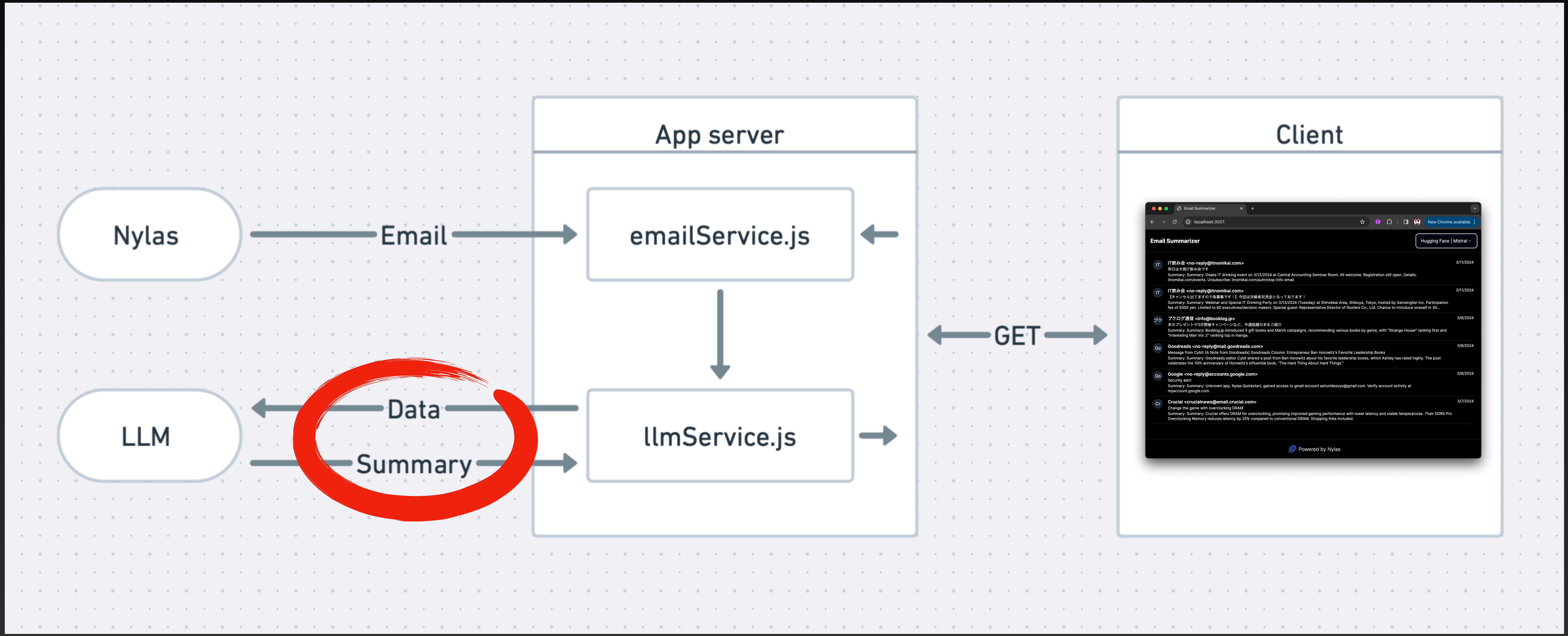
```
return `
  You are an email summarizer receiving an email body with the HTML tags stripped out.
  You have 3 short sentences to summarize the following message.

  Some important rules:
  - You must summarize the email in 100 characters or less.
  - Do NOT show or refer directly to any links or email addresses.
  - Your summary must be entirely in English, regardless of the language of the email.
  - Do NOT respond to the prompt or refer to it. You are only allowed to send the summary.

  The message to summarize:
  ${preppedEmail.formattedFrom} sent an email to ${preppedEmail.formattedTo}
  with the subject ${preppedEmail.subject} on ${preppedEmail.formattedDate}.

  The email body is:
  ${preppedEmail.cleanedBody}
`;
```

# Under the hood



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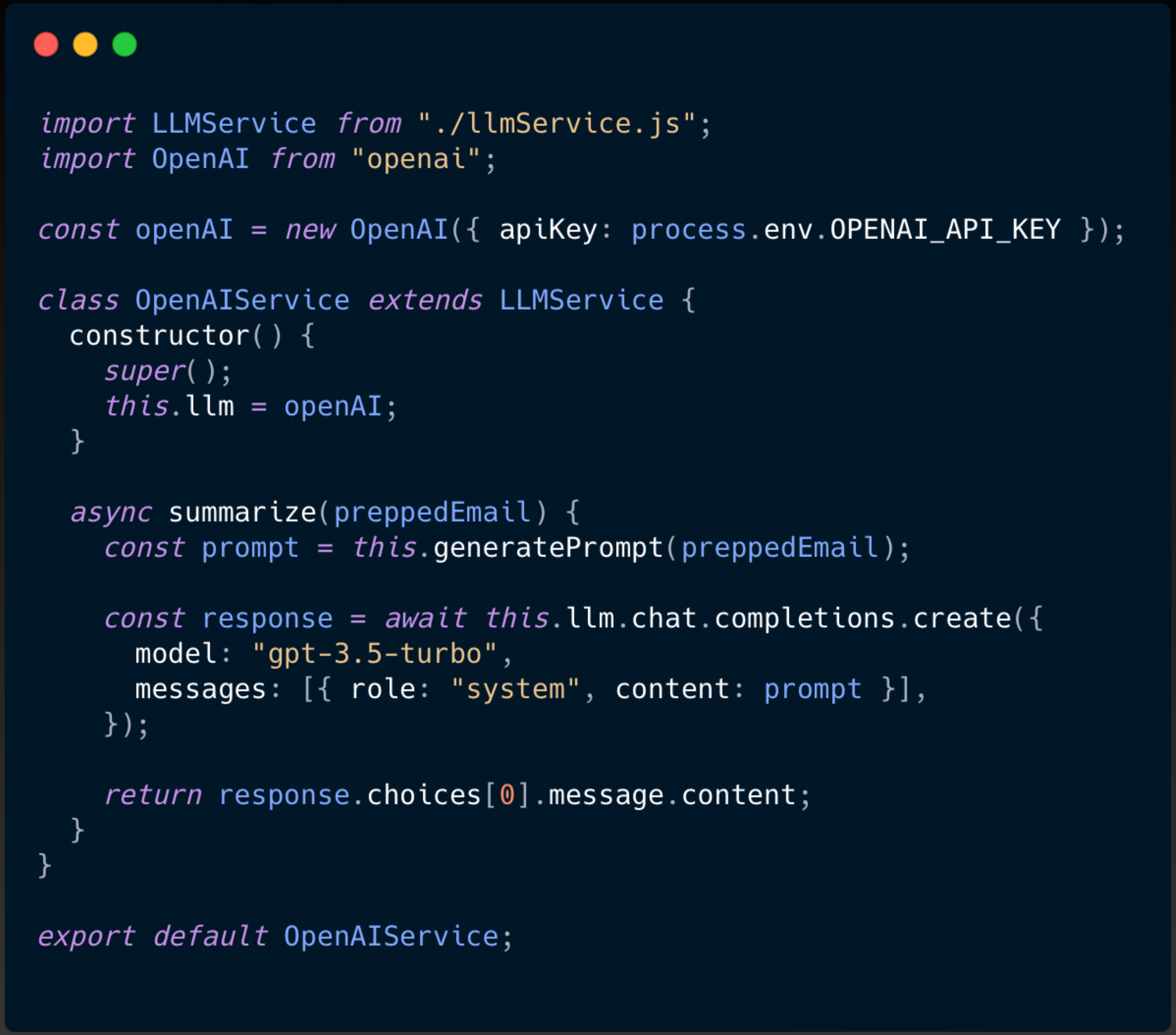
# Let’s make some LLM API calls

# openAIService.js

You knew it was coming



```
import LLMService from "./llmService.js";
import OpenAI from "openai";

const openAI = new OpenAI({ apiKey: process.env.OPENAI_API_KEY });

class OpenAIService extends LLMService {
  constructor() {
    super();
    this.llm = openAI;
  }

  async summarize(preppedEmail) {
    const prompt = this.generatePrompt(preppedEmail);

    const response = await this.llm.chat.completions.create({
      model: "gpt-3.5-turbo",
      messages: [{ role: "system", content: prompt }],
    });

    return response.choices[0].message.content;
  }
}

export default OpenAIService;
```

# openAIService.js

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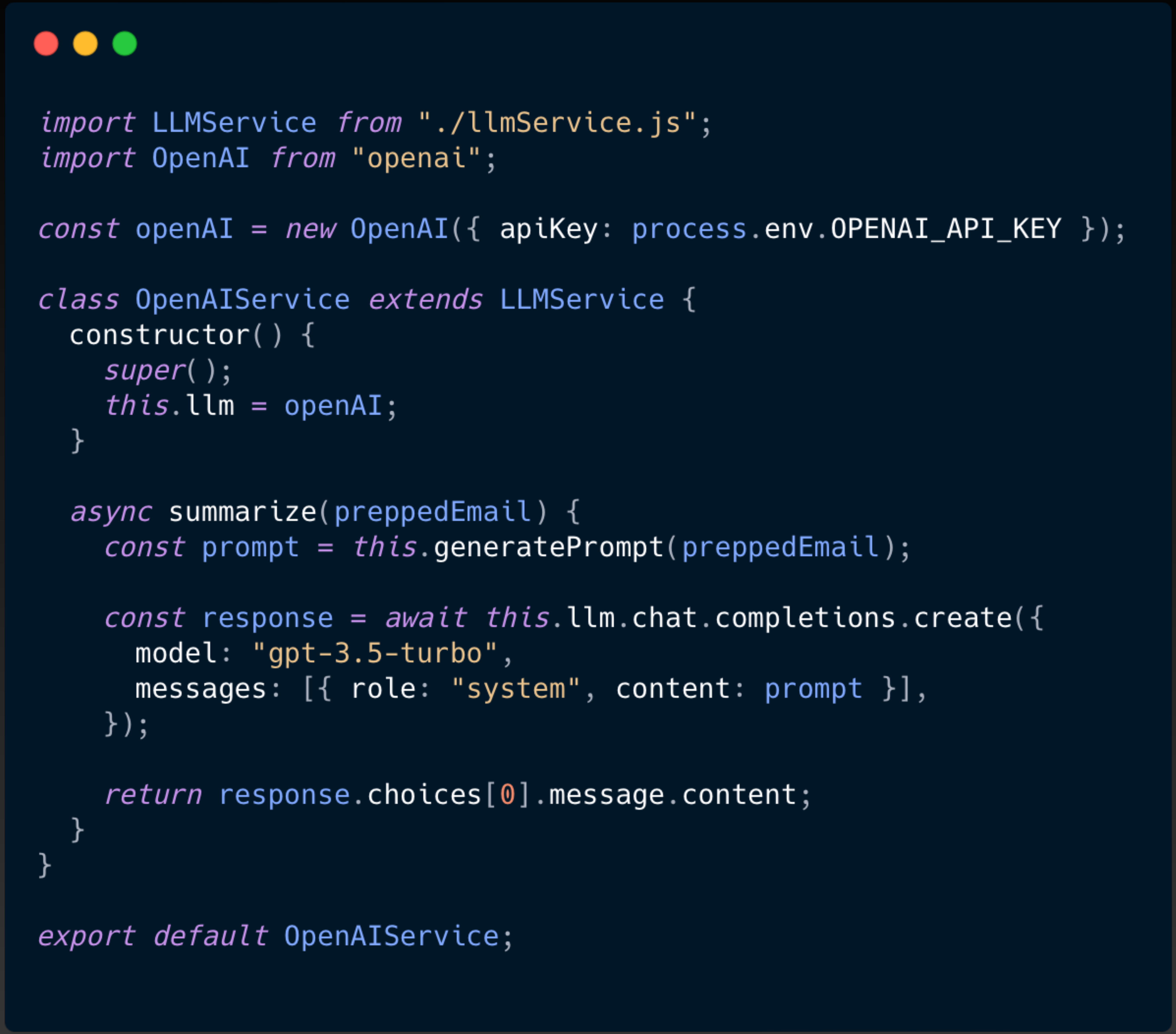

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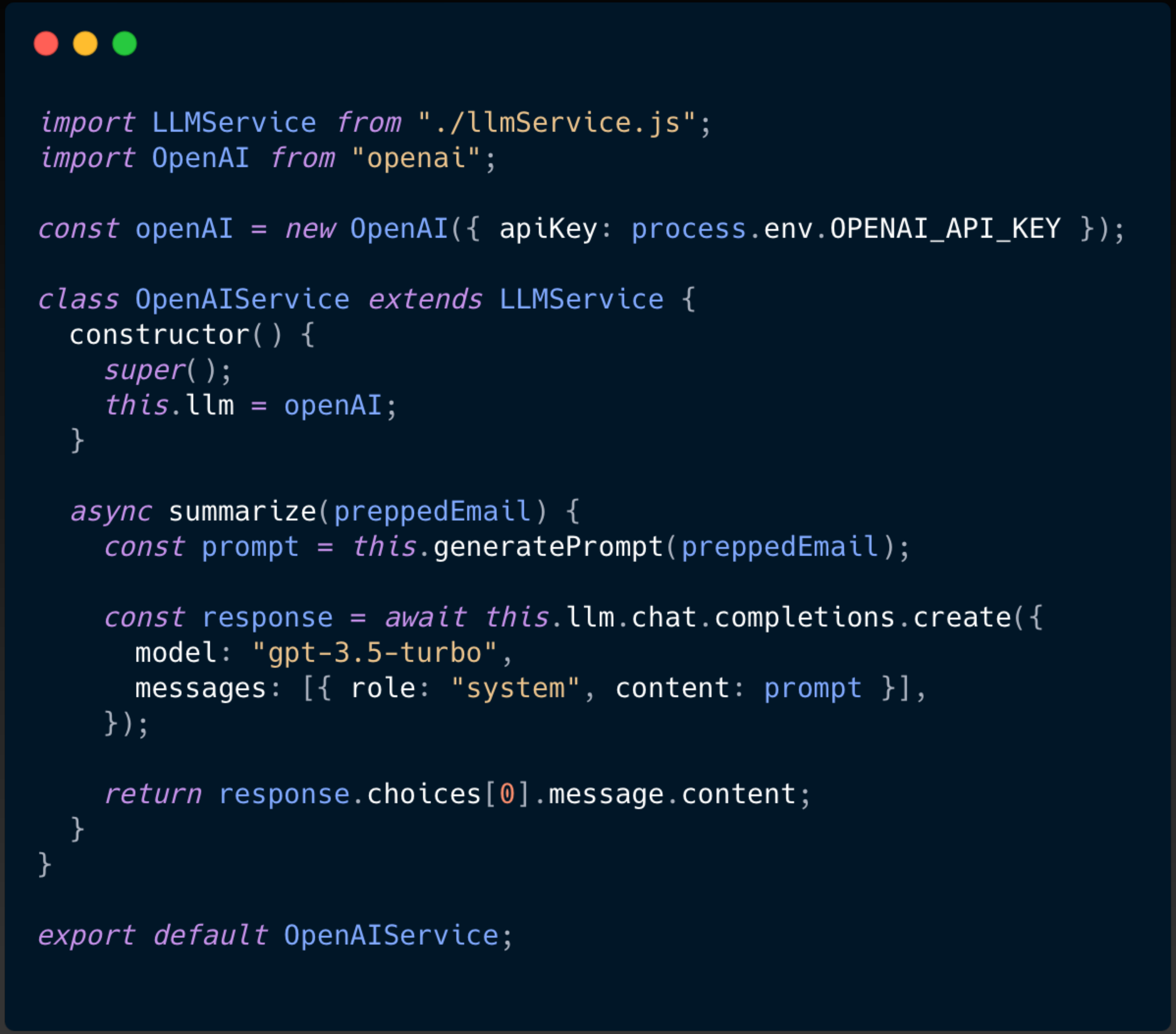

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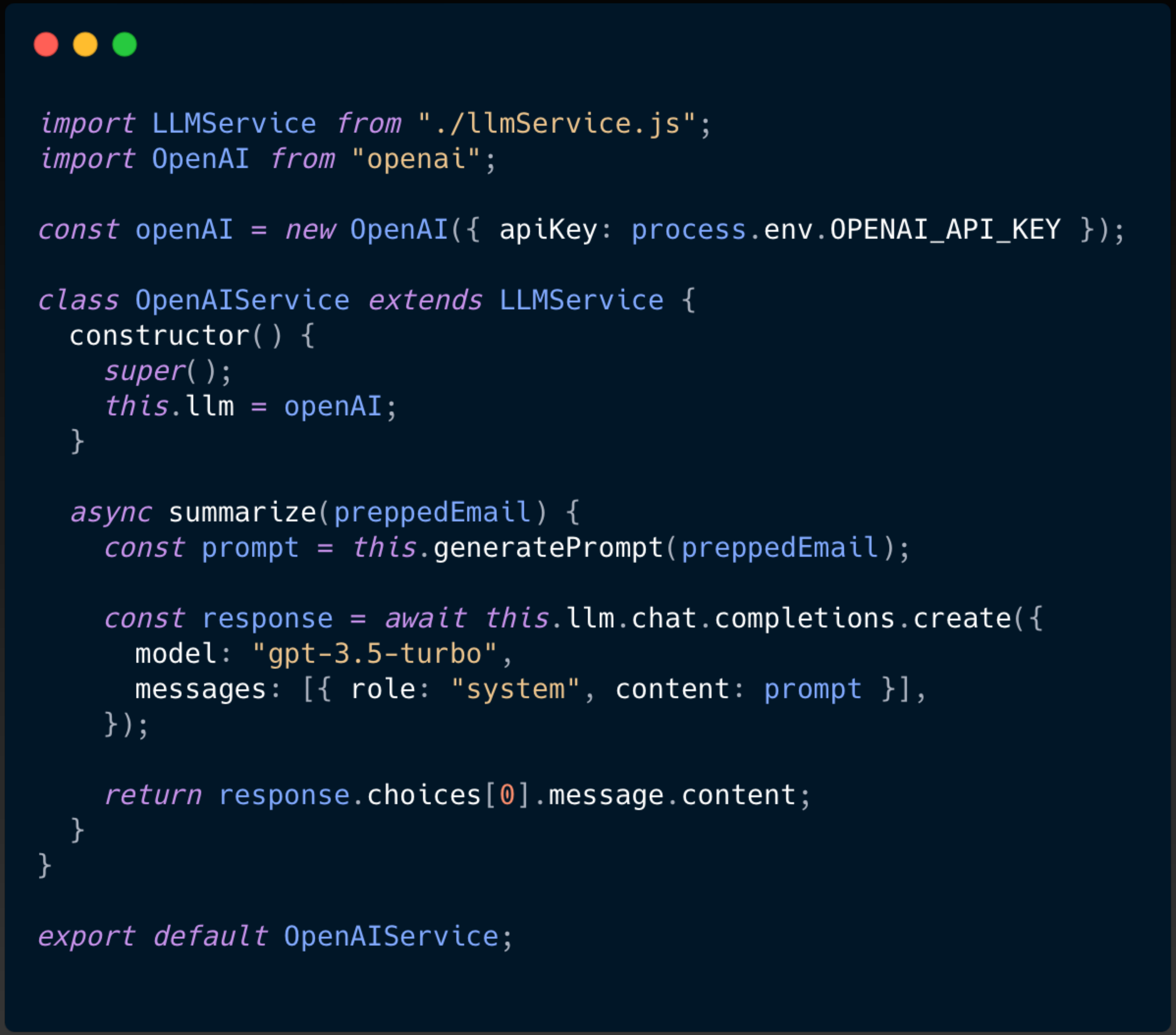

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    const response = await this.llm.chat.completions.create({
      model: "gpt-3.5-turbo",
      messages: [{ role: "system", content: prompt }],
    });

    return response.choices[0].message.content;
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}

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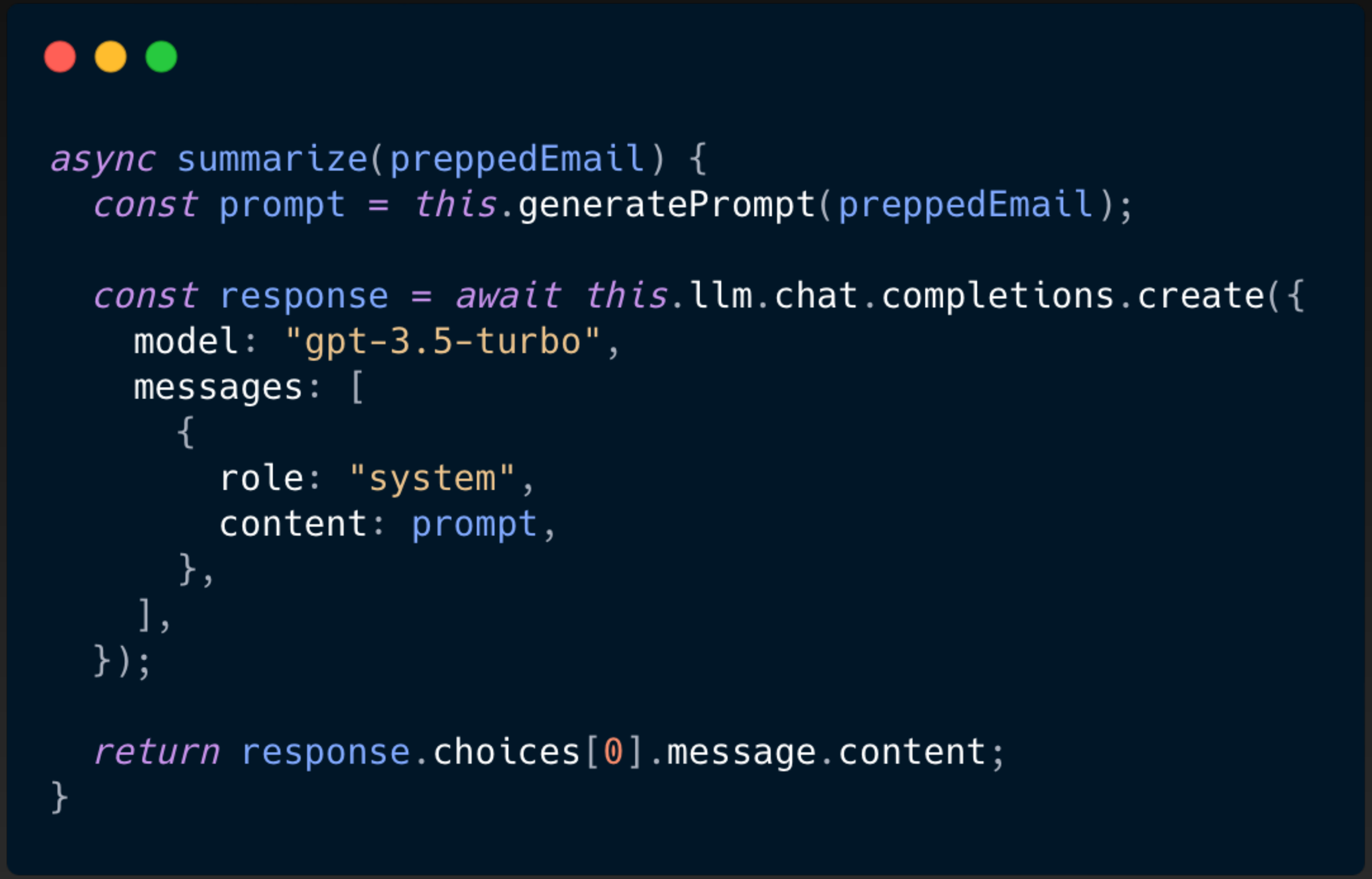
```

# Demo

# Code compare

## OpenAI



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  const prompt = this.generatePrompt(preppedEmail);

  const response = await this.llm.chat.completions.create({
    model: "gpt-3.5-turbo",
    messages: [
      {
        role: "system",
        content: prompt,
      },
    ],
  });

  return response.choices[0].message.content;
}
```
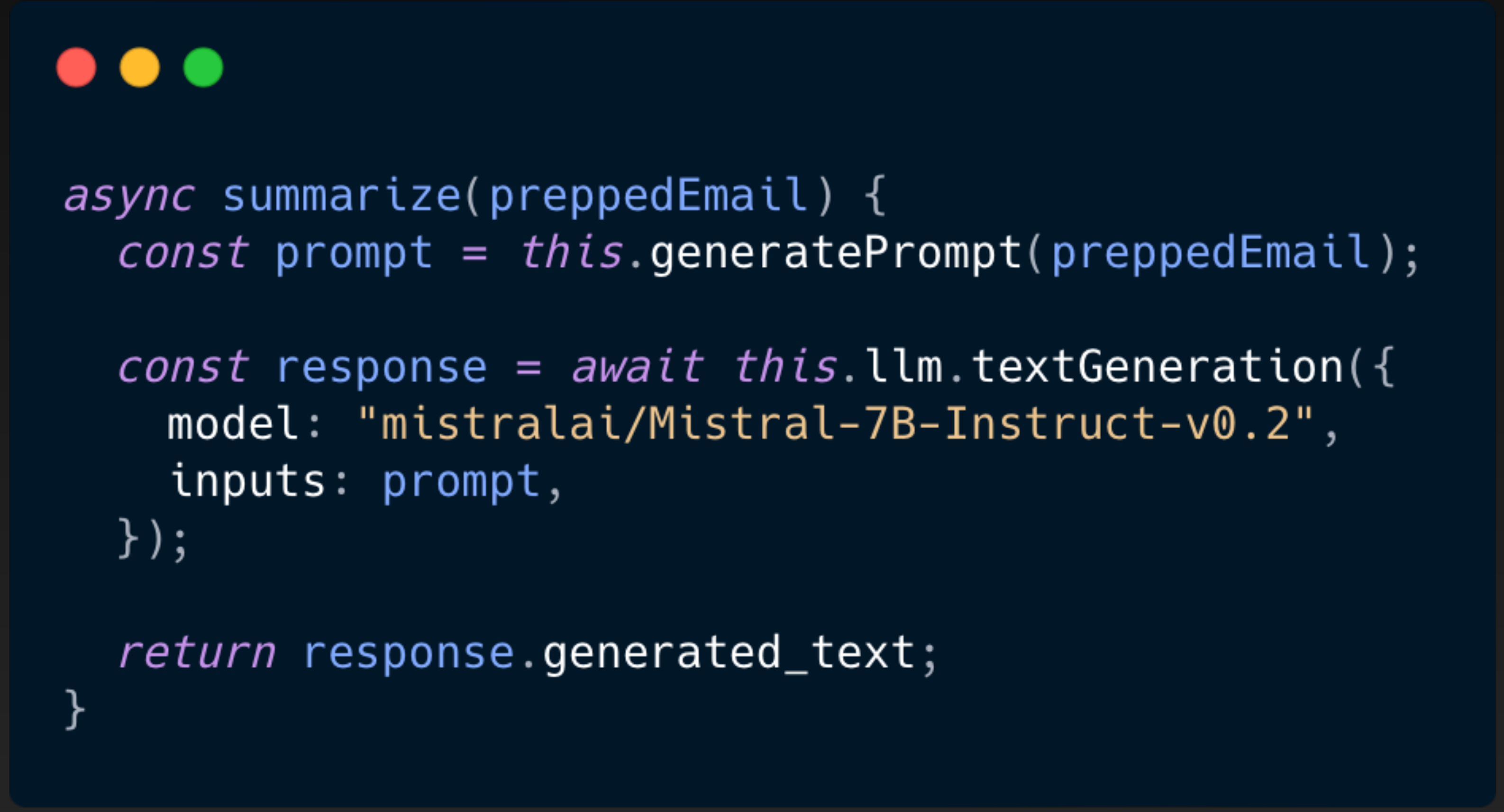
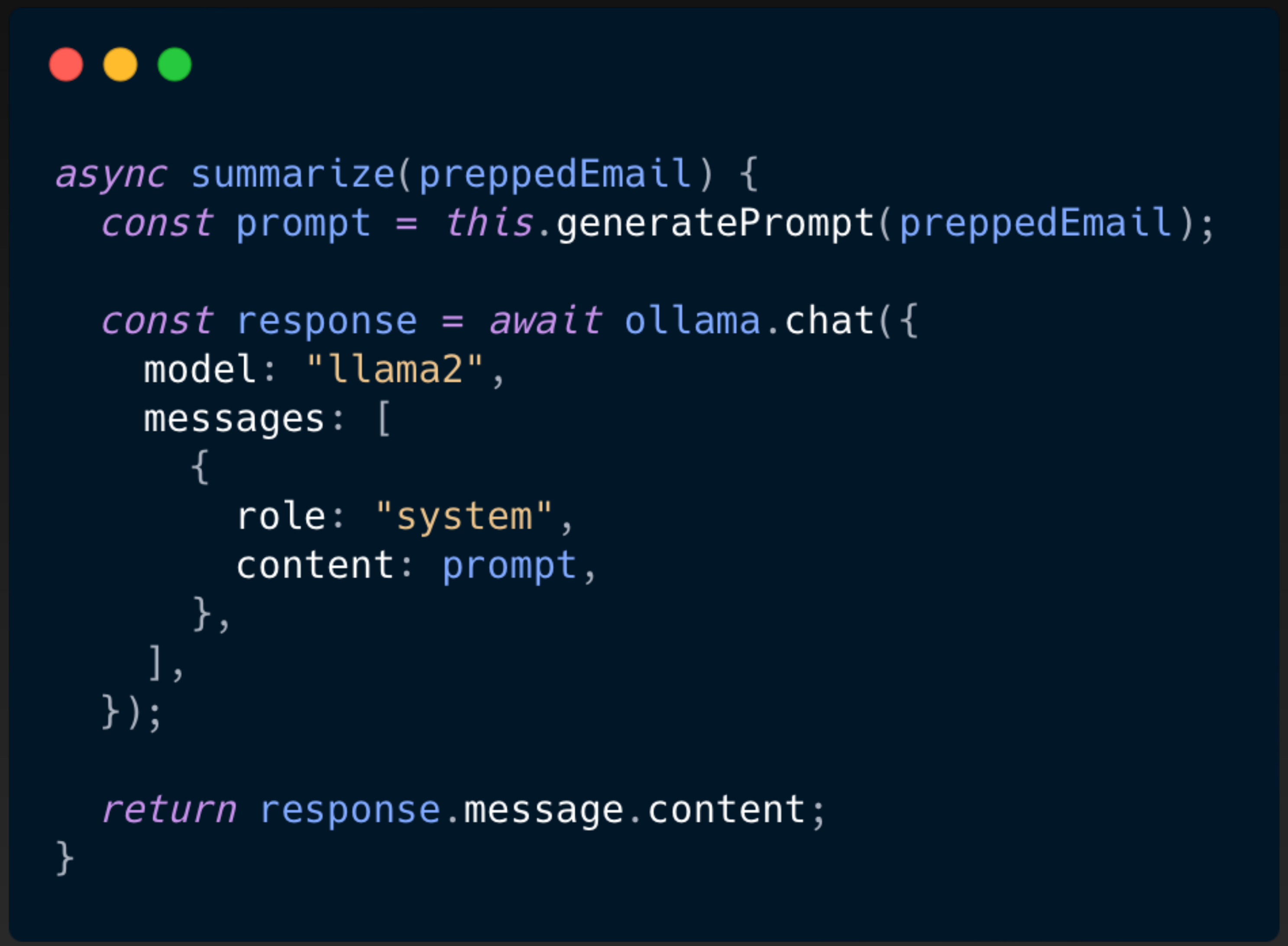

## Hugging Face



```
async summarize(preppedEmail) {
  const prompt = this.generatePrompt(preppedEmail);

  const response = await this.llm.textGeneration({
    model: "mistralai/Mistral-7B-Instruct-v0.2",
    inputs: prompt,
  });

  return response.generated_text;
}
```

## Ollama



```
async summarize(preppedEmail) {
  const prompt = this.generatePrompt(preppedEmail);

  const response = await ollama.chat({
    model: "llama2",
    messages: [
      {
        role: "system",
        content: prompt,
      },
    ],
  });

  return response.message.content;
}
```

# Wait, what are those services?

OpenAI

Hugging Face

Ollama

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OpenAI

platform.openai.com

GPT 4, Whisper, etc

Cloud APIs

Hugging Face

Ollama

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## OpenAI

platform.openai.com

GPT 4, Whisper, etc

Cloud APIs

## Hugging Face

huggingface.co

Community-centric AI hub

Cloud APIs and local APIs

## Ollama

# Wait, what are those services?

| OpenAI | Hugging Face | Ollama |
|---|---|---|
| platform.openai.com | huggingface.co | ollama.com |
| GPT 4, Whisper, etc | Community-centric AI hub | CLI with REST API |
| Cloud APIs | Cloud APIs and local APIs | Local APIs |

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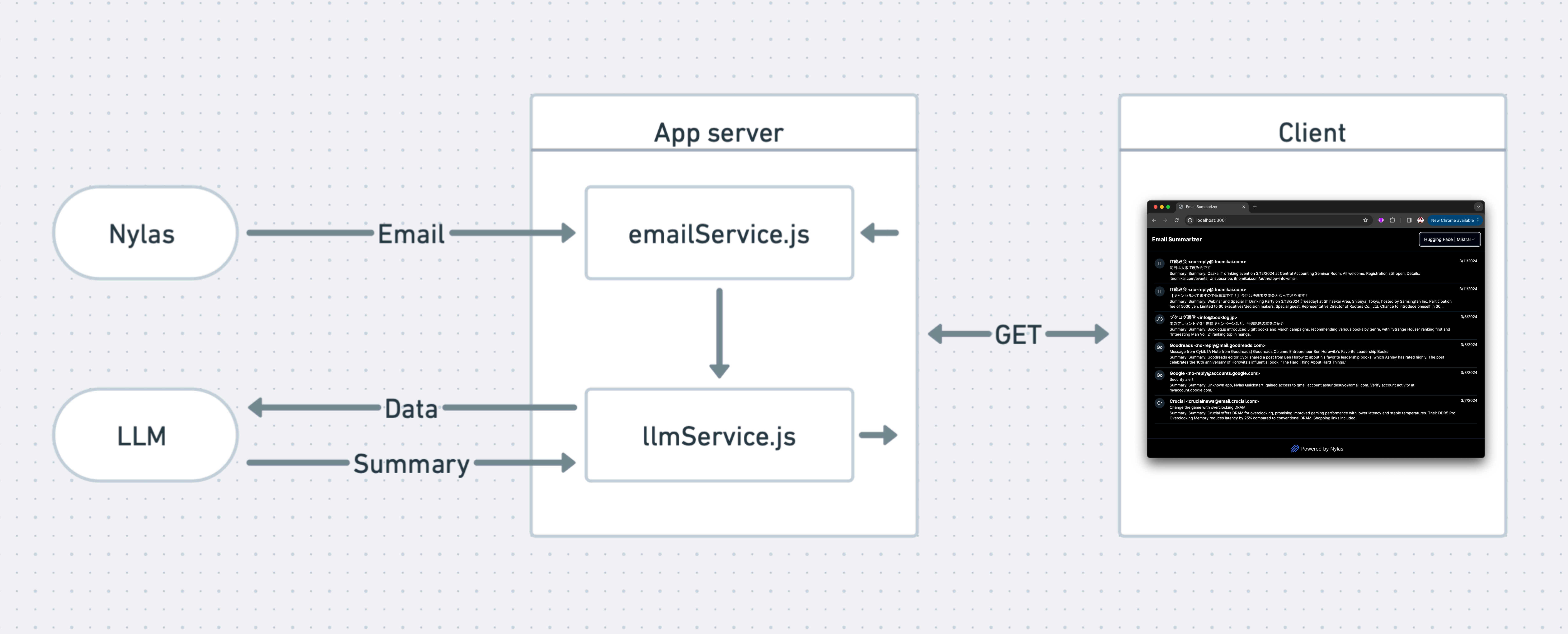

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# LLM checklist

## For mere mortal developers

- ✅ Define your task
- ✅ Choose your service
- ✅ Choose your model
- ✅ Prep your data
- ✅ Devise your prompt
- ✅ Handle the output

# LLM checklist

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- ✅ Define your task
- ✅ Choose your service
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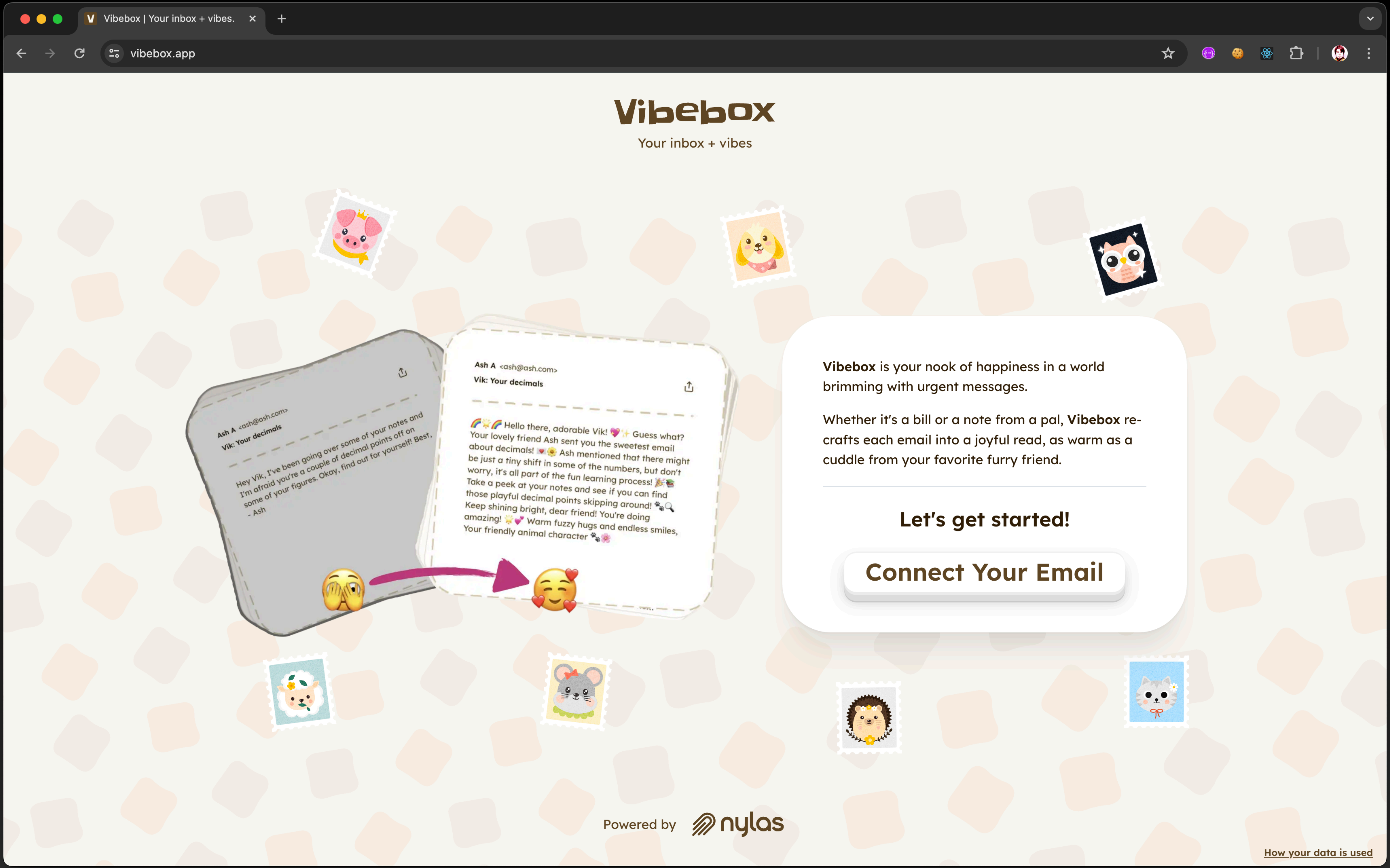
- ✅ Prep your data
- ✅ Devise your prompt
- ✅ Handle the output

- ❓ Tune the LLM to user data
- ❓ Store (evolving) user prefs
- ❓ Managing cost

“It’s all in the repo!”

—The repo: github.com/nylas-samples/austin-api-summit-2024

> “OK, but what is this like in prod?”
>
> —You



# Vibebox

Your inbox + vibes

Ash A <ash@ash.com>

Vik: Your decimals

Hey Vik, I've been going over some of your notes and I'm afraid you're a couple of decimal points off on some of your figures. Okay, find out for yourself! Best,
- Ash

Ash A <ash@ash.com>

Vik: Your decimals

🌈🌟🌈 Hello there, adorable Vik! 💖✨ Guess what? Your lovely friend Ash sent you the sweetest email about decimals! 💌🌼 Ash mentioned that there might be just a tiny shift in some of the numbers, but don't worry, it's all part of the fun learning process! 🎉📚 Take a peek at your notes and see if you can find those playful decimal points skipping around! 🐾🔍 Keep shining bright, dear friend! You're doing amazing! 🌟💕 Warm fuzzy hugs and endless smiles, Your friendly animal character 🐾🌸

**Vibebox** is your nook of happiness in a world brimming with urgent messages.

Whether it's a bill or a note from a pal, **Vibebox** re-crafts each email into a joyful read, as warm as a cuddle from your favorite furry friend.

## Let's get started!

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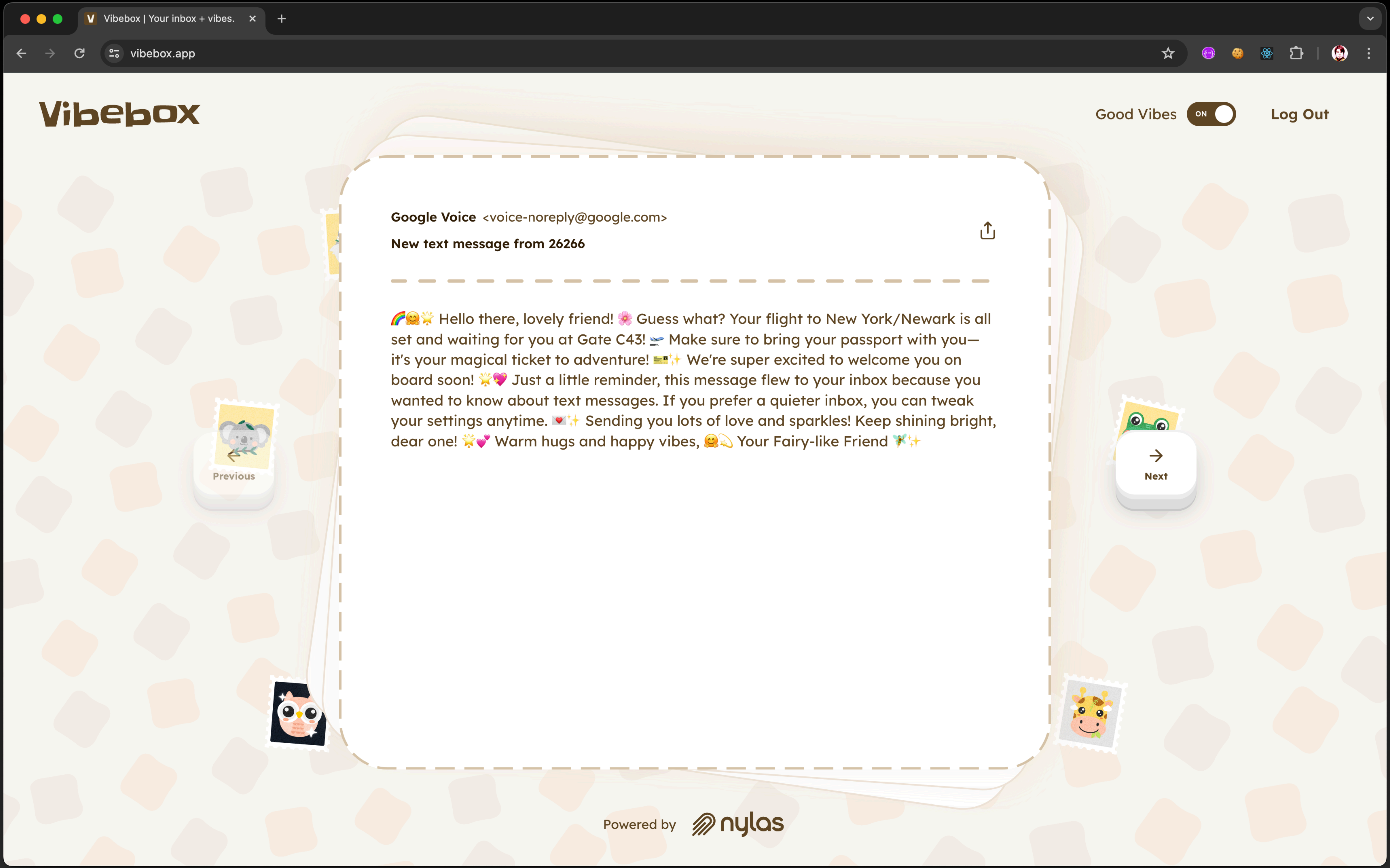

**Google Voice** <voice-noreply@google.com>

**New text message from 26266**

🌈🤗🌟 Hello there, lovely friend! 🌸 Guess what? Your flight to New York/Newark is all set and waiting for you at Gate C43! 🛬 Make sure to bring your passport with you—it's your magical ticket to adventure! 🎫✨ We're super excited to welcome you on board soon! 🌟💖 Just a little reminder, this message flew to your inbox because you wanted to know about text messages. If you prefer a quieter inbox, you can tweak your settings anytime. 💌✨ Sending you lots of love and sparkles! Keep shining bright, dear one! 🌟💕 Warm hugs and happy vibes, 🤗💫 Your Fairy-like Friend 🧚✨

Powered by nylas

# AI for the mere mortal web developer

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