

Part 3: AI Integration - Short Essay

If I'm building a chat feature using a language model, I'll go with OpenAI GPT-3.5 Turbo only. It's powerful, gives proper answers, and also supports streaming and all. Mostly I'll use Vercel AI SDK with it, since it's made specially for Next.js, so integration also becomes easy.

First, I'll create an API route in Next.js App Router, like `app/api/chat/route.ts`. From frontend, I'll send the user message using `fetch` POST request to that route. Inside that route, I'll call OpenAI's API with the user input, and get the AI reply.

For input/output, I'll create a simple React component with one textbox and button. When user types something and clicks "Send", that message will go to the backend API. Then response from AI will come back and display on the same page below the user message.

If I want streaming, I'll use `ReadableStream` and `Response` methods from Next.js API route, so the AI reply can come word by word like typing effect. That will give real chat experience like how ChatGPT works.

Part 4: Developer Mindset

1. What's the most exciting tool/stack you've explored recently?

Recently I tried this Next.js App Router thing, it's really nice. It helps to build React apps faster and simple. File-based routing is easy to understand, and server components also very good for performance.

2. Describe how you approach debugging when stuck.

When I stuck, first I check error message carefully to understand problem. Then I put console logs here and there to see what is happening. If still no idea, I try to make small code example and test again. Sometimes I search Google or Stack Overflow or AI tools like ChatGPT and Deepseek, usually I get solution there.

3. Share a link to one past project you're proud of (if any).

I made one Student Grading System project using HTML, CSS, JS, and PHP. It's for students to save their marks and calculate GPA, CGPA also very easy. You can see it on my GitHub here: <https://github.com/KarthikeyanGnanavel528/Student-Grading-System-for-University-Students>. I feel happy about this because I learned how frontend and backend connect, and also how to handle database properly.