Tanimawo AI Academy

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Build Your First AI App

A small web app with a safe server-side API call

Free guide

About 20 minutes to read

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Free AI training every Sunday
with Dr. Daniel Tanimawo

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What we will build

A one-page **Study Helper**: a student types a question, the page sends it to your small server, the server asks the AI, and the answer appears on the page.

Part	File	Job
Front end	public/index.html	The page the user sees
Back end	server.js	Holds the API key and calls the AI
Settings	.env (or environment variable)	Your secret key

> The browser never sees the API key. Only your server does. This is the most important rule in AI app development.

1. Set up the project

```
mkdir study-helper && cd study-helper
npm init -y
npm install express openai
```

In **package.json**, add this line so you can use modern imports:

```
"type": "module",
```

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2. The server (server.js)

```
import express from "express";
import OpenAI from "openai";

const app = express();
const client = new OpenAI(); // reads OPENAI_API_KEY
app.use(express.json());
app.use(express.static("public"));

app.post("/api/ask", async (req, res) => {
  const question = String(req.body.question || "").slice(0, 500);
  if (!question) return res.status(400).json({ error: "Please ask a question." });
  try {
    const r = await client.chat.completions.create({
      model: "gpt-4.1-mini",
      max_tokens: 300,
      messages: [
        { role: "system", content: "You are a patient study helper. Explain simply, then give
one example." },
        { role: "user", content: question },
      ],
    });
    res.json({ answer: r.choices[0].message.content });
  } catch (e) {
    console.error(e.message);
    res.status(500).json({ error: "The AI is not available right now. Try again." });
  }
});

app.listen(3000, () => console.log("Open http://localhost:3000"));
```

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3. The page (public/index.html)

```
<!DOCTYPE html>
<html>
<body>
  <h1>Study Helper</h1>
  <textarea id="q" rows="3" placeholder="Ask any study question"></textarea>
  <button id="ask">Ask</button>
  <p id="answer"></p>
  <script>
    document.getElementById("ask").addEventListener("click", async () => {
      const answer = document.getElementById("answer");
      answer.textContent = "Thinking...";
      const res = await fetch("/api/ask", {
        method: "POST",
        headers: { "Content-Type": "application/json" },
        body: JSON.stringify({ question: document.getElementById("q").value }),
      });
      const data = await res.json();
      answer.textContent = data.answer || data.error;
    });
  </script>
</body>
</html>
```

4. Run it

```
export OPENAI_API_KEY="sk-...your key..."
node server.js
```

Open **http://localhost:3000**, ask a question, and watch the answer appear.

5. Make it production-ready

Add	Why
Rate limiting (for example express-rate-limit)	Stops one person from running up your bill
Input length limits	Long inputs cost more and can be abused
A daily budget check	A hard stop if usage spikes
Logging (without personal data)	See errors and costs
HTTPS hosting	Protects users' data in transit

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6. Ideas to extend it

- A **subject dropdown** that changes the system prompt (maths tutor, English tutor)
- Keep a **conversation history** by sending earlier messages back
- Add **“Explain simpler”** and **“Quiz me”** buttons
- Save favourite answers in the browser

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